CITY OF SEWARD
City Council
Regular Meeting
Agenda

Tuesday, July 1, 2025 **7:00 PM** **Municipal Building Council Chambers**

NOTICE IS HEREBY GIVEN that a meeting of the City Council of the City of Seward, Nebraska will be held at 7:00 PM on Tuesday, July 1, 2025, in the Council Chambers, 142 N 7th Street, Seward, Nebraska in which the meeting will be open to the public. The Mayor and City Council reserve the right to adjourn into Closed Session as per Section 84-1410 of the Nebraska Revised Statutes. An Agenda for such meeting, kept continually current, is available at the Office of the City Clerk, 537 Main Street, Seward, Nebraska, during normal business hours. Individuals requiring physical or sensory accommodations, who desire to attend or participate, please contact the City Clerk's Office at 402.643.2928 no later than 3:30 PM on the Friday preceding the Council Meeting. City financial claims and related invoices will be available for Council member review, audit, and voluntary signatures at the meeting location beginning 30 minutes prior to the scheduled meeting time.

CALL TO ORDER
PLEDGE OF ALLEGIANCE
DISCLOSURE OF OPEN MEETINGS ACT & OTHER NOTIFICATIONS

This is an Open Meeting of the Seward Nebraska Governing Body. The City of Seward abides by the Nebraska Open Meetings Act in conducting business. A copy of the Nebraska Open Meetings Act is displayed on the north wall of this meeting room facility as required. Disclosure of meeting recording processes is posted in the Meeting Room. Any citizen may address the Council regarding items included on the meeting agenda and are asked to complete and hand-in a Speaker Card to the Clerk. Presenters shall approach the podium, state their name & address for the Clerk's record and are asked to limit remarks to five minutes. All remarks shall be directed to the Mayor who shall determine by whom any appropriate response shall be made. The City of Seward reserves the right to adjust the order of items on this Agenda if necessary and may elect to take action on any of the items listed.

ROLL CALL
CONSENT AGENDA

1. Claims & Payables Reports

CLAIMS LIST
7/1/2025
COUNCIL MEETING

Abbreviations: AF-Annual Fee; BE-Benefits; BU-Building Upkeep; CI-Capital Improvements; DF-Diesel Fuel; DO-Donations; EQ-Equipment; ENG-Engineering; EX-Expense; FA-Fixed Asset; GS-Gas; GU-Ground Upkeep; IT-Technology; INS-Insurance; INV-Inventory;LG-Legal; MA-Maintenance; MAT-Materials; MC-Miscellaneous; MH-Merchandise; MI-Mileage; ML-Meals; MS-Memberships; OI-Oil; OP-Operations; PF-Postage; PU-Publications; RE-Repairs; RI-Reimbursement; RS-Restaurant; SA-Salaries; SE-Services; SL-Sales; ST-Sales Tax; SU-Supplies; TE-Testing; TR-Training; TO-Tools; UN-Uniforms; UT-Utilities

ACLARA TECHNOLOGIES LLC	IT		3,995.00
ADE	BU/RE		374.84
ALL COPY PRODUCTS INC	SU		20.19
ALL ROAD BARRICADES INC	SU		1,483.64
ALLISON ELLER	RI		50.00
AMAZON CAPITAL SERVICES INC	SU/MAT		1,181.84
AMG TECHNOLOGY LLC	UT		103.35
ANDERSON AUTO GROUP	FA		36,167.00
AQUA-CHEM INC	SU		2,745.15
BADGER METER	SE		1,580.87
BIZCO TECHNOLOGIES	IT		3,130.00
BLACK DIAMOND AUTO DETAILING	SE		125.00
BLACK HILLS ENERGY	UT		2,306.38
BORDER STATES INDUSTRIES INC	INV/SU		9,772.78
BOTTLE ROCKET BREWING	SU		110.00
BRENT ROYUK	MC		300.00
BROCK MCMAHON	MC		50.00
BROKEN ARROW EXCAVATING	CI		374,805.40
BSN SPORTS LLC	SU		332.00
CAPITAL BUSINESS SYSTEMS INC-TX	SE		919.11
CASH-WA DISTRIBUTING CO	SU		547.60
CHASE CARD SERVICE			464.24
LOGMEINPRO	IT	376.24	
ZOOMSHIFT	IT	88.00	
CITY SEWARD BUILDINGS/GROUNDS	RI		4,000.00
CITY SEWARD LIBRARY PETTY CASH	PF/SU		236.03
CODR PLUMBING & EXCAVATING	BU		286.41
COMMONWEALTH ELECTRIC CO	RE		190.00
CONSTELLATION NEWENERGY GAS	UT		336.47
CONTROL SERVICES INC	SE		912.00
D & K PRODUCTS	SU		532.00
DALANEY ANDERSON	MC		55.00

DREW KRATOCHVIL	MC	60.00
EAKES OFFICE SOLUTION	SU	9.15
ECES INC DBA CAMPBELL CLEANING	SE	1,200.00
ECOLAB	BU	653.17
ERIK HESSE	MC	60.00
ERIKSEN CONSTRUCTION	CI	116,375.00
FALLER LANDSCAPE	CI/SU	5,040.00
FASTENAL COMPANY	SU	163.70
FINN HOCHSTEIN	MC	65.00
FIRSTAR FIBER INC	SE	2,447.65
FYR-TEK	SU	1,142.34
G & P DEVELOPMENT LANDFILL	SE	3,360.08
GERALD EICHMEIER	MC	300.00
GERHOLD CONCRETE CO INC	SU	2,762.36
GRAINGER INC	SU	1,237.78
GREG MILLER	MC	180.00
HDR ENGINEERING INC	CI	74,503.99
HOBSON AUTOMOTIVE	OI/RE	439.42
HOFFSCHNEIDER LAW PC LLO	SE	5,000.00
HUSKER ELECTRIC SUPPLY CO	SU	178.35
INTERSTATE ALL BATTERY CENTER	SU	569.60
JASON BRANDENBURGH	SU	200.00
JEO CONSULTING GROUP INC	CI	32,640.25
JOEL BRASE	MC	245.00
JOHN SMITH	MC	115.00
JONES AUTOMOTIVE	SE	902.50
JOSH TAYLOR	MC	60.00
K & Z DISTRIBUTING	SU	1,013.50
KARLEE BAACK	MC	105.00
KLUG'S LLC	SE	9,500.00
KYLE PERRY	MC	105.00
LAST MILE NETWORK CONS GR LLC	UT	75.30
LOVELY HIBBERT	MC	135.00
MASON WISNIESKI	MC	60.00
MATHESON TRI-GAS INC	SU	97.67
MAX T WAKE/ELIZABETH B WAKE	RI	975.00
MID-AMERICAN BENEFITS LLC	BE	2,416.76
MIDWEST TURF & IRRIGATION	RE	205.93
NEBRASKA D A S ACCT OCIO	SE	245.00
NEBRASKA EQUIPMENT INC	SU	125.03
NEBRASKA PUBLIC HEALTH ENV LAB	TE	184.00
NICK'S FARM STORE CO	RE	570.17
NORRIS PUBLIC POWER DISTRICT	UT	1,233.70
OLSSON	CI	21,289.87

ONYX MDH LLC	FA		5,057.00
O'REILLY AUTOMOTIVE INC	SU		123.89
QUALITY BRANDS OF LINCOLN	SU		2,563.15
RICHARD BURTON/ICC	SE		240.00
SAM'S CLUB/SYNCHRONY BANK	SU		434.24
SAPP BROTHERS PETROLEUM INC	GS		11,111.80
SCOREVISION LLC	AF		1,000.00
SCCDP	RI		231.95
SHAYLEA BROWN	RI		50.00
SHORT ELLIOTT HENDRICKSON INC	CI		25,799.43
SOUTHEAST NE DEVELOP DISTRICT	MS		4,500.00
SPORTS EXPRESS	SU		206.00
ST P J SUPPLY INC	SU		93.00
STATE DISTRIBUTING CO	SU		992.58
SUMMIT FIRE PROTECTION	SE		2,345.30
U S CELLULAR	UT		150.33
U S POSTAL SERVICE	AF		188.00
ULINE	SU		617.73
VERIZON FINANCIAL SERVICES LLC	UT		281.64
VISA			22,568.63
MAILCHIMP	MS	39.50	
SMTP2GO	IT	75.00	
CANVA	SU	32.00	
LEAGUE OF NE MUNICIPALTIES	TR	521.00	
ALERT ALL CORP	SE	5,082.50	
EMERGENCY SOLUTIONS	IT	167.00	
YETI	SU	1,006.20	
NATIONAL REGISTRY	MS	208.00	
SP TAYLORSTINS	SU	212.00	
US POSTAL	PF	128.80	
WALMART	SU	1,752.20	
LA QUINTA MOTOR INNS	TR	144.14	
REVOLUTION WRAPS	FA	509.61	
SEWARD CO MOTOR VEHICLE DEPT	MC	17.00	
HOME DEPOT	BU	1,229.95	
AMAZON.COM	GU/SU	1,798.74	
SPARETIME	ML	121.10	
RUNZA	ML	168.21	
VALENTINO'S	ML	118.93	
DRAGON PALACE	ML	204.74	
BURESH MEATS	ML	734.09	
SAM'S CLUB	SU	475.27	
ARIAT INTERNATIONAL INC	SU	393.29	
HENKEL ADVESIVES	SU	16.00	

DLT SOLUTIONS	IT	1,281.90	
AMERICAN WATERWORKS	MS	240.00	
NIGHTFLYER.COM	SU	1,858.80	
DULTMEIER SALES	RE	20.09	
PGA OF AMERICA	MS	683.92	
CONSTANT CONTACT	MC	23.00	
FOREUP	IT	686.08	
TRACFONE	UT	34.27	
NDEQ	TR	80.00	
HULU	MS	89.21	
KIEFER AQUATICS	SU	1,428.44	
AMERICAN RED CROSS	TR	890.00	
ELIFEGUARD.COM	SU	97.65	
WESCO DISTRIBUTION INC	SU		317.13
		TOTAL	$814,231.37

2. Draft Minutes of June 17, 2025, City Council Meeting

June 17, 2025

The Seward City Council met at 7:00 p.m. on Tuesday, June 17, 2025, with Mayor Joshua Eickmeier presiding and City Clerk Derek Bargmann recording the proceedings. Upon roll call, the following Councilmembers were present: Zane Francescato, Megan Kahler, Jessica Kolterman, John Singleton, Matt Stryson, Tatum Tonniges, Rich Wergin. Councilmembers absent: Karl Miller. Other officials present: City Administrator Greg Butcher, City Attorney Kelly Hoffschneider, City Engineer Mike Oneby, Water/Wastewater Director Brandon Koll, Street Superintendent Bob Miers, and Building/Zoning & Code Enf. Director Tim Dworak.

Notice of the meeting was given in advance thereof, and Mayor Eickmeier announced that a copy of the Open Meetings Act and tonight's agenda is posted in the meeting room and is accessible to members of the public. Mayor Eickmeier led those in attendance in the Pledge of Allegiance.

CONSENT AGENDA CONSIDERATION ITEMS

The following Consent Agenda items were approved in one single motion made by Councilmember Wergin, seconded by Councilmember Singleton.

1. City Codes Director Report
2. City Treasurer Report
3. Claims & Payables Report (totaling $855,843.66)
4. Police Department Report
5. Draft Minutes of June 3, 2025, City Council Meeting
6. Mayor Appointments to Boards and Commissions:
    a. Appoint Sterling Millard to the Seward Volunteer Fire Department Roster

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

PUBLIC HEARINGS

1. TAX INCREMENT FINANCING (TIF) APPLICATION BY TWO CREEKS HOLDINGS (1151 SOUTH STREET)

A. PRESENTATION AND REVIEW OF TIF APPLICATION, COST BENEFIT ANALYSIS, REDEVELOPMENT PLAN AMENDMENT, REDEVELOPMENT AGREEMENT

TIF Attorney Andrew Willis (Cline Williams) presented the application submitted by Two Creeks Holdings. He noted that the project was a southward business expansion of St. PJ Supply Co (237 N 12th Street) for approximately 5,000 sq. ft. of warehousing and shop space. He noted that the proposed project fit into the comprehensive plan and the 'UC – Urban Corridor' zone. The CRA and Planning Commission had approved the application previously. The TIF amount requested over 15 years was $77,045 to be used for site preparation, engineering services, and utilities construction.

The public hearing was opened at 7:09 p.m. with the following comments received:

- Mike Lewis, applicant—expressed appreciation to expand and grow business in the community.

The public hearing was closed at 7:10 p.m. with no other comments received.

B. CONSIDERATION OF A RESOLUTION APPROVING THE REDEVELOPMENT PLAN AMENDMENT AND ADOPTING A COST BENEFIT ANALYSIS FOR THE REDEVELOPMENT PROJECT

Councilmember Francescato introduced **Resolution No. 2025-17**, to approve the redevelopment plan amendment and adopt a cost benefit analysis for the Two Creeks Holdings Project. Councilmember Tonniges moved, seconded by Councilmember Kahler, to approve the resolution as presented.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

C. CONSIDERATION OF A RESOLUTION APPROVING THE REDEVELOPMENT PLAN AGREEMENT FOR A REDEVELOPMENT PROJECT INCLUDING THE ISSUANCE OF TIF INDEBTEDNESS FOR THE REDEVELOPMENT PROJECT AND OTHER SUCH ACTIONS UNDER THE COMMUNITY DEVELOPMENT LAW

Councilmember Wergin introduced **Resolution No. 2025-18**, to approve the redevelopment plan agreement for the Two Creeks Holdings Project. Councilmember Singleton moved, seconded by Councilmember Stryson, to approve the resolution as presented.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

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2. TAX INCREMENT FINANCING (TIF) APPLICATION BY DARI PROCESSING (1143 & 1144 WORTHMAN BLVD)

A. PRESENTATION AND REVIEW OF TIF APPLICATION, COST BENEFIT ANALYSIS, REDEVELOPMENT PLAN AMENDMENT, REDEVELOPMENT AGREEMENT

Mr. Willis introduced the application from DARI Processing which had previously been approved by the CRA and Planning Commission. He noted that since the property was currently outside of the City limits, a contingency was proposed for annexation of the land to continue with the TIF financing. The project would allow for the construction of a 240,000 sq. ft. dairy processing plant. The TIF amount requested over 15 years was approximately $8.65 million to assist with financing wastewater treatment, engineering services, site preparation, façade improvements, and energy efficiency. The project will create approximately 70 full-time jobs and fits into the comprehensive plan for the Seward Rail Campus area.

The public hearing was opened at 7:18 p.m. with the following comments received:

- Brett Rusher, CFO—expressed excitement to join the Seward community and begin construction.

The public hearing was closed at 7:19 p.m. with no other comments received.

B. CONSIDERATION OF A RESOLUTION APPROVING THE REDEVELOPMENT PLAN AMENDMENT AND ADOPTING A COST BENEFIT ANALYSIS FOR THE REDEVELOPMENT PROJECT

Councilmember Francescato introduced **Resolution No. 2025-19**, to approve the redevelopment plan amendment and adopt a cost benefit analysis for the DARI Processing Project. Councilmember Wergin moved, seconded by Councilmember Singleton, to approve the resolution as presented.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

C. CONSIDERATION OF A RESOLUTION APPROVING THE REDEVELOPMENT PLAN AGREEMENT FOR A REDEVELOPMENT PROJECT INCLUDING THE ISSUANCE OF TIF INDEBTEDNESS FOR THE REDEVELOPMENT PROJECT AND OTHER SUCH ACTIONS UNDER THE COMMUNITY DEVELOPMENT LAW

Councilmember Kahler introduced **Resolution No. 2025-20**, to approve the redevelopment plan agreement for the DARI Processing Project. Councilmember Kolterman moved, seconded by Councilmember Tonniges, to approve the resolution as presented.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

3. TAX INCREMENT FINANCING (TIF) APPLICATION BY GOOD LIFE LTD DBA PARKER BABY CO. (1027 WORTHMAN BLVD)

A. PRESENTATION AND REVIEW OF TIF APPLICATION, COST BENEFIT ANALYSIS, REDEVELOPMENT PLAN AMENDMENT, REDEVELOPMENT AGREEMENT

Mr. Willis presented the application from Parker Baby Co. that was previously approved by CRA and the Planning Commission. He noted it was an approximately 25,000 sq. ft. building for warehousing and distribution for e-commerce. The project also includes portions of land not within the City limits, thus it will need to be annexed to be included in the TIF financing. The TIF amount requested over 15 years was $380,500 to be used for site acquisition, engineering, site preparation, and infrastructure improvements to the site. The project is expected to create 10 full-time jobs.

The public hearing was opened at 7:27 p.m. with the following comments received:

- Kirsten Huebner, co-owner—expressed excitement to return to her hometown after looking at many other sites in the region; the project will allow for the business to expand.

The public hearing was closed at 7:29 p.m. with no other comments received.

B. CONSIDERATION OF A RESOLUTION APPROVING THE REDEVELOPMENT PLAN AMENDMENT AND ADOPTING A COST BENEFIT ANALYSIS FOR THE REDEVELOPMENT PROJECT

Councilmember Kolterman introduced **Resolution No. 2025-21**, to approve the redevelopment plan amendment and adopt a cost benefit analysis for the Parker Baby Co. Project. Councilmember Wergin moved, seconded by Councilmember Stryson, to approve the resolution as presented.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

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C. CONSIDERATION OF A RESOLUTION APPROVING THE REDEVELOPMENT PLAN AGREEMENT FOR A REDEVELOPMENT PROJECT INCLUDING THE ISSUANCE OF TIF INDEBTEDNESS FOR THE REDEVELOPMENT PROJECT AND OTHER SUCH ACTIONS UNDER THE COMMUNITY DEVELOPMENT LAW

Councilmember Francescato introduced **Resolution No. 2025-22**, to approve the redevelopment plan agreement for the Parker Baby Co. Project. Councilmember Kolterman moved, seconded by Councilmember Singleton, to approve the resolution as presented.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

4. CONSIDERATION OF AN ORDINANCE RE-ZONING PROPERTY IDENTIFIED AS LOT 1, KRUSE ACRES FROM 'AG – AGRICULTURAL DISTRICT' TO 'RR – RURAL RESIDENTIAL DISTRICT'

Building/Zoning & Code Enforcement Director Dworak described the application as creating a conforming rural residential lot for a property in the extra-territorial jurisdiction. The Planning Commission approved the application unanimously. The public hearing was opened at 7:32 p.m. With no comments received, the hearing was closed at 7:32 p.m.

Councilmember Kolterman introduced Ordinance No. 2025-15. Councilmember Wergin moved, seconded by Councilmember Tonniges, to dispense with the statutory rule.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

Councilmember Kolterman moved, seconded by Councilmember Francescato, that the minutes of the proceeding of the Mayor and the Council of the City of Seward, Seward County, Nebraska in the matter of passing: **Ordinance No. 2025-15**, AN ORDINANCE TO AMEND THE OFFICIAL ZONING MAP OF THE CITY OF SEWARD, NEBRASKA; TO REZONE CERTAIN PROPERTY WITHIN THE EXTRA TERRITORIAL JURISDICTION OF THE CITY OF SEWARD, NEBRASKA NOW ZONED AG AGRICULTURAL DISTRICT, TO RR RURAL RESIDENTIAL; SPECIFICALLY, TRACTS OF LAND SOUTH OF BLUFF ROAD AND EAST OF 308TH RD; TO DESCRIBE THE PROPERTY REZONED; TO PROVIDE FOR PUBLICATION OF THIS ORDINANCE IN PAMPHLET FORM; TO PROVIDE FOR A TIME WHEN THIS ORDINANCE SHALL TAKE EFFECT.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

Councilmember Wergin moved, seconded by Councilmember Singleton, that all ordinances be added to the permanent record.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

5. CONSIDERATION OF AN APPLICATION FOR A SPECIAL USE PERMIT TO ALLOW FOR A TELECOMMUNICATIONS TOWER LOCATED IN THE SOUTH-HALF OF THE NORTHEAST QUARTER OF SECTION 22, TOWNSHIP 11 NORTH, RANGE 3 EAST OF THE 6TH P.M., AND ZONED 'AG – AGRICULTURAL DISTRICT'

Mr. Dworak described the project as a proposal to construct at 245 ft. telecommunication tower at 1545 252nd Road (located approximately north-center of parcel no. 800039351), which is part of the extra-territorial jurisdiction. The engineer's estimate of the fall zone for the crumbling of the structure is approximately 75 ft. from the site, with the nearest property line at 85 ft. which the tower would straddle. The following concerns were raised by the Planning Commission in denying the application unanimously: the fall zone radius to the neighboring property line; the need for construction of an additional tower in the area; and possible radiofrequency (RF) radiation health concerns. The applicant also requested a variance for the landscaping requirements, which would have to be considered by the Board of Adjustment.

The public hearing was opened at 7:38 p.m. with the following comments received:

- Woody Krog from Buell Consulting, representative for applicant Vertical Bridge—informed that the applicant would now comply with landscaping requirements; described that the radio frequency health concerns were a non-issue since wavelengths are controlled by the FCC; noted that fall zone was developed by a licensed engineer. He also felt that the Planning Commission's concerns were unfounded, and the decision was made arbitrarily. He reiterated that the proposed tower was to improve coverage for local T-Mobile customers and co-location and other sites were not feasible. Councilmember Kolterman queried about efforts to communicate with neighbors to the site about

the possible construction of the tower. Mr. Krog responded that they had met all advertising requirements but had not gone door-to-door since there were no neighborhood organizations he was aware of. Councilmember Kolterman queried how the coverage would be improved by the new tower. Mr. Krog noted that as technologies have improved, coverage areas have shrunk due to radio frequencies—T-Mobile has determined this tower would eliminate a local coverage gap. Mr. Krog contended that co-location to an existing tower would not improve local coverage.

- Joel & Gina Germer (1577 252nd Rd)—read a statement from the Ridge Run Homeowners Association which was against construction of the tower due to obstructed views of nearby residents, possible health consequences, lowered property values, fall zone radius, and that the engineer of record was licensed for civil, not structural. The Germer's live directly north of the proposed site. They shared that they had never been contacted by the applicant about the project and their home was within the proposed fall-zone area. They opined that the tower would hinder Seward's growth eastward due to the concerns presented.
- Ryon & Marla Baumbach (1560 252nd Rd)—against construction and expressed concern about health risks associated with radiofrequency waves; opined the tower will lessen property values.

The public hearing was closed at 8:01 p.m. with no other comments received.

Councilmember Singleton moved, seconded by Councilmember Francescato, to deny the application as presented by Vertical Bridge.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

6. REVISIONS OF THE ONE- AND SIX-YEAR STREET IMPROVEMENT PLAN

City Engineer Oneby presented the revisions of the plan and indicated no new projects had been added. The Planning Commission approved the plan unanimously.

The public hearing was opened at 8:27 p.m. With no comments received, the hearing was closed at 8:27 p.m.

Councilmember Singleton moved, seconded by Councilmember Stryson, to approve the revisions to the one- and six-year street improvement plan as presented.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

ADMINISTRATIVE ITEMS

1. CONSIDERATION OF AN AMENDMENT TO THE AGREEMENT WITH SEH, INC. FOR DESIGN AND BIDDING ENGINEERING SERVICES IN THE AMOUNT OF $1,117,295.92 FOR THE WASTEWATER TREATMENT FACILITY IMPROVEMENTS PROJECT

Colin Marcusen, project manager from SEH, spoke to the elements of the proposed amendment. Specifically, the addition of the DARI project will contribute a significant user that will alter the design of the project. As such, SEH continues to work with personnel from the DARI project to understand expected flows/loads, pre-treatment, and surcharge for processing. The previous design was at 90% completion; however, the plant design will now need significant revision before construction can occur. The expected costs for completion now are project near $41 million. The City plans to utilize a State Revolving Fund (SRF) low interest loan at 1.5% with a 30-year payment term.

Councilmember Kolterman moved, seconded by Councilmember Stryson, to approve an amendment to the agreement with SEH, Inc. for design and bidding engineering services for the Wastewater Treatment Facility Improvements Project as presented.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

2. CONSIDERATION OF DESIGN OPTIONS FOR THE RECYCLING CENTER RETAINING WALL PROJECT AS DEVELOPED BY THE SCHEMMER ASSOCIATES

Mr. Oneby updated that he, Street Superintendent Miers, and City Administrator Butcher, had discussed the future of the recycling center and addressing the erosion of the east side of the site. The preferred design would be a gentle slope of the existing wall to allow for grass/vegetation that could be mowed and resistant to further erosion. This design would mean the closing of the cardboard shed and recyclables building with options to place rolloff

containers to allow for a cheaper, unmanned alternative. The terms of the deed from the Izaak Walton League to the City called for a dedicated site for recycling to serve Seward County residents, which this alternative would fulfill.

Councilmember Singleton moved, seconded by Councilmember Stryson, to proceed with alternative #3 for stabilizing the recycling center embankment as developed by The Schemmer Associates .

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

3. CONSIDERATION OF A REQUEST TO EXTEND CDBG #21DTR011 TO JUNE 30, 2025, AND AUTHORIZE THE MAYOR TO SIGN ALL DOCUMENTS

City Administrator Butcher indicated the amendment would close out items to complete the project.

Councilmember Stryson moved, seconded by Councilmember Singleton, to approve a request to extend CDBG #21DTR011 to June 30, 2025, to decrease proposed beneficiaries, and for the Mayor to sign all documents.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

4. CONSIDERATION OF A MEMORANDUM OF UNDERSTANDING BETWEEN THE CITY OF SEWARD AND DARI PROCESSING, LLC, REGARDING SEWARD RAIL CAMPUS SITE READINESS

The draft agreement was not finalized prior to the meeting; thus, this item was tabled.

5. CONSIDERATION OF A RESOLUTION TO DESIGNATE CITY ITEMS AS SURPLUS

Councilmember Kolterman introduced **Resolution No. 2025-23**, to designate City items as surplus. Councilmember Wergin moved, seconded by Councilmember Francescato, to approve the resolution as presented.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

CITY ADMINISTRATOR'S REPORT

Councilmember Wergin moved, seconded by Councilmember Kahler, that the City Administrator's report of June 17, 2025, be accepted.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

MOTION TO ADJOURN

Councilmember Singleton moved, seconded by Councilmember Stryson, that the June 17, 2025, City Council Meeting be adjourned.

Aye: Francescato, Kahler, Kolterman, Singleton, Stryson, Tonniges, Wergin.
Nay: None. Absent: Miller. Motion carried.

Adjourned approximately 8:59 p.m.

THE CITY OF SEWARD, NEBRASKA

_____
Joshua Eickmeier, Mayor

_____
Derek Bargmann, City Clerk

DRAFT

ADMINISTRATIVE ITEMS

1. Consideration of an Emergency Purchase by the Electric Department to Rebuild Electric Infrastructure Damaged by the March 19, 2025 Blizzard Disaster - Electric Superintendent Hochstein

City of Seward
537 Main Street
Seward NE 68434
Phone: 402-643-2928

July 1, 2025

To: Seward City Council
RE: Repair to 34.5 kV line north of Augusta Drive

On March 19, 2025, a severe snowstorm caused significant damage to our electrical infrastructure. Mayor Eickmeier declared an emergency proclamation and later a disaster declaration was issued by President Trump. Locally, a section of the transmission line located north of Augusta Drive, between the Water Tower Substation and the 14th Street Substation, was lost. As a result, our system no longer has a loop feed supplying the Water Tower and Second Street Substations, reducing system reliability and redundancy.

To address this issue, Olsson Associates was engaged to develop a comprehensive rebuild plan, including pole framing designs, pole span layouts, sagging charts, and a detailed material list. The affected section of the line was heavily obstructed by trees and brush, which needed to be cleared to allow truck access for reconstruction. The old line has since been removed, and a 30-foot right-of-way has been cleared.

Due to the critical importance of restoration of the damaged line, I reached out to Great Plains Power regarding a quote for the rebuild. Great Plains Power submitted a bid of $108,465 for materials and labor to complete the rebuild. They informed us that they were finishing a project in Fairbury and could potentially begin our job before starting another in Plainview, Nebraska. If not scheduled immediately, the next available opportunity would be after completion of the Plainview project, which is estimated to take approximately two months.

Due to the emergency nature of restoring transmission redundancy and maintaining system reliability, I recommend that we accept this quote and proceed with the project as per Section IX of the Purchasing Policy.

Please let me know if additional information is needed.

Sincerely,
Jared Hochstein
Electric Superintendent

GREAT PLAINS POWER
3716 W OLD HWY 30
GRAND ISLAND, NE 68803

June 20, 2025

Jared Hochstein
City of Seward, NE
1345 River St
Seward, NE 68434

Great Plains Power appreciates the opportunity to submit a quote for 34.5kv project. Our quote is $24,585.00 for the material and $108,465.00. We would be able to start this project next week if the weather permits.

The scope of the work includes but not limited too. Setting wood poles and structures. Stringing wire and removing all old poles and material.

If you have any questions or concerns give me a call at the number below.

Kevin Hulse

Kevin Hulse
Great Plains Power, LLC
308-380-6314
khulse@gppowerllc.com

PURCHASING POLICY, 2025-001

SECTION I: INTRODUCTION

The City of Seward's Purchasing Policy is intended to serve as a consistent guide for all departments in efficiently obtaining supplies, materials, equipment, and services in a competitive and impartial manner. The City shall strive to acquire goods and services for City use which are deemed reasonable and necessary, meet the specifications identified in the solicitation, and are at the lowest cost available. The City of Seward shall comply with all federal, state, and local rules regarding procurement. All City Departments, Boards, and Commissions shall comply with this policy with exception to the Langworthy Trust when purchasing items or services directly for the benefit of the Civic Center.

SECTION II: COMMITMENT TO COMPETITIVE, OPEN & FAIR COMPETITON

The City seeks to maximize competition within the competitive procurement process to effect cost savings and to provide more value for the tax dollar. The City of Seward shall always strive to undergo procurement in the manner of open and fair competition with inclusion to minority and/or women-owned (M/WBEs) vendors.

SECTION III: DEFINITIONS

The following words, terms, and phrases, when used in this article, shall have the meanings respectively ascribed to them in this section, except where the context clearly indicates a different meaning:

Acceptable Bid: A bid or proposal received by the City which is less than one hundred and fifty percent (150%) of the estimated amount and which meets all specifications in the solicitation.

Change Order or Change Order Request: A proposal to make changes to a contract/agreement that may be approved by the Purchasing Officer or designee or by the City Council as is needed.

Contractual Services: Shall include insurance, leases, maintenance, repair, and rental agreements, for City-owned property and/or equipment used for operations.

Lowest Acceptable Bid: The most cost efficient and effective bid, including the sum of all costs, which meets the requirements as set out in the bid request.

Payment Bond: Shall mean a bond issued to the City, executed by a surety company, to ensure a financial guarantee for all persons supplying labor, materials, equipment, or supplies to the contractor or its subcontractors for the performance of the work provided for in the contract or agreement. The bond shall comply with the provisions of Neb.Rev.Stat. 52-118.

Performance Bond: Shall mean a bond issued to the City, executed by a surety company, to ensure that the contractor or vendor will perform the work outlined in the contract or agreement. The City may receive compensation in the event of noncompliance.

Public Bid: Shall mean the purchase of goods or services requiring a public notice of bid letting; a deadline for the receipt of sealed bids; and the opening of sealed bids at a designated time and place.

Quote: A quote shall mean a statement by a supplier stating the schedule, cost, and delivery of the goods or services to be delivered.

Request for Proposal (RFP): A publicly advertised request to perspective vendors to submit a proposal addressing the cost, schedule, and approach to the project in which price and project specifics are not well defined. Often, the lowest responsible bidder is chosen.

Request for Qualifications (RFQ): A publicly advertised request to perspective vendors to submit a list of team members, a portfolio of experience, intended approach to the project, and references to meet the identified price and project specifics. Often, the vendor deemed most qualified is chosen.

SECTION IV: AUTHORITY ROLES AND RESPONSIBILITIES

The City Council is responsible for approving and adopting an annual operating budget to guide City expenditures, adopting the Purchasing Policy, setting City policy and decision-making regarding large purchases, and providing direction on the provision of City services. The City Administrator, or designee, shall act as the official Purchasing Officer of the City of Seward. As Purchasing Officer, they shall administer all procurement procedures for the City, including but not limited to:

1. Oversight of all purchase of supplies, equipment and machinery needed by any City Department, Board or Commission in as full, open, and competitive manner as is possible;
2. Procurement of the highest quality supplies, equipment and machinery at least expense for the City; purchasing in bulk whenever feasible; and to procure for the City all tax exemptions to which it is entitled;
3. Maintaining documentation of all purchases for budgeting, accounting, and auditing purposes;

4. Recommending the disqualification of vendors who have been deemed an irresponsible bidder ; and
5. Maintaining and recommending amendments, when necessary, to the City Purchasing Policy.

Under the authority of the City Council and the Purchasing Officer, department heads are delegated purchasing authority and responsibility as established in this policy and as set by the annually adopted City Operating Budget. If a department deviates from the procurement policies and procedures without advanced approval by the City Administrator, it may result in discipline up to and including termination.

SECTION V: – REVIEW AND AUTHORIZATION OF AGREEMENTS

All contracts, including but not limited to rental or lease agreements, contracts for goods and services, facility use agreements, and interlocal agreements, must be reviewed and approved by the City Attorney prior to execution. All contracts of any sort must be signed by either the Mayor, upon approval of the City Council, or the City Administrator. Change orders to an executed agreement shall be considered by Council and signed by Mayor or City Administrator, where applicable. Change order requests may be approved by the Purchasing Officer, or designee, as is needed to keep the project moving. A copy of all contracts of any sort must also be forwarded to the City Clerk for processing and recordkeeping upon execution. Contracts and procurement documents are subject to public record requests and retention requirements.

SECTION VI: STANDARD SUPPLIES The Purchasing Officer, or designee, shall supervise the purchasing of general supplies which are common among Departments, such as paper, pens, pencils, cleaning supplies, etc.

A. GUIDELINES FOR USAGE OF CREDIT CARD

Designated department heads or employees may be issued a credit card for purchase of standard supplies. The cardholder is responsible for the security of their card and all transactions made on the card. In the event of a lost card or suspected fraud, the Finance Director and City Administrator should be notified immediately. Itemized invoices, receipts, and packing slips should support that the cardholder is using their credit card responsibly and in accordance with their established budget and the purchasing policy. Below, are some basic rules about use of a City credit card:

- The card shall only be used for official business purposes and with sufficient budget authority.
- Cardholders shall strive to make tax exempt purchases where possible.
- Purchaser must be able to explain the nature of all purchases and the need for official City business.
- Purchases must have a detailed receipt and shall be able to be reconciled to the monthly statements.
- Cardholders will surrender the card at the discretion of the Purchasing Officer or at their termination.

B. PETTY CASH

A petty cash fund may be established to enable departments to make small, necessary purchases when a check is not available, or a credit card cannot be used. Departments wishing to establish a new or modifying an existing petty cash fund shall contact the Finance Director. Petty cash accounts will be reconciled weekly or as often as is needed with receipts to match the purchases.

SECTION VII: METHODS OF PROCUREMENT FOR CONSTRUCTION, EQUIPMENT, MATERIALS, OR SUPPLIES

The Purchasing Officer, or designee, shall seek at least three competitive quotes or bids to secure the best product or service at the least expense to the City. Procurement methods shall be utilized depending on the dollar value of contracted capital construction projects, or the purchase of equipment, materials, parts, or supplies:

A. Informal Quotations (not applicable to items deemed as 'standard supplies'):

For purchases of less than $2,500.00—excluding freight and taxes—the Department Head, or their designee, shall ensure to the greatest extent feasible that each purchase be made at the least expense possible. The supplier should provide a firm price, delivery time, and payment terms. If all informal quotations exceed $2,500 the process shall move to written quotations.

B. Written Quotations:

For purchases between $2,500 and $30,000, the Department Head, or their designee, shall, whenever possible, gather at least three competitive quotes, and shall award to the lowest responsible vendor with approval from the Purchasing Officer or designee. The quote shall provide a firm price, delivery time, and payment terms. If all quotations exceed $30,000 the process shall move to formal public bidding.

C. Formal Public Bidding:

For purchases above $30,000—which require formal bidding according to City Code 44-1.24 and Neb.Rev.Stat. 16-321—a Department Head, in coordination with the Purchasing Officer or designee, shall prepare the necessary plans, specifications, cost estimates, and bid documents for City Council approval. Notice of bid shall be published at least seven days prior to the bid closing in a legal newspaper in or of general circulations in the city. The notice shall include a general description of the articles to be purchased, and state where bid documents may be acquired, and state the date, time, and place for opening bids. When deemed

necessary by the City, payment or performance bonds may be required for formal submission of a bid. Bids to be opened at City Hall shall be submitted 'sealed' to the City Clerk's Office and shall indicate the name of the firm and purpose of the bid. Bids shall be opened on the date, time, and place stated in the public notice. A tabulation of bids shall be available for public inspection. The City shall have the authority to reject all bids or parts of all bids. The City Council shall have the authority to declare a vendor or contractor an irresponsible bidder and to disqualify them from receiving any business from the City of Seward, if said vendor: 1). Has defaulted on previous bids, quotes, contracts, or projects; 2). Has previous unresolved performance issues with the City; 3). Is involved in collusion with other bidders; 4) Has failed to timely complete previous projects or contracts with the City; 5). Has unpaid debts owed to the City; 6). Has insufficient prior experience with similar projects; or 7). Is disqualified through SAM.gov registration.

A Contract shall be awarded to the lowest responsible bidder, determined by price and the following factors: the ability, capacity, and skill of the bidder to perform the contract or provide the service required; whether the bidder can perform the contract or provide the service promptly, or within the time specified, without delay or interference; the character, integrity, reputation, judgment, and efficiency of the bidder; the quality of performance of previous contracts or services; the previous and existing compliance by the bidder with laws and ordinances relating to the contract or service; the sufficiency of the financial resources and ability of the bidder to perform the contract or provide the service; the quality and availability of the goods or contractual services to the particular use required; the ability of the bidder to provide future maintenance and service for the use of the subject of the contract; and, the number and scope of conditions attached to the bid.

When the award is not given to the lowest bidder in price, a full and complete statement of the reasons for placing the award elsewhere shall be prepared by the Purchasing Officer or designee. If all bids received by the City are in excess of one hundred and fifty percent (150%) of the Engineer's estimate, then such bids may be deemed unacceptable, and the City Council may request a rebid. The City shall neither impose nor condone any bidding or procurement policies that result in exclusionary or anti-competitive bidding or violate state or federal anti-trust laws. If multiple lowest bids received are for the same total amount or unit price, the Purchasing Officer shall recommend a bid order for consideration. Once a recommendation of 'lowest responsible bidder' is determined, the Purchasing Officer or designee shall present the bid tabulation to the City Council for consideration. The City Council shall authorize the award for all purchases in the formal public bidding process.

D. Electric Department Procurement

As a municipal electric utility exceeding $10 million in retail sales, the City's Electric Department is subject to Neb.Rev.Stat. 16-321(5) regarding procurement. For purchases between $2,500 and $120,000, the Department Head, or their designee, shall, whenever possible, gather at least three competitive quotes, and shall award to the lowest responsible vendor with approval from the Purchasing Officer or designee. If all quotations exceed $120,00.00 the process shall move to formal public bidding.

E. State Bids and Bidding Collectives

The City may, where applicable and cost effective, consider purchases under a State of Nebraska contract, vendor, bid, or cooperative purchase. In these situations, a vendor has extended the same terms and pricing to other governmental entities; therefore, the administrative burden and time is greatly reduced. In these instances, the Purchasing Officer or designee will work with State to secure the procurement terms and conditions. This item shall be presented to the City Council for consideration before execution.

F. Sole Source Procurement

Exemption from competitive procurement is permitted when a determination has been made by the Purchasing Officer, in consultation with a department head, that there is only one source reasonably available to provide a supply or service. The following instances permit the use of a sole source provider for procurement: 1). The vendor is the original equipment or service provider and required parts, equipment, or software are unavailable from another vendor; 2). Incompatibility or non-conformity with City owned equipment, materials, or software; or 3). The vendor provides a unique supply or service, and no similar supply or service is available or suitable. In rare instances sole source materials or equipment may have a substantial lead time for delivery. If such items require payment upon delivery or at a later date, and exceed $30,000, approval by the City Council prior to order or procurement will be required. The Purchasing Officer, Department Head, or designee should consult with the City Administrator in all such instances for direction and guidance.

G. Political Subdivisions Construction Alternatives Act

When utilizing this mode of project completion, the City shall be in adherence to City Code, Chapter 100, Article II and Sections 13-2901-13-2914 of the Neb.Rev.Stat.

SECTION VIII: PROFESSIONAL SERVICES

Professional services occur when technical expertise or knowledge of a specialized field is critical to the performance of that service, typically in legal, engineering, architectural, financial, real estate, insurance, consulting, or information technology services. Such

services may be solicited through a Request for Proposals (RFP) or Request for Qualifications (RFQ) at the discretion of the Purchasing Officer or City Council. The RFP or RFQ process may include notice of proposal, establishment of a receipt date and open, and a tabulation of all proposals received for the solicitation. If addendums are made to the solicitation, they shall be distributed to existing planholders and posted to the site in which the bid advertisement is visible. Such professional services shall be reviewed on the basis of the vendor's ability to perform the work, the experience of the assigned personnel and the firm, the quoted fee, and the proposed time frame for completion. A recommendation shall be made by the Purchasing Officer or designee and shall be considered by the City Council. Any contract awarded for such services may be written to reflect that services will continue until terminated by one of the parties.

SECTION IX - EMERGENCY PURCHASES Emergency purchases are considered only when adherence to normal purchasing policies and procedures would threaten: (1) the functioning of City government; (2) the preservation or protection of property, machinery, or equipment; and/or (3) the health or safety of any person. In the event of an emergency, which requires the immediate purchase of supplies, equipment, or contractual services exceeding $5,000, the Purchasing Officer (or designee in their absence) with the concurrence of Mayor (or Council President in their absence) shall be authorized to secure the materials in the most expeditious, cost-effective manner possible. In these instances, a report of the circumstances of the emergency purchase shall be presented by the City Administrator at the next regularly scheduled Council meeting.

SECTION X - SURPLUS PROPERTY

The City shall dispose of surplus property according to Chapter 44, Section 1.26 of the City Code.

SECTION XI – APPLICABILTY TO REPAIRS AND MAINTENANCE TO BUILDINGS AND VEHICLES

This policy applies when the purchase of maintenance parts or the cost of repairs to vehicles or machinery exceeds $500—including replacement of tires or batteries. In these instances, the Purchasing Officer or designee shall be contacted for prior approval or in emergency instances, notified as soon as possible thereafter.

SECTION XII - PROHIBITION OF CITY EMPLOYEE INVOLVEMENT

No public official or public employee, a member of that individual's immediate family, or business with which the individual is associated shall enter into a contract valued at two thousand dollars ($2,000.00) or more, in any year, with a government body unless the contract is awarded through an open and public process. If deemed to provide a conflict of interest, a public official must abstain from a vote of consideration of the award. An open and public process includes prior public notice and subsequent availability for public inspection during the regular office hours of the contracting government body of the proposals considered and the contract awarded. No contract may be divided for the purpose of evading the requirement of this section. Purchases from City elected officials or appointed voluntary officials are allowable, provided said purchases comply with Chapter 100, Article I of City Code.

SECTION XIII - GIFTS AND REBATES

All City employees are expressly prohibited from accepting any fee, reward, gift or gratuity from any vendor, except in those instances where a departmental gift or gratuity is of nominal value.

SECTION XIV - COMPLIANCE WITH CITY PURCHASING POLICY Failure to comply with above purchasing policies may be cause for disciplinary action up to and including termination from City service at the discretion of the City Administrator.

2. Consideration of a Resolution to Enter into a Loan Agreement with the Nebraska Department of Water, Energy, and Environment (NDWEE) in the Amount of $50,500,000 for the Wastewater Treatment Plant Improvements Project **(REPLACES Res. No. 2025-12)** - City Engineer Oneby

LOAN AGREEMENT
(Governmental Borrower)

Between the

NEBRASKA DEPARTMENT OF WATER, ENERGY, AND ENVIRONMENT

And

CITY OF SEWARD, NEBRASKA

NDWEE PROJECT NO. C318082

DATED AS OF _____

DRAFT COPY FOR REVIEW.

PLEASE SEE EMAIL FOR MORE INFORMATION.

ATTACHMENT E & ATTACHMENT F ARE NEEDED BEFORE LOAN CAN BE SIGNED.

THIS DOCUMENT IS LOCKED, BUT COMMENTS CAN BE MADE USING "REVIEW" RIBBON AND "NEW COMMENT" OPTIONS IN WORD.

LOAN AGREEMENT
BETWEEN THE
NEBRASKA DEPARTMENT OF WATER, ENERGY, AND ENVIRONMENT
AND
THE CITY OF SEWARD, NEBRASKA
PROJECT NO. C318082

This LOAN AGREEMENT with SRF Number C318082 (hereinafter "Loan Agreement") is entered into by and between the State of Nebraska, acting by and through the Nebraska Department of Water, Energy, and Environment (hereinafter "NDWEE") and the City of Seward, Nebraska (hereinafter "Borrower").

WITNESSETH THAT

WHEREAS, the Federal Water Pollution Control Act, and all amendments thereto (hereinafter "Federal Act"), including the Water Quality Act of 1987, established a state revolving fund program; and

WHEREAS, to fund the state revolving fund program, the United States (US) Environmental Protection Agency (hereinafter "EPA") will make annual capitalization grants to the states under Catalog of Federal Domestic Assistance (CFDA) #66.458 for Clean Water State Revolving Funds, on the condition that each state provide an appropriate match for such state's revolving fund; and

WHEREAS, Nebraska Revised State Statute (Neb. Rev. Stat.) §81-15,153 empowers the NDWEE to loan available funds in the Wastewater Treatment Facilities Construction Loan Fund (hereinafter "Fund") to borrowers pursuant to the Wastewater Treatment Facilities Construction Assistance Act (hereinafter "Act") and rules and regulations adopted under such Act; and

WHEREAS, under the Act, the Director of the NDWEE is given the responsibility for administration and management of the Fund; and

WHEREAS, pursuant to such authorization, the Nebraska Investment Finance Authority (hereinafter "NIFA") may, from time to time, issue its Wastewater Treatment Facilities Construction Loan Fund revenue bonds for the purpose of financing wastewater treatment projects (as defined in the Act), including to provide funds for the NDWEE to loan to borrowers and to satisfy the state match requirements of the Federal Act; and

WHEREAS, the NDWEE may, from time to time, enter into a pledge agreement with the NIFA (hereinafter "Pledge Agreement"), pursuant to which the NDWEE will pledge the interest portion of loan repayments (as defined herein) and certain other revenues to the NIFA for the payment of the principal of, redemption premium, if any, and interest on Clean Water State Revolving Fund Revenue Bonds, which may be issued by the NIFA from time to time; and

WHEREAS, the City of Seward, Nebraska, is a "Municipality" as defined in Neb. Rev. Stat. §81-15,149(10); and

WHEREAS, the project to be financed under this Loan Agreement, as described in Exhibit 1 (hereinafter "Project") of this Loan Agreement, is an eligible project under the Act; and

WHEREAS, the Project Costs (as defined herein) are based upon estimates of the Borrower and at times during or at completion of construction, the loan amount may be adjusted by the NDWEE pursuant to Section 2.01 of this Loan Agreement; and

WHEREAS, the Borrower is listed in the NDWEE Intended Use Plan; and

WHEREAS, the NDWEE has approved the Borrower's application for a Loan from federal funds and the state match requirement if and when received by and made available to the NDWEE pursuant to the Federal Act and the Act to finance Project Costs; and

NOW, THEREFORE, for and in consideration of the award of the Loan Agreement by the NDWEE, the Borrower agrees to complete its Project and to perform under this Loan Agreement in accordance with the conditions, covenants, and procedures set forth in this Loan Agreement.

ARTICLE I

DEFINITIONS

Section 1.01. Definitions. The following terms as used in this Loan Agreement will, unless the context clearly requires otherwise, have the following meanings:

(a) “Act” means the Wastewater Treatment Facilities Construction Assistance Act, Neb. Rev. Stat. §81-15,147 et seq., as amended.

(b) “Additional Revenue Obligation” means any obligation for the payment of money undertaken by the Borrower which is payable from or secured by a pledge of, or lien upon, the System Revenues incurred after the date of execution and delivery of this Loan Agreement, including any capital lease entered into by the Borrower the rentals of which are payable from, or secured by a pledge of or lien upon, System Revenues.

(c) “Authorized Representative" means the person or persons authorized pursuant to a resolution or ordinance of the governing body of the Borrower to perform any act or execute any document relating to this Loan Agreement.

(d) "Borrower" means the City of Seward, Nebraska that is a party to and is described in the first paragraph of this Loan Agreement, and its successors and assignees.

(e) “Clean Water State Revolving Fund” or “CWSRF” means the Nebraska Clean Water State Revolving Fund Program established pursuant to the Act and Regulations.

(f) "Cut-off Date" means the date established by the NDWEE, prior to which, the Borrower will make the final disbursement request for eligible Project Costs.

(g) “Disadvantaged business enterprise” or “DBE” means an entity owned or controlled by a socially and economically disadvantaged individual as described by Public Law 102-389 (42 U.S.C. 4370d) or an entity owned and controlled by a socially and economically disadvantaged individual as described by Title X of the Clean Air Act Amendments of 1990 (42 U.S.C. 7601 note); a Small Business Enterprise (SBE); a Small Business in a Rural Area (SBRA); or a Labor Surplus Area Firm (LSAF), a Historically Underutilized Business (HUB) Zone Small Business Concern, or a concern under a successor program.

(h) "Drinking Water System" means the structures, equipment, and processes to obtain source water, treat the source water, store water, distribute drinking water fit for human consumption, and dispose of any byproducts from the processes.

(i) "Due Date" means the dates specified for payment of principal and interest on the Loan as specified in Section 2.06.

(j) "Event of Default" means any occurrence or event specified in Article V of this Loan Agreement.

(k) “Existing Revenue Obligation” means any obligation for a payment of money undertaken by the Borrower which is payable from or secured by a pledge of, or lien upon, the System Revenues existing or outstanding at the time of execution and delivery of this Loan Agreement by the Borrower, including any capital lease entered into by the Borrower the rentals of which are payable from, or secured by a pledge of or lien upon, System Revenues.

(l) “Federal Act” means the Federal Water Pollution Control Act, et seq. as amended.

(m) “Fund" means the Wastewater Treatment Facilities Construction Loan Fund established pursuant to the Act.

(n) “GAAP” means generally accepted accounting principles as applicable to the Public Water System.

(o) “Indebtedness” means any financial obligation of the Borrower for the repayment of borrowed moneys or credit extended, including, without duplication, this Loan, Revenue Obligations, general obligation bonds or notes, leases or lease-purchase agreements, or similar financial transactions.

(p) “Initiation of Operation" means the date on which the Borrower places the Project in operation or the Project is capable of being placed in operation for the purposes for which it was planned, designed, and built.

(q) “Intended Use Plan” means a document prepared annually by the NDWEE which identifies the intended use of all State Revolving Fund program funds.

(r) "Late Payment" means any payment that is not received within fifteen days of the due date as established by this Loan Agreement.

(s) "Loan" means the loan made by the NDWEE to the Borrower to finance or refinance all or a portion of the Project Costs pursuant to this Loan Agreement.

(t) "Loan Agreement" means this Loan Agreement, including the Attachments hereto, as it may be properly supplemented, modified, or amended.

(u) "Loan Amount" means the principal amount specified in Section 2.01 of this Loan Agreement and as amended which the NDWEE has agreed to disburse to the Borrower subject to the terms, provisions, and conditions of this Loan Agreement and the availability of State and Federal Funds.

(v) “Loan Finalization Date” means the date established by this Loan Agreement in which the Loan Amount is considered finalized and no further disbursement can be made outside of the Loan Agreement being amended.

(w) "Loan Repayments" means the payments of the Loan required to be made by the Borrower pursuant to Section 2.06 of this Loan Agreement.

(x) "Loan Terms" means the terms as established by this Loan Agreement.

(y) “NDWEE" means the Nebraska Department of Water, Energy, and Environment established pursuant to Neb. Rev. Stat. §81-1501 et. seq, as amended.

(z) “NIFA" means the Nebraska Investment Finance Authority, a public body politic and corporate and an instrumentality of the State, and its successors and assigns established pursuant to Neb. Rev. Stat. §58-201 et seq., as amended.

(aa) “Note” means a promissory note of the Borrower with respect to the Loan in the form of Attachment F to this Loan Agreement.

(bb) “Project" means an eligible item for funding under the Act and is as described in Exhibit 1 of this Loan Agreement.

(cc) "Project Costs" means eligible costs or expenses necessary or incidental to the Project, which are directly attributable thereto and which in the determination of the NDWEE are eligible under the Federal Act, and the Act, and Regulations. Estimated Project Costs are described in Attachment B.

(dd) "Regulations" means the Nebraska Administrative Code, Title 131, Rules and Regulations for the Wastewater Treatment Facilities and Drinking Water Construction Assistance Programs, and any amendments thereto promulgated by the NDWEE pursuant to the Act.

(ee) "Retainage" means construction costs held back by the Borrower from the payments due to the contractor to assure satisfactory completion of the construction agreement.

(ff) “Revenue Obligation” means, without duplication, (i) the Loan; (ii) any Existing Revenue Obligation; and (iii) any Additional Revenue Obligation.

(gg) “Sanitary Sewer Collection System” means the structures, equipment, and processes required to collect and transport sanitary sewer wastewater to the wastewater treatment facility.

(hh) “SEC Rule” means Rule 15c2 12 adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as such rule may be amended from time to time or such other similar rule regarding disclosure of information in securities transactions.

(ii) “State" means the State of Nebraska acting, unless otherwise specifically indicated, by and through the NDWEE and its successors and assignees.

(jj) “Subsidies” means Loan Forgiveness Grant funds as established by Section 2.01(a) of this Agreement that are provided as grant concurrently with the loan amount to the Borrower.

(kk) “System Revenues” means all revenues derived by the Borrower from the User Charge System.

(ll) "Trustee" means the trustee under any trust indenture with respect to revenue bonds the proceeds of which are deposited in the Fund.

(mm) “User Charge System” means the methodology used to assess user charge fee(s) for the users of a utility or utilities within the Borrower’s jurisdiction. This includes the fees and charges for the use and services furnished by or through Wastewater Treatment Facility and Sanitary Sewer Collection System, or if applicable, a Combined Utilities System to the Borrower and as defined herein of this Loan Agreement. Revenues shall include, without limitation:

(1) Receipts from all charges imposed upon users for service(s) provided; and

(2) Receipts from hookup fees, tap fees, capital facilities charges connected with the use or right to use the Wastewater Treatment Facility and Sanitary Sewer Collection System, or, if applicable, right to use the Combined Utilities System, for any part thereof (specifically including the Project) whether any such receipts (as described herein of the definition of User Charge System of this Loan Agreement) are directly received by the Borrower from customers or indirectly through interlocal or other agreements with other political subdivisions.

(nn) "Wastewater Treatment Facility" or “Wastewater Treatment Works” means the structures, equipment, and processes required to treat domestic or industrial wastes and to discharge or dispose of the effluent and sludges.

ARTICLE II

LOAN CONDITIONS AND TERMS

Section 2.01. Amount of the Loan. Subject to all of the terms, provisions, and conditions of this Loan Agreement, and subject to the availability of State and Federal funds, the NDWEE will loan amount not to exceed fifty million five hundred thousand dollars ($50,500,000) to the Borrower to pay a portion of the Project Costs described in Attachment B hereto.

The final actual amount of the Loan may be reduced without revision of any other terms, provisions, or conditions of this Loan Agreement, other than adjustment by the NDWEE to the final repayment schedule in Attachment A hereto, to reflect reductions in the estimated or actual total Project Costs as impacted by opening of bids for construction, change orders, final actual costs, and prepayments.

The Borrower must make provisions for the payment of all costs of the Project exceeding the Loan Amount. The NDWEE may provide supplemental loan funds through a separate Loan Agreement. Receipt of any supplemental loan funds is dependent on availability of unobligated funds in the Fund and any obligation of additional funds to this Project is at the sole discretion of the NDWEE with such revised or additional terms, conditions, and covenants as the NDWEE may require.

Section 2.02. Term of the Loan. The Borrower agrees to fully repay the Loan with interest on the date of Initiation of Operation or to begin repayment of principal and interest on the Loan within one (1) year from the date of Initiation of Operation, but no later than three (3) years from the date of the Loan, whichever occurs first, and to repay such Loan in full no later than thirty (30) years from Initiation of Operation and to pay all principal, interest, administrative fees, and penalty fees when due. The Borrower shall provide the NDWEE no less than 60 days written notice of its intent to repay the Loan all or in part on the date of the Initiation of Operation.

Section 2.03. Interest Rate. The interest rate on this Loan is determined by the NDWEE pursuant to Regulations and the Intended Use Plan and is applied to outstanding principal. The interest rate on this Loan is 0.7% per annum (calculated on the basis of a year equaling 360 days made up of 12 months of 30 days each) to be paid pursuant to Section 2.06 of this Loan Agreement.

Section 2.04. Administrative Fee. The administrative rate on this Loan is determined by the NDWEE pursuant to Regulations and the Intended Use Plan and is applied to outstanding principal. The Borrower shall pay to the NDWEE, or at the direction of the NDWEE, to the NIFA or the Trustee, an annual administrative fee of 0.7% per annum (calculated on the basis of a year equaling 360 days made up of 12 months of 30 days each) to be paid pursuant to Section 2.06 of this Loan Agreement.

Section 2.05. Disbursement of Loan. Until the date of Loan Finalization, the Borrower may request disbursement of the loan pursuant to the following conditions:

(a) Upon receipt of a disbursement request for work completed accompanied by any certification from the Borrower required by the NDWEE, the NDWEE shall make progress disbursements as established by Section 2.01 of this Loan Agreement that correspond to such request of the Loan Amount to be used by the Borrower for Project Costs. The Borrower may obtain a copy of the disbursement record upon request to the NDWEE. Each disbursement shall be Automated Clearing House (ACH) by the State of Nebraska and shall be equal to that portion of the unobligated principal amount incurred to the date of the request for disbursement from the Borrower.

(b) Minimum Disbursement Percentage. The minimum amount of a disbursement request that is not a final request must be at least 5% of the total loan amount of this Loan Agreement or $150,000, whichever is the lesser, or the NDWEE may choose not to process the request.

(c) Submitted requests for disbursement must be supported by the following: (i) proper invoices for Project Costs; (ii) a certificate of the Authorized Representative to the effect that all representations made in this Loan Agreement remain true as of the date of the request and that no adverse developments affecting the financial condition of the Borrower or its ability to complete the Project or to repay the Loan have occurred since the date of this Loan Agreement; and (iii) other documentation acceptable to and approved by the NDWEE.

(d) The Borrower may request disbursement of the Loan Amount for eligible Project Costs, when such Project Costs have been incurred and are due and payable to project contractors. However, actual payment of such Project Costs by the Borrower is not required as a condition of a disbursement request. Any Retainage withheld by the Borrower corresponding to the progress payment made to any contractor will be withheld by the NDWEE until such Retainage is either reduced or released to the contractor by the Borrower.

(e) Additional requirements for disbursement include:

(1) Operation and Maintenance Manual. The Borrower shall submit a draft of the operation and maintenance manual for the Project to the NDWEE before disbursements exceed 75% of the Project Costs. The Borrower shall submit a final operation and maintenance manual to the NDWEE and receive approval before disbursements exceed 95% of the Project Costs or final disbursement, whichever occurs first.

(2) Fiscal Sustainability Plan. In accordance with the Regulations, a recipient of a CWSRF loan for a project that involves the repair, replacement, or expansion of a Wastewater Treatment Works must develop and implement a Fiscal Sustainability Plan (FSP) that includes, at minimum:

i. An inventory of critical assets that are part of the Wastewater Treatment Works;

ii. An evaluation of the condition and performance of inventoried assets or asset groupings;

iii. A certification that the Borrower has evaluated and will be implementing water and energy conservation efforts as part of the plan; and

iv. A plan for maintaining, repairing, and, as necessary, replacing the Wastewater Treatment Works assets and a plan for funding such activities.

The Borrower agrees to develop, implement, and provide certification to the NDWEE that their FSP meets these requirements before disbursements exceed 95% of the Project Costs or before final disbursement, whichever occurs first.

(3) Cost and Effectiveness Analysis. The Borrower agrees that a cost and effectiveness analysis has been conducted in accordance with the Regulations and Section 2.10(r) of this Loan Agreement, and agrees to provide certification of a cost and effectiveness analysis being completed to the NDWEE before disbursement of construction costs for the Project.

(f) If a request for disbursement is not received by the NDWEE within eighteen (18) months from either the effective date of this Loan Agreement or the last disbursement request, the NDWEE may finalize, close, or terminate this agreement pursuant to Section 6.12 of this Loan Agreement.

Section 2.06. Loan Payments.

(a) Principal and Interest Payments. The Borrower shall pay to the NDWEE, or at the direction of the NDWEE, to the NIFA or the Trustee, on or before the due dates specified below, but only from the sources specified in Section 3.02 hereof, appropriate installments of principal and interest until all principal and interest due on the Loan to the NDWEE has been paid in full. Installments of principal,

interest, and administrative fees shall be paid semiannually on December 15 and June 15 of each year in accordance with the Loan Repayment Schedule in Attachment A; provided that, following the receipt of the Initiation of Operation date and the final disbursement of Loan proceeds to the Borrower, a revised Attachment A shall be prepared by the NDWEE to establish the final debt service schedule based upon the parameters described in the projected Attachment A. Such revised final Attachment A thereafter shall be deemed to be incorporated herein by reference and made a part hereof and shall supersede and replace the projected Attachment A.

The NDWEE will send the Borrower an invoice 30 days prior to the due date of each payment. When a Loan disbursement occurs after invoices are mailed, the NDWEE will include adjustments for interest and fee charges on the next semiannual invoice.

(b) Optional Prepayment of the Loan.

(1) If the Borrower is receiving Loan Forgiveness, the Borrower may not prepay the Loan in whole or in part within ten (10) years of the date of this Loan Agreement. After the ten years, the Borrower may prepay the Loan together with any accrued interest in whole or in part without penalty upon giving no less than 60 days written notice to the NDWEE of its intent to prepay.

(2) If the Borrower is not receiving Loan Forgiveness, the Borrower may prepay the Loan together with any accrued interest in whole or in part at any time without penalty upon giving no less than 60 days written notice to the NDWEE of its intent to prepay.

(3) Once the Borrower is able to prepay the loan, the Borrower may make a partial prepayment of the Loan Amount only if the prepayment amount is greater than the lesser of 10% of the outstanding amount of the Loan, or fifty thousand dollars ($50,000). The NDWEE shall prepare a new Loan Repayment Schedule to revise Attachment A following receipt of any partial prepayment of the Loan and such revised Attachment A thereafter shall be deemed to be incorporated herein by reference and made a part hereof and shall supersede and replace Attachment A.

(c) Mandatory Prepayment of Loan. If the Borrower receives a grant from any source for any portion of the Project Costs for which a portion of the Loan Amount has been disbursed and is outstanding under this Loan Agreement, the Borrower must notify the NDWEE immediately and such portion of the Loan Amount shall become immediately due and payable.

(d) Delinquent Payment Penalty and Penalty Interest. Payments may be considered delinquent by the NDWEE if not received within 15 days of the due date and for any such delinquent payment, the Borrower agrees to pay a 5% administrative penalty of said delinquent payment. In addition, the Borrower agrees to pay penalty interest on any such delinquent payment at the rate of 1% per month of the amount of such delinquent payment from and after the due date until it is paid. Failure to pay any payment or other charges due within sixty days of the date due will result in the Borrower's account to be considered a delinquent account, subject to State of Nebraska action pursuant to the provision of Article V of this Loan Agreement.

Section 2.07. Project Schedule. The Borrower agrees to perform steps of the Project in accordance with the following projected schedule of milestone dates:

(a) Construction Start – October 2025

(b) Substantial Completion of Construction – December 2028

(c) Estimated Initiation of Operation – December 2027

Section 2.08. Disadvantaged Business Enterprises. The Borrower hereby agrees to the following.

(a) To comply with the requirements of the EPA's Disadvantaged Business Enterprise (DBE) Program for procurement activities under assistance agreements, contained in 40 CFR, Part 33, and, to the fullest reasonable extent possible, ensure that at least zero percent will be made available to Disadvantage Business Enterprises for the Project;

(b) To make the following good faith efforts whenever procuring construction, equipment, services, and supplies:

(1) Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. This includes placing DBEs on a solicitation list and soliciting them whenever they are potential sources;

(2) Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid proposal closing date;

(3) Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. This includes dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process;

(4) Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually;

(5) Use the services and assistance of the Small Business Administration and the Minority Business Development Agency of the Department Commerce; and

(6) If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs (1) through (5) of this section.

Section 2.09. Borrower's Sewer Use Ordinances and User Charge Systems.

(a) The Borrower agrees to submit for review to the NDWEE its Sewer User Ordinance and its User Charge System, and to adopt and implement any necessary changes as determined by the NDWEE.

(b) The Borrower agrees that it shall not modify, amend, make additions to, or deletions from its Sewer Use Ordinance and its User Charge System without the consent of the NDWEE during the term of the Loan Agreement, with the exceptions of the following changes:

(1) Any increase in rates and charges necessary or deemed necessary by the governing body of the Borrower in order to comply with the provisions of this Loan Agreement, the Sewer Use Ordinance, or any ordinance and other agreement pursuant to which any Revenue Obligations have been issued, and for which the revenues of the User Charge Systems have been pledged; or

(2) Any increase deemed necessary by the governing body of the Borrower in order to permit the issuance of or provide the payment of Additional Revenue Obligations.

Section 2.10. Other Conditions and Terms.

(a) Engineering Services. The Borrower shall provide and maintain competent and adequate engineering supervision and resident inspection during construction.

(b) Construction Agreement Award. The Borrower shall obtain the NDWEE concurrence and authorization of the construction agreement.

(c) Initiation of Operation. The Borrower shall provide written notification to the NDWEE of the date of Initiation of Operation of the Project.

(d) Construction Completion. The Borrower shall provide written notification to the NDWEE of the construction completion date of the Project.

(e) Long Term Planning. The Borrower agrees to develop and implement a long-term Wastewater Treatment Works management plan for the term of the Loan, including yearly renewals. This plan shall recognize the cost relationship between the Project and future projects.

(f) Contractor's Security. The Borrower agrees to require any contractor of the Project to post separate performance and payment bonds or other security approved by the NDWEE in the amount of the bid.

(g) Certified Operator. The Borrower agrees to provide a certified operator for its Wastewater Treatment Works pursuant to Nebraska Administrative Code, Title 197 - Rules and Regulations for the Certification of Wastewater Treatment Facility Operators in Nebraska.

(h) Site Title and Easements. The Borrower must certify that site title for all easements and rights-of-way necessary to allow construction of the Project have been obtained prior to award of the construction agreement (i.e., all real property has been acquired, bonafide options have been taken or formal condemnation proceedings have been initiated for necessary real property).

(i) Contractors Payments. The Borrower agrees to make prompt payment to its contractor(s) of sums due for construction and to retain only such amounts as may be justified by specific circumstances and provisions of the construction agreement.

(j) Bid Solicitation. The Borrower agrees to notify the NDWEE of its intent to solicit bids for the project and to request the latest State Revolving Fund Federal Assurance Packet from the NDWEE. The Borrower agrees to follow the directions in the packet and to include and insert all the required information, text, documents, and other items into the bid solicitation in accordance with the packet.

(k) Debarment or Suspension. The Borrower acknowledges that doing business with any party that has been declared ineligible to receive federal contracts may result in an event of default, disallowance of federal funds under this Loan Agreement, and may also result in suspension or debarment under 40 CFR Part 32. Instructions for finding the federal list of current companies declared ineligible can be found at the following website: https://www.dol.gov/agencies/ofccp/debarred-list.

(l) Other Federal Requirements. The Borrower agrees to comply with other applicable Federal Requirements in Attachment D hereto.

(m) Project Sign. If requested by the NDWEE, the Borrower agrees to display a project sign created by the NDWEE. The displaying of a project sign may include both physical displays and digital displays. This can include, but not be limited to, a physical board provided by the NDWEE to be displayed at a designated site, digital graphic to be posted on a Borrower's website, or image and text to be posted in a newsletter, community notice, or newspaper. The NDWEE will provide instructions for displaying the Project Sign.

(n) Employment under Public Contracts, LB 403. The Borrower agrees to comply with the provisions of Legislative Bill 403, approved by the Governor on April 8, 2009. The following language is required and will be included in all agreements made with contractors and is a pass through requirement for his or her subcontractors.

> "The Contractor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of

the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee. If the Contractor is an individual or sole proprietorship, the following applies: 1. The Contractor must complete the United States Citizenship Attestation Form, available on the Department of Administrative Services website at www.das.state.ne.us; 2. If the Contractor indicates on such attestation form that he or she is a qualified alien, the Contractor agrees to provide the US Citizenship and Immigration Services documentation required to verify the Contractor's lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program; and 3. The Contractor understands and agrees that lawful presence in the United States is required and the Contractor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. §4-108."

(o) Wage Rate Requirements. By accepting this award, the Borrower acknowledges and agrees to the terms and conditions provided in the https://www.epa.gov/grants/contract-provisions-davis-bacon-and-related-acts.

Davis-Bacon prevailing wage requirements will apply to the construction, alteration, and repair of "Wastewater Treatment Works", as defined by the Federal Act carried out in whole or in part with assistance made available by this Loan Agreement. For wages that require a Davis-Bacon prevailing wage, the Borrower certifies compliance with the following:

(1) Obtaining a Wage Determination.

(i) Wage Determinations for Soliciting. The Borrower is responsible for and shall obtain the wage determinations for the locality of the project prior to issuing requests for bids, proposals, quotes, or other methods for soliciting contracts for the project (hereinafter "soliciting"). These wage determinations will be incorporated into solicitations and any subsequent contracts. Prime contract must contain a provision requiring that subcontractors follow the wage determinations incorporated into the prime contract.

1. Monitoring for Current Wage Determinations During Solicitation Period. While the solicitation remains open, the Borrower shall monitor https://sam.gov/ weekly to ensure that the wage determinations contained in the solicitation remain current. The Borrower shall amend the solicitation if the Department of Labor issues a modification to the wage determinations more than ten (10) days prior to the closing date for the solicitation.

2. Monitoring for Current Wage Determinations After Closing Date. Unless extended in writing by the NDWEE, if the Borrower does not award the contract within ninety (90) days of the closing date for the solicitation, the Borrower shall monitor https://sam.gov/ on a weekly basis for any modifications or supersedes the Department of Labor makes on the wage determinations contained in the solicitation and shall amend the solicitation.

(ii) Wage Determinations for Non-Published Solicitations. If the Borrower issues a task order, work assignment, or similar instrument to an existing contractor, or ordering instrument, rather than by publishing a solicitation, the Borrower shall insert the appropriate wage determinations from https://sam.gov/ into the ordering instrument.

(iii) Verification of Wage Determinations Inclusion. The Borrower shall review all contracts and subcontractors and verify that all contracts include the applicable wage determinations.

(iv) Issuance of Revised Wage Determinations. The Department of Labor may issue a revised wage determination applicable to a Borrower's contract after the award of a contract or the issuance of an ordering instrument if the Department of Labor determines that the Borrower has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the Borrower shall either: i) terminate the contract or ordering instrument and issue a revised solicitation, or ii) incorporate the Department of Labor's wage determination retroactive to the beginning of the contract or ordering instrument by change order. All contractors must be compensated for any increases in wages resulting from the use of the Department of Labor's revised wage determination.

(2) NDWEE Federal Assurance Package. Before soliciting, The Borrower agrees to contact the NDWEE for the most recent applicable NDWEE Federal Assurance Package and to incorporate the package into the solicitation documents. If the Borrower has failed to incorporate the most recent applicable NDWEE Federal Assurance Package, the Borrower shall either: i) terminate the contract or ordering instrument and issue a revised solicitation, or ii) incorporate the NDWEE Federal Assurance Package by change order.

(3) Contract and Subcontract Provisions. The Borrower shall insert in full for any contract entered into for the actual construction, alteration, and/or repair, including painting and decorating, of a "Wastewater Treatment Works", as defined by the Federal Act, the required clauses as listed in most recent applicable NDWEE Federal Assurance Package.

(i) Unlisted Classifications. The Borrower shall require that any class of laborers or mechanics, including helpers, which is not listed in the applicable wage determination and which is to be employed under the contract shall be classified in conformance with the wage determinations in accordance with procedures established within the NDWEE Federal Assurance Package.

(ii) Weekly Payroll Review and Certifications. The Borrower shall monitor, collect, and review weekly payrolls for each week in which any contract work is performed and provide written confirmation in a form satisfactory to the NDWEE indicating whether or not the project is in compliance with the Davis-Bacon prevailing wage requirements.

(iii) Withholding Payments. The Borrower shall, upon written request by authorized representatives of the NDWEE, the EPA, or of the Department of Labor, withhold or cause to be withheld from a contractor under this Loan Agreement or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the EPA may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(4) Contract Provisions for Contracts in Excess of $100,000. All contracts in an amount in excess of $100,000 must comply with the Contract Work Hours and Safety Standards Act, 40 U.S.C. 3701 et seq., as amended. The Borrower shall insert in full for any contract in excess of $100,000 the required clauses as listed in the most recent applicable NDWEE Federal Assurance Package. In addition:

(i) Withholding Payments. The Borrower, upon written request by authorized representatives of the NDWEE, the EPA, or of the Department of Labor, shall withhold or cause to be

withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as determined by the NDWEE.

(ii) Maintaining of Payroll and Records. The Borrower shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Borrower shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the NDWEE, EPA and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

(5) Compliance Verification.

(i) Interview Requirement. The Borrower shall periodically interview a sufficient number of employees entitled to Davis-Bacon prevailing wages to verify that contractors and/or subcontractors are paying the appropriate wages. All interviews must be conducted in confidence. The Borrower must use Standard Form 1445 or equivalent documentation to memorialize the interviews. Copies of Standard Form 1445 are available from the EPA upon request.

(ii) Interview Frequency. The Borrower shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with Davis-Bacon prevailing wage requirements posed by contractors or subcontractors and the duration of the contract or subcontract. The Borrower must conduct more frequent interviews if the initial interviews or other information indicated that there is a risk that the contractor or subcontractor is not complying with Davis-Bacon prevailing wages. The Borrower shall immediately conduct interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.

(iii) Interview Spot Checks. The Borrower shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The Borrower shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with Davis-Bacon prevailing wages posed by contractors or subcontractors and the duration of the contract or subcontract. The Borrower must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with Davis-Bacon prevailing wage. In addition, during the examinations the Borrower shall verify evidence of fringe benefit plans and payments thereunder by contractors and subcontractors who claim credit for fringe benefit contributions.

(iv) Review of Apprentices and Trainees. The Borrower shall periodically review contractor's and subcontractor's use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the Department of Labor, or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be

conducted in accordance with the schedules for spot checks and interviews described in Section 2.10(o)(5)(ii through iii) of this Loan Agreement.

(v) Potential Violations. The Borrower must immediately report potential violations of the Davis-Bacon prevailing wage requirements to the NDWEE, EPA, and to the appropriate Department of Labor Wage and Hour District Office listed at https://www.dol.gov/agencies/whd/contact/local-offices.

(p) Human Trafficking. Under the requirements of Section 106 of the Trafficking Victims Protection Act of 2000, as amended, the following provisions apply to this award:

"The Borrower, its employees, sub-recipients under this award, and sub-recipients' employees may not engage in severe forms of trafficking in persons during the period of time that the award is in effect; procure a commercial sex act during the period of time that the award is in effect; or use forced labor in the performance of the award or sub-awards under the award."

(q) American Iron and Steel (AIS) Products. Use of Loan funds for partial or full payment of the construction, alteration, maintenance, and repair of "Wastewater Treatment Works", as defined by the Federal Act, must be constructed pursuant to Public Law 113-76, Consolidated Appropriations Act of 2014, which includes an "American Iron and Steel" requirement. The Borrower agrees to be responsible for and to comply with all American Iron and Steel conditions and requirements pursuant to the Consolidated Appropriations Act of 2014 and agrees to provide written certification of such compliance to the NDWEE after construction completion.

(r) Cost Effectiveness Analysis. The Borrower agrees to certify that they have:

(1) Studied and evaluated the cost and effectiveness of the processes, materials, technique, and technologies for carrying out the proposed project or activity for which assistance is sought under the Water Resources Reform and Development Act of 2014; and

(2) Selected, to the maximum extent practicable, a project or activity that maximizes the potential for efficient water use, reuse, recapture, and conservation, and energy conservation, taking into account:

(i) The cost of constructing the project or activity;

(ii) The cost of operating and maintaining the project or activity over the life of the project or activity; and

(iii) The cost of replacing the project or activity.

(s) State Cybersecurity. If the Borrower's network or information system is connected to EPA networks for the purpose of transferring data using systems other than the Environmental Information Exchange Network, or EPA's Central Data Exchange, the Borrower agrees that when collecting and managing environmental data for this Project, the Borrower will protect the data by following all applicable state law cybersecurity requirements. Prior to collecting, managing, or transferring any environmental data, the Borrower agrees to contact the EPA and the assigned EPA Project Officer, notifying the NDWEE when they have done so, and work with the EPA to ensure that any connections between the Borrower's network or information system and EPA networks used by the Borrower to transfer data under this Loan Agreement are secure.

(t) Loan Finalization Date. This Loan Agreement will be considered finalized either upon the date the NDWEE processes the final disbursement request by the Borrower or twelve (12) months following receipt of the written notification of the construction completion pursuant to Section 2.10(d) of this Loan Agreement, whichever occurs first.

(u) Prohibition on Certain Telecommunication and Video Surveillance Services or Equipment. The Borrower agrees to comply with the regulations of 2 CFR 200.216, *Prohibition on certain telecommunication and video surveillance services or equipment*, and section 889 of Public Law 115-232. The Borrower shall prohibit procuring (enter into, extend, or renew contracts) or obtaining equipment, systems, or services that use "covered telecommunications equipment or services" identified in the regulations as specified by this section as a substantial or essential component of any system, or as critical technology as part of any system for the Project. This prohibition extends to Borrowers and their subrecipients (i.e. Consulting Engineers, contractors, etc.) that "uses any equipment, system, or service that uses covered telecommunications equipment or services" as a substantial or essential component of any system, or as critical technology as part of any system. Certain equipment, systems, or services, including equipment, systems, or services produced or provided by entities subject to the prohibition are recorded in the System for Award Management exclusion list (https://sam.gov/content/exclusions).

ARTICLE III

REPRESENTATION AND COVENANTS OF THE BORROWER

Section 3.01. Representations of the Borrower. The Borrower represents as follows:

(a) Organization and Authority.

(1) The Borrower is a village, town, city, district, association, or other public body created by or pursuant to the constitution and statutes of the State of Nebraska.

(2) The Borrower has full legal right and authority and has all necessary licenses and permits required as of the date hereof (or is in the process of obtaining all necessary licenses and permits that will be required, but are not required to be in place as of the date hereof) to own, operate and maintain its Wastewater Treatment Works, to carry on its activities relating thereto, to execute and deliver this Loan Agreement, to undertake and complete the Project, and to carry out and consummate all transactions contemplated by this Loan Agreement.

(3) The proceedings of the Borrower's governing body conducted to approve this Loan Agreement and authorizing its execution, issuance, and delivery on behalf of the Borrower, and authorizing the Borrower to undertake and complete the Project have been duly and lawfully convened and conducted and the resolution of the Borrower's governing body approving such matters has been duly and lawfully adopted.

(4) This Loan Agreement has been duly authorized, executed, and delivered on behalf of the Borrower, and constitutes the legal, valid, and binding obligation of the Borrower enforceable in accordance with its terms.

(b) Full Disclosure. To the best knowledge of the Borrower, there is no fact that the Borrower has not disclosed to the NDWEE in writing on the Borrower's application for the Loan or otherwise anything that materially adversely affects or that will materially adversely affect the properties, activities of its Wastewater Treatment Works, or the ability of the Borrower to make all Loan Repayments and otherwise observe and perform its duties, covenants, obligations and agreement under this Loan Agreement.

(c) Non-Litigation. There is no controversy, suit or other proceeding of any kind pending, or to the best knowledge of the Borrower, threatened questioning, disputing or affecting in any way the: (i) legal organization of the Borrower or its boundaries; (ii) the right or title of any of its officers to their respective offices; (iii) the legality of any official act taken in connection with obtaining the Loan; (iv) the constitutionality or validity of the indebtedness represented by the Loan Agreement; (v) any of the proceedings had in relation to the authorization or execution or the pledging of the revenues stated in Section 2.09 and Section 3.02 of this Loan Agreement; or (vi) the ability of the Borrower to make all

Loan Repayments or otherwise observe and perform its duties, covenants, obligations and agreements under this Loan Agreement.

(d) Compliance with Existing Laws and Agreements. The authorization, execution and delivery of this Loan Agreement by the Borrower, and the performance by the Borrower of its duties, covenants, obligations, and agreements thereunder will not result in any breach of any existing law or agreement to which the Borrower is a party.

(e) No Defaults. No event has occurred and no condition exists that would constitute an Event of Default. The Borrower is not in violation of any agreement which would materially adversely affect the ability of the Borrower to make all Loan Repayments or otherwise observe and perform its duties, covenants, obligations, and agreements under this Loan Agreement.

(f) Governmental Consent. The Borrower has obtained all permits and approvals required to date under this Loan Agreement (or is in the process of obtaining all permits and approvals that will be required, but are not required to be in place as of the date hereof) for the undertaking or completion of the Project and the financing or refinancing thereof. The Borrower has complied with, or expects to comply with, all applicable provisions of law requiring any notification, with any governmental body or officer in connection with this Loan Agreement or with the undertaking or completion of the Project and the financing or refinancing thereof.

(g) Compliance with the Law. The Borrower:

(1) Is in compliance with all laws, ordinances, governmental rules and regulations to which it is subject, including, without limitation, any public hearing or public notice requirements or environmental review requirements contained in the Regulations, with which the failure to comply would materially adversely affect the ability of the Borrower to conduct its activities, enter into this Loan Agreement or undertake or complete the Project; and

(2) Has obtained, or expects to obtain, all licenses, permits, franchises or other governmental authorizations presently necessary for the ownership of its property which, if not obtained, would materially adversely affect the ability of the Borrower to complete the Project.

(h) Use of Loan Proceeds. The Borrower will apply the proceeds of the Loan as described in Article II of this Loan Agreement:

(1) To finance or refinance a portion of the Project Costs; and

(2) Where applicable, to reimburse the Borrower for a portion of the Project Costs, which portion was paid or incurred in anticipation of reimbursement by the NDWEE and is eligible for such reimbursement pursuant to the Regulations. All of such costs constitute Project Costs for which the NDWEE is authorized to make loans to the Borrower pursuant to the Act and the Regulations.

(i) Project Costs. The Borrower certifies that the Project Costs, as listed in Attachment B, are reasonable and accurate estimations and, upon direction of the NDWEE, will supply the same with a certificate from its engineer stating that such costs are reasonable and accurate estimations, taking into account investment income, if any, to be realized during the course of construction of the Project and other money that would, absent the Loan, have been used to pay the Project Costs.

Section 3.02. Particular Covenants of the Borrower.

(a) Dedicated Source of Revenue for Repayment of the Loan. The Borrower hereby pledges to the NDWEE, and grants a lien to the NDWEE on, the User Charge System as the dedicated source of revenue for the repayment of the Loan. The Borrower shall fix, establish, maintain and collect such rates, fees and

charges for the use and services furnished by or through the Borrower's Wastewater Treatment Facility, and Sanitary Sewer Collection System, including all improvements and additions hereafter constructed or acquired by the Borrower, as will provide revenues sufficient to (i) pay the cost of the operation and maintenance, and replacement of the Wastewater Treatment Works, (ii) pay at least 110% of the principal of and interest on the Loan as and when the same become due, and (iii) pay all other amounts due at any time under this Loan Agreement. The lien of NDWEE on the revenues of the Borrower's Wastewater Treatment Facility and Sanitary Sewer Collection System, shall be on a parity with the lien on such revenue of the Borrower's outstanding Wastewater Treatment Facility revenue bonds and Sanitary Sewer Revenue Bonds now outstanding, if any, and any additional revenue bonds hereafter issued on parity with such outstanding revenue bonds. The Borrower hereby expressly reserves the right to issue Revenue Obligations on parity with the lien described in this Loan Agreement and the other outstanding Revenue Obligations, provided the Borrower complies with the covenants contained in this Subsection 3.02(a). These revenues shall be collected and maintained in separate accounts or ledgers for the operation and maintenance costs and for principal and interest payments on the Loan. The funds in such accounts or ledgers shall be restricted for their intended use, and the Loan obligation shall be reported on the financial statements of the Borrower. The Borrower agrees to develop a User Charge System based on actual or estimated use of the Wastewater Treatment Works, providing that each user or user class pay its proportionate share of operation and maintenance (including replacement) costs within the Borrower's service area, based on each user's demand or potential demand for service and to conduct at least a biennial review of adequacy of the user charge rates. The Borrower agrees the initial financial analysis performed by the NDWEE in Attachment C is a reasonable estimate of the Project Costs, of the financial condition of the Borrower in relation to this Project, and of the user charges necessary at the time of initiation of operation of the Project. The NDWEE may review this information annually to ensure the Borrower's compliance with the Loan conditions and update Attachment C to reflect any changes.

(b) Performance Under Loan Agreement. The Borrower agrees:

(1) To comply with all applicable State and Federal laws, rules, and regulations in the performance of this Loan Agreement (including, but not limited to the Federal crosscutting items as set forth on Attachment D of this Loan Agreement, and other NDWEE Regulations); and

(2) To cooperate with the NDWEE in the observance and performance of the respective duties, covenants, obligations, and agreements of the Borrower and the NDWEE under this Loan Agreement.

(c) Completion of Project and Provision of Moneys Therefore. The Borrower agrees:

(1) To exercise its best efforts in accordance with prudent wastewater treatment utility practice to complete the Project and to so accomplish such completion on or before the estimated Project completion date set forth in Article II hereto; and

(2) To provide from its own financial resources all moneys, in excess of the total amount of proceeds it receives pursuant to this Loan Agreement, required to complete the Project.

(d) Delivery of Documents. Concurrently with the delivery of this Loan Agreement (as previously authorized and executed) at the loan closing, the Borrower will cause to be delivered to the NDWEE each of the following items:

(1) Counterparts of this Loan Agreement (as previously executed by parties hereto);

(2) Copies of the ordinances and/or resolutions of the governing body of the borrower authorizing the execution and delivery of this Loan Agreement certified by an Authorized Representative;

(3) An Opinion of the Borrower's Counsel substantially in the form of Attachment E hereto;

(4) An executed Note (or other evidence of indebtedness) evidencing the Borrower's obligations under this Loan Agreement in the form of Attachment F;

(5) An executed certificate of the Borrower in the form of Attachment G hereto; and

(6) Such other certificates, documents, opinions, and information as the NDWEE may require.

(e) Operation and Maintenance of Wastewater Treatment System. The Borrower agrees that it shall, in accordance with prudent wastewater treatment utility practice:

(1) At all times operate the properties of its Wastewater Treatment Works in an efficient manner; and

(2) Maintain its Wastewater Treatment Works, making all necessary and proper repairs, renewals, replacements, additions, betterments, and improvements necessary to maintain its system in good repair, working order and operating condition.

(f) Disposition of Wastewater Treatment Works. The Borrower agrees that it intends to own and operate the Project at all times during the term of the Loan. The Borrower does not know of any reason why the Project will not be so used in the absence of (i) supervening circumstances not anticipated by the Borrower at the time of the Loan, (ii) adverse circumstances beyond the control of the Borrower or (iii) obsolescence of such insubstantial parts or portions of the Project as may occur as a result of normal use thereof.

The Borrower shall not sell, lease, abandon, or otherwise dispose of all or substantially all of its Wastewater Treatment Works except on ninety (90) days' prior written notice to the NDWEE and, in any event, shall not so sell, lease, abandon, or otherwise dispose of the same unless the Borrower shall in accordance with Section 4.02 hereof assign this Loan Agreement and its rights and interests hereunder to the purchaser or lessee of the Wastewater Treatment Works and such purchaser or lessee shall assume all duties, covenants, obligations and agreements of the Borrower under this Loan Agreement. In no event shall the Borrower sell, lease, abandon, or otherwise dispose of the Wastewater Treatment Works to any person or entity other than a municipal corporation or other political subdivision of the State of Nebraska or any combination thereof, which has legal responsibility to treat wastewater.

Before any proposed disposition of the Wastewater Treatment Works can be made, the Borrower shall provide the NDWEE with (i) an opinion of counsel, satisfactory to the NDWEE, that such proposed disposition is permitted by the provisions of this Loan Agreement, and (ii) if any such proposed disposition includes a portion of the Project financed by the Loan, an opinion of a nationally recognized bond counsel, satisfactory to the NDWEE, that such disposition will not adversely affect the exclusion from gross income for federal income tax purposes of the interest on any bonds issued to fund deposits into the Fund. No disposition of all or any portion of the Wastewater Treatment Works shall relieve the Borrower of its duties, covenants, obligations, and agreements under this Loan Agreement.

(g) Records and Accounts. The Borrower shall maintain accurate records and accounts in accordance with generally accepted accounting principles, including principles relating to the reporting of infrastructure assets for its Wastewater Treatment System (the “System Records”), which shall be separate and distinct from its other records and accounts (the “General Account”). The System Records and General Accounts shall be made available for inspection upon request by the NDWEE at any reasonable time. The Borrower shall, upon written request by the NDWEE during the term of the Loan, engage an independent auditor to conduct an audit of the project’s financial records in accordance with generally accepted government auditing standards. The Borrower shall provide the NDWEE a copy of the audit report, provided such audit shall not be due to the NDWEE sooner than 210 days following the close of the fiscal year, or years, identified in the request for audit. In the event that during the period in which the Project financed by this Loan Agreement is under construction, and the Borrower expends, for any purpose, total federal funds in excess of one million dollars ($1,000,000) during the Borrower’s fiscal year, then the Borrower shall, irrespective of any request from the NDWEE, provide the NDWEE a copy of the Single Audit made on the Borrower’s General Accounts performed by an independent auditor

required in such cases by 2 CFR Part 200 – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. In the sole discretion of the NDWEE, any requirement herein to perform and/or provide an audit at the request of the NDWEE may be waived by the NDWEE on the basis of the Borrower's receipt of an audit waiver received from some other government agency and accurately acknowledging the Borrower's obligation to the NDWEE under this Loan or for any other reason acceptable to the NDWEE.

(h) Inspections; Information. The Borrower shall permit the EPA, the NDWEE, and any party designated by the NDWEE to examine, visit, and inspect, at any and all reasonable times, the property, if any, constituting the Project, and to inspect and make copies of any accounts, books, and records, including (without limitation) its records regarding receipts, disbursements, contracts, investments, and any other matters relating thereto and to its financial standing, and shall supply such reports and information as the EPA and the NDWEE may reasonably require in connection therewith.

(i) Financial Information. The Borrower specifically agrees to provide to the NDWEE a reasonable number of copies of such financial information and operating data of the Borrower and the Wastewater Treatment Facility and/or Works and the prompt notification of the occurrence of certain material events, to the extent necessary for the NDWEE to comply with its continuing disclosure obligations set forth in the SEC Rule. Such financial information shall be prepared in accordance with GAAP. Such financial information and operating data, if requested, shall be supplied within 210 days after the end of its fiscal year. If audited financial information will be prepared, but is not available within 210 days of the end of the appropriate Borrower's fiscal year, unaudited financial information shall be provided to the NDWEE pending receipt of audited financial information. For purposes of this paragraph, "material event" shall mean:

(1) Principal and interest payment delinquencies on any Indebtedness;

(2) Non payment related defaults in agreements authorizing any Indebtedness;

(3) Rating changes on any Indebtedness;

(4) Adverse tax opinions or events affecting the tax exempt status of any Indebtedness; or

(5) Unscheduled draws on debt service reserves or credit enhancements on any Indebtedness reflecting financial difficulties.

(j) Insurance. The Borrower will carry and maintain such reasonable amount of all risk insurance on all properties and all operations of the Wastewater Treatment Works as would be carried by similar sized Wastewater Treatment Works, insofar as the properties are of an insurable nature. The Borrower also will carry general liability insurance in amounts not less than the maximum liability of a governmental entity for claims arising out of a single occurrence, as provided by the Nebraska Political Subdivisions Tort Claims Act (Neb. Rev. Stat. §§13-901 to 13-928), or other similar future law.

(k) Continuing Representations. The representations of the Borrower contained herein shall be true at the time of the execution of this Loan Agreement and at all times during the term of this Loan Agreement.

(l) Notice of Material Adverse Change. The Borrower shall promptly notify the NDWEE of any material adverse change in the activities, prospects, or condition (financial or otherwise) of the Borrower's Wastewater Treatment Works, or in the ability of the Borrower to make all Loan Repayments and otherwise observe and perform its duties, covenants, obligations, and agreements under this Loan Agreement.

(m) Additional Covenants and Requirements. If necessary in connection with the making of the Loan Agreement, additional covenants and requirements, if any, are hereby incorporated with their inclusion to Attachment I, Other Documents.

ARTICLE IV

ASSIGNMENT

Section 4.01. Assignment and Transfer by the NDWEE. The Borrower hereby approves and consents to any assignment or transfer of this Loan Agreement that the NDWEE deems necessary in connection with the operation and administration of the Fund. The Borrower hereby specifically approves the assignment and pledging of the interest portion of the Loan Repayments to the NIFA.

Section 4.02. Assignment by the Borrower. This Loan Agreement may not be assigned by the Borrower for any reason, unless the following conditions shall be satisfied:

(a) The NDWEE shall have approved said assignment in writing;

(b) The assignee is a village, town, city, district, association, county, or other public body created by or pursuant to State law of the State of Nebraska, or any combination thereof, that has legal responsibility to treat wastewater;

(c) The assignee shall have expressly assumed in writing the full and faithful observance and performance of the Borrower's duties, covenants, and obligations under this Loan Agreement; provided, however, such assignment shall not relieve the Borrower of its duties, covenants, and obligations under this Loan Agreement;

(d) The assignment will not adversely impact the NDWEE's ability to meet its duties, covenants, and obligations under any Pledge Agreement as determined in writing by the NDWEE;

(e) The assignment will not adversely affect the exclusion from gross income for federal tax purposes of the interest on any bonds issued by the NIFA to fund deposits into the Fund; and

(f) The Borrower shall provide the NDWEE, and the NIFA if the NIFA is an assignee of the Note, with:

(1) An opinion of a qualified attorney satisfactory to the NDWEE that each of the conditions set forth in Section 4.02(b) and Section 4.02(c) of this Loan Agreement has been met, and;

(2) An opinion of nationally recognized bond counsel satisfactory to the NDWEE that the condition set forth in Section 4.02(e) of this Loan Agreement has been met.

ARTICLE V

EVENTS OF DEFAULT AND NONCOMPLIANCE

Section 5.01. Event of Default. Event of Default means: (i) any violation or noncompliance by the Borrower of any of the provisions of this Loan Agreement; (ii) violation or noncompliance by the Borrower of any provision of federal, state, or local regulations or requirements; (iii) failure by the Borrower to pay when due any Loan Payment pursuant to Section 2.06 of this Loan Agreement and for such payment to be considered delinquent by the NDWEE; and (iv) a default under the terms of any Revenue Obligation and other parity obligation allowing any holder of such obligation the right to exercise any remedies against the Borrower.

Section 5.02. Notice of Default.

(a) If an Event of Default shall occur and is discovered by the Borrower, the Borrower shall give the NDWEE prompt telephonic notice of the Event of Default. Such telephonic notice shall be immediately followed by written notice of such Event of Default given in the manner as established by Section 6.03 of this Loan Agreement.

(b) If an Event of Default shall occur and is discovered by the NDWEE, the NDWEE shall give the Borrower and the NIFA prompt telephonic notice of the occurrence of such Event of Default. Such telephonic notice shall be immediately followed by written notice from the NDWEE to the Borrower of such Event of Default given in the manner as established by Section 6.03 of this Loan Agreement.

Section 5.03. Remedies on Default.

(a) Whenever an Event of Default shall have occurred and be continuing, the NDWEE or the Borrower shall have the right to take whatever action at law or in equity may appear necessary or desirable to collect the amounts then due and to become due or to enforce the performance and observance of any obligation or agreement of the Borrower (including, without limitation, withholding remaining Loan disbursements, cancellation of this Loan Agreement and acceleration of the remaining scheduled principal payments set forth on Attachment A, or such other remedies provided to the NDWEE in the Act and the Regulations).

(b) If the Borrower fails to make any payment of principal and interest, administrative fee, late fee, or penalty interest imposed pursuant to this Loan Agreement within 60 days of the due dates specified in Section 2.06 of this Agreement, the payment shall be deducted from the amount of aid to municipalities to which the Borrower is entitled under Neb. Rev. Stat. §72-1503. Such amount shall be paid directly to the Fund.

Section 5.04. Expenses. Upon the occurrence of an Event of Default, and to the extent permitted by law, the Borrower shall, on demand, pay to the NDWEE the reasonable fees and expenses incurred by the NDWEE in the collection of Loan Repayments or any other sum due hereunder or in the enforcement of performance or observation of any other duties, covenants, obligations, or agreements of the Borrower contained herein. Upon request by the Borrower, the NDWEE shall provide copies of statements evidencing the fees and expenses for which the NDWEE is requesting payment.

Section 5.05. Application of Moneys. Any moneys collected by the NDWEE pursuant to Section 5.03 or 5.04 hereof shall be applied:

(a) First, to pay administrative fees on the Loan as the same becomes due and payable;

(b) Second, to pay interest on the Loan as the same becomes due and payable;

(c) Third, to pay principal due and payable on the Loan;

(d) Fourth, to pay expenses owed by the Borrower pursuant to Section 5.04 of this Loan Agreement; and

(e) Fifth, to pay any other amounts due and payable hereunder as such amounts become due and payable. To the extent that the NDWEE's right to receive Loan Repayments is on a parity of lien basis with the lien of Existing Revenue Obligations or Additional Revenue Obligations on the Borrower's System Revenues, such moneys shall be applied pro rata to all such obligations.

Section 5.06. No Remedy Exclusive; Waiver; Notice. No remedy herein conferred upon or reserved to the parties hereto is intended to be exclusive and every such remedy shall be cumulative and shall be in addition to every other remedy given under this Loan Agreement or now or hereafter existing at law or in equity. The parties hereto, in good faith, shall exercise such remedies with due diligence in a timely manner, however, no delay or omission to exercise any right, remedy or power accruing upon any Event of Default shall impair any such right, remedy or power or shall be construed to be a waiver thereof, but any such right, remedy or power may be exercised from time to time and as often as may be deemed expedient. In order to entitle the parties hereto to exercise any remedy reserved to them in this Article, it shall not be necessary to give any notice, other than such notice as may be required in this Article V.

Section 5.07. Retention of Rights. Notwithstanding any assignment or transfer of this Loan Agreement pursuant to the provisions hereof, or anything else to the contrary contained herein, the parties hereto shall have the right upon the occurrence of an Event of Default to take any action, including (without limitation) bringing an action against the defaulting party at law or in equity, as such party may, in its discretion, deem necessary to enforce the obligations of the defaulting party pursuant to this Loan Agreement.

Section 5.08. Violation of Loan Agreement Provisions. Violation or noncompliance of any of the provisions of this Loan Agreement by the Borrower, or failure of the Borrower to complete and maintain the Project in the manner proposed by the Borrower, and approved by the NDWEE may result in a cancellation of this Loan Agreement, and a demand that any outstanding balance of principal, interest, and administrative fees and any other amounts due under this Loan Agreement be paid immediately.

ARTICLE VI

MISCELLANEOUS

Section 6.01. Hold Harmless Agreement. The State of Nebraska and the NDWEE, and the officers, agents, and employees of each, shall have no responsibility or liability for the construction, operation and maintenance of the Project. The Borrower shall be responsible for such construction, operation and maintenance of the Project and shall assume responsibility for all Project Costs and any claims, demands, damages, losses, costs, expenses, or liability accruing or resulting to any and all contractors, subcontractors, employees, and any other person, firm, or corporation furnishing or supplying services, materials, or supplies in connection with construction of the Project, and for any and all claims, demands, damages, losses, costs, expenses, or liability occurring or resulting to any person, firm, or corporation, as a result of or incident to, either in whole or in part, whether directly or indirectly, the construction or operation of the Project.

Section 6.02. Waivers. Any waiver at any time of rights or duties under this Loan Agreement shall not be deemed to be a waiver of any subsequent right or duty under this Loan Agreement.

Section 6.03. Notices. All notices, certificates or other communications hereunder shall be sufficiently given and shall be deemed given when hand delivered or mailed by registered or certified mail, postage prepaid, to the Borrower and the NDWEE, at the following addresses:

(a) BORROWER

City of Seward
537 Main Street
P.O. Box 38
City of Seward, 68434
Phone: (402) 643-2928

(b) THE NDWEE

Nebraska Department of Environment & Energy
245 Fallbrook Blvd Ste 100
Lincoln, NE 68509-8922
Phone: (402) 471-2186

All notices given by registered or certified mail as aforesaid, shall be deemed duly given as of the date they are so mailed. Any of the foregoing parties may designate any further or different addresses to which subsequent notices, certificates or other communications shall be sent, by notice in writing given to the others.

Section 6.04. Amendments, Supplements and Modifications. This Loan Agreement may not be amended, supplemented, or modified except in writing signed by the NDWEE and the Borrower.

Section 6.05. Severability. In the event any provision of this Loan Agreement shall be held illegal, invalid, or unenforceable by any court of competent jurisdiction, such holding shall not invalidate, render unenforceable or otherwise affect any other provision hereof.

Section 6.06. Binding Effect. This Loan Agreement shall inure to the benefit of and shall be binding upon the NDWEE and the Borrower and their respective successors and assignees.

Section 6.07. Execution in Counterparts. This Loan Agreement may be executed in several counterparts, each of which shall be deemed to be an original and all of which shall constitute but one and the same instrument.

Section 6.08. Governing Law and Regulations. This Loan Agreement shall be governed by and construed in accordance with the laws of the State of Nebraska, including the Act and the Regulations which are, by this reference thereto, incorporated herein as a part of this Loan Agreement.

Section 6.09. Consents and Approvals. Whenever the written consent or approval of the State shall be required under the provisions of this Loan Agreement, such consent or approval may only be given by the NDWEE.

Section 6.10. Further Assurances. The Borrower shall, at the request of the NDWEE, authorize, execute, acknowledge, and deliver such further resolutions, conveyances, transfers, assurances, financing statements, and other instruments as may be necessary or desirable for better assuring, conveying, granting, assigning and confirming the rights, security interests, and agreements granted, or intended to be granted by this Loan Agreement.

Section 6.11. Notice to Trustee. Upon assignment of the Note to the NIFA which may occur from time to time and thereafter, the NDWEE shall deliver a notice of this Loan in the form prescribed by the NIFA, and other pertinent information relating thereto, to the Trustee for any bonds of the NIFA issued to fund deposits into the Fund.

Section 6.12. Finalizing, Closing, and Termination of the Loan Agreement. The NDWEE reserves the right to finalize and close, or terminate this Loan Agreement for cause at any point during the term of the loan. Before any action is taken, the NDWEE shall give no less than 30 days written notice of the NDWEE's intent to the Borrower. Following the final disbursement of Loan proceeds to the Borrower, the NDWEE shall revise Attachment A. Such revised Attachment A shall be deemed to be incorporated herein by reference and made a part hereof and shall supersede and replace Attachment A.

Section 6.13. Electronic Signature. The NDWEE and the Borrower hereby approve the usage of electronic signatures pursuant to Neb. Rev. Stat. §86-611 and Nebraska Administrative Code, Title 437, Digital Signatures Act.

(a) Attachment F – Promissory Note of the CITY OF SEWARD of this Loan Agreement may not be electronically signed and must be signed physically by the authorized signatories. The Borrower agrees that prior to electronically signing this Loan Agreement, Attachment F has been physically signed and provided to the NDWEE.

Section 6.14. Effective Date. This Loan Agreement shall become effective upon the latter date of the following two signatures:

IN WITNESS THEREOF, the parties hereto have caused this Loan Agreement to be executed and delivered as of the date set forth below.

CITY OF SEWARD, NEBRASKA

By _____
(printed name)

NEBRASKA DEPARTMENT OF WATER, ENERGY, AND ENVIRONMENT

By _____
(printed name)

DRAFT: PLEASE DO NOT SIGN THIS SECTION. THIS SECTION WILL BE SIGNED ELECTRONICALLY THROUGH DOCUSIGN.

_____ (signature)	_____ (signature)
Title Mayor	Title Director
Date _____	Date _____

INDEX OF ATTACHMENTS

Exhibit 1 -	Project Description
Attachment A -	Loan Repayment Schedule
Attachment B -	Project Costs and Projected Outlay Schedule
Attachment C -	Financial Analysis
Attachment D -	List of Federal Laws and Authorities
Attachment E -	Borrower's Counsel's Opinion
Attachment F -	Promissory Note
Attachment G -	Certificate
Attachment H -	Resolution
Attachment I -	Additional Documents

EXHIBIT 1

PROJECT DESCRIPTION

The City of Seward has requested CWSRF funding assistance of $50,500,000 to finance a sequencing batch reactor (SBR) upgrade to the wastewater treatment facility (WWTF) in addition to other ancillary upgrades at the WWTF. The project includes all related work, land testing, construction change orders, and engineering fees.

ATTACHMENT A

LOAN REPAYMENT SCHEDULE

Payments are due on June 15 and December 15 of each year. Interest and Administrative fees shall accrue at the applicable rate as established by Section 2.03 and Section 2.04 of this Loan Agreement and repayments of such accrued interest and administrative fees will be repaid after the effective date of this Loan Agreement. A commencement of principal repayment is estimated to start on December 15, 2028 (as established by Section 2.02 of this Loan Agreement wherein repayment must begin within one (1) year from the date of Initiation of Operation, but no later than three (3) years from the date of the Loan, whichever occurs first).

Amounts due will be invoiced on or about May 15 and November 15 of each year for each six-month payment period ending on the set interest payment date. Interest and Administrative fee accruing on principal amounts drawn after the invoicing date are to be included with the next invoice.

The Amortization Schedule included in Attachment A is a projected schedule based upon estimated principal repayment start and full distribution of funds and is subject to change pending date of Initiation of Operation and final principal amount disbursed. Interest and Administrative fees accruing before the first principal repayment that is not reflected on the following draft amortization schedule will be billed and paid in accordance with the NDWEE's procedures.

Following the receipt of Initiation of Operation date and the final disbursement of Loan proceeds to the Borrower, a revised final Attachment A shall be prepared by the NDWEE to establish the final debt service schedule based upon the following parameters set forth below. Such revised final Attachment A thereafter shall be deemed to be incorporated herein by reference and made a part hereof and shall supersede and replace the projected Attachment A.

The final Loan Repayment Schedule shall be calculated by the NDWEE based on the following parameters:

(1) Final principal amount of Loan;

(2) Amount of Subsidies, if any;

(3) Interest rate as set forth in Section 2.03;

(4) Administrative fee rate as set forth in Section 2.04; and

(5) Installments of principal, interest, and fees on each June 15 and December 15 payment date shall:

   a. Begin no later than one year after the Initiation of Operation, or three years from the effective date of this Loan Agreement, whichever occurs first; and

   b. End on the last repayment which must be paid no later than thirty (30) years from the date of either (i) one year after the Initiation of Operation, or (ii) three years from the effective date of this Loan agreement, whichever occurs first; and

(6) Amortization of principal to achieve level payments of principal and interest (not taking into account the administrative fee payment pursuant to Section 2.04).

ATTACHMENT A

PROJECTED AMORTIZATION SCHEDULE

TOTAL PRINCIPAL:	**$ 50,500,000**	**INTEREST RATE (%):**	**0.70**
LOAN FORGIVENESS:	**$ -**	**ADMIN FEE (%):**	**0.70**
SMALL TOWN GRANT:	**$ -**	**TERM (YEARS):**	**30**
TOTAL SRF ASSISTANCE:	**$ 50,500,000**		

Principal Payment	Principal	Principal Payment	Interest	Admin Fee	Total Payment	Remaining Principal
12/15/2028	$ 50,500,000.00	$ 757,849.19	$ 176,750.00	$ 176,750.00	$ 1,111,349.19	$ 49,742,150.81
6/15/2029	$ 49,742,150.81	$ 760,501.66	$ 174,097.53	$ 174,097.53	$ 1,108,696.72	$ 48,981,649.15
12/15/2029	$ 48,981,649.15	$ 763,163.42	$ 171,435.77	$ 171,435.77	$ 1,106,034.96	$ 48,218,485.73
6/15/2030	$ 48,218,485.73	$ 765,834.49	$ 168,764.70	$ 168,764.70	$ 1,103,363.89	$ 47,452,651.24
12/15/2030	$ 47,452,651.24	$ 768,514.91	$ 166,084.28	$ 166,084.28	$ 1,100,683.47	$ 46,684,136.32
6/15/2031	$ 46,684,136.32	$ 771,204.71	$ 163,394.48	$ 163,394.48	$ 1,097,993.67	$ 45,912,931.61
12/15/2031	$ 45,912,931.61	$ 773,903.93	$ 160,695.26	$ 160,695.26	$ 1,095,294.45	$ 45,139,027.68
6/15/2032	$ 45,139,027.68	$ 776,612.59	$ 157,986.60	$ 157,986.60	$ 1,092,585.79	$ 44,362,415.09
12/15/2032	$ 44,362,415.09	$ 779,330.74	$ 155,268.45	$ 155,268.45	$ 1,089,867.64	$ 43,583,084.35
6/15/2033	$ 43,583,084.35	$ 782,058.40	$ 152,540.80	$ 152,540.80	$ 1,087,139.99	$ 42,801,025.95
12/15/2033	$ 42,801,025.95	$ 784,795.60	$ 149,803.59	$ 149,803.59	$ 1,084,402.78	$ 42,016,230.35
6/15/2034	$ 42,016,230.35	$ 787,542.38	$ 147,056.81	$ 147,056.81	$ 1,081,656.00	$ 41,228,687.97
12/15/2034	$ 41,228,687.97	$ 790,298.78	$ 144,300.41	$ 144,300.41	$ 1,078,899.60	$ 40,438,389.18
6/15/2035	$ 40,438,389.18	$ 793,064.83	$ 141,534.36	$ 141,534.36	$ 1,076,133.55	$ 39,645,324.35
12/15/2035	$ 39,645,324.35	$ 795,840.56	$ 138,758.64	$ 138,758.64	$ 1,073,357.83	$ 38,849,483.80
6/15/2036	$ 38,849,483.80	$ 798,626.00	$ 135,973.19	$ 135,973.19	$ 1,070,572.38	$ 38,050,857.80
12/15/2036	$ 38,050,857.80	$ 801,421.19	$ 133,178.00	$ 133,178.00	$ 1,067,777.19	$ 37,249,436.61
6/15/2037	$ 37,249,436.61	$ 804,226.16	$ 130,373.03	$ 130,373.03	$ 1,064,972.22	$ 36,445,210.45
12/15/2037	$ 36,445,210.45	$ 807,040.95	$ 127,558.24	$ 127,558.24	$ 1,062,157.43	$ 35,638,169.49
6/15/2038	$ 35,638,169.49	$ 809,865.60	$ 124,733.59	$ 124,733.59	$ 1,059,332.78	$ 34,828,303.90
12/15/2038	$ 34,828,303.90	$ 812,700.13	$ 121,899.06	$ 121,899.06	$ 1,056,498.25	$ 34,015,603.77
6/15/2039	$ 34,015,603.77	$ 815,544.58	$ 119,054.61	$ 119,054.61	$ 1,053,653.80	$ 33,200,059.19
12/15/2039	$ 33,200,059.19	$ 818,398.98	$ 116,200.21	$ 116,200.21	$ 1,050,799.40	$ 32,381,660.21
6/15/2040	$ 32,381,660.21	$ 821,263.38	$ 113,335.81	$ 113,335.81	$ 1,047,935.00	$ 31,560,396.83
12/15/2040	$ 31,560,396.83	$ 824,137.80	$ 110,461.39	$ 110,461.39	$ 1,045,060.58	$ 30,736,259.02
6/15/2041	$ 30,736,259.02	$ 827,022.28	$ 107,576.91	$ 107,576.91	$ 1,042,176.10	$ 29,909,236.74
12/15/2041	$ 29,909,236.74	$ 829,916.86	$ 104,682.33	$ 104,682.33	$ 1,039,281.52	$ 29,079,319.88
6/15/2042	$ 29,079,319.88	$ 832,821.57	$ 101,777.62	$ 101,777.62	$ 1,036,376.81	$ 28,246,498.31
12/15/2042	$ 28,246,498.31	$ 835,736.45	$ 98,862.74	$ 98,862.74	$ 1,033,461.94	$ 27,410,761.86
6/15/2043	$ 27,410,761.86	$ 838,661.52	$ 95,937.67	$ 95,937.67	$ 1,030,536.86	$ 26,572,100.33
12/15/2043	$ 26,572,100.33	$ 841,596.84	$ 93,002.35	$ 93,002.35	$ 1,027,601.54	$ 25,730,503.49
6/15/2044	$ 25,730,503.49	$ 844,542.43	$ 90,056.76	$ 90,056.76	$ 1,024,655.95	$ 24,885,961.07
12/15/2044	$ 24,885,961.07	$ 847,498.33	$ 87,100.86	$ 87,100.86	$ 1,021,700.05	$ 24,038,462.74
6/15/2045	$ 24,038,462.74	$ 850,464.57	$ 84,134.62	$ 84,134.62	$ 1,018,733.81	$ 23,187,998.17
12/15/2045	$ 23,187,998.17	$ 853,441.20	$ 81,157.99	$ 81,157.99	$ 1,015,757.18	$ 22,334,556.97
6/15/2046	$ 22,334,556.97	$ 856,428.24	$ 78,170.95	$ 78,170.95	$ 1,012,770.14	$ 21,478,128.73
12/15/2046	$ 21,478,128.73	$ 859,425.74	$ 75,173.45	$ 75,173.45	$ 1,009,772.64	$ 20,618,702.99
6/15/2047	$ 20,618,702.99	$ 862,433.73	$ 72,165.46	$ 72,165.46	$ 1,006,764.65	$ 19,756,269.26
12/15/2047	$ 19,756,269.26	$ 865,452.25	$ 69,146.94	$ 69,146.94	$ 1,003,746.13	$ 18,890,817.01
6/15/2048	$ 18,890,817.01	$ 868,481.33	$ 66,117.86	$ 66,117.86	$ 1,000,717.05	$ 18,022,335.68
12/15/2048	$ 18,022,335.68	$ 871,521.02	$ 63,078.17	$ 63,078.17	$ 997,677.37	$ 17,150,814.66
6/15/2049	$ 17,150,814.66	$ 874,571.34	$ 60,027.85	$ 60,027.85	$ 994,627.04	$ 16,276,243.32
12/15/2049	$ 16,276,243.32	$ 877,632.34	$ 56,966.85	$ 56,966.85	$ 991,566.04	$ 15,398,610.98
6/15/2050	$ 15,398,610.98	$ 880,704.05	$ 53,895.14	$ 53,895.14	$ 988,494.33	$ 14,517,906.93
12/15/2050	$ 14,517,906.93	$ 883,786.52	$ 50,812.67	$ 50,812.67	$ 985,411.87	$ 13,634,120.41
6/15/2051	$ 13,634,120.41	$ 886,879.77	$ 47,719.42	$ 47,719.42	$ 982,318.61	$ 12,747,240.64
12/15/2051	$ 12,747,240.64	$ 889,983.85	$ 44,615.34	$ 44,615.34	$ 979,214.53	$ 11,857,256.79
6/15/2052	$ 11,857,256.79	$ 893,098.79	$ 41,500.40	$ 41,500.40	$ 976,099.59	$ 10,964,158.00
12/15/2052	$ 10,964,158.00	$ 896,224.64	$ 38,374.55	$ 38,374.55	$ 972,973.74	$ 10,067,933.36
6/15/2053	$ 10,067,933.36	$ 899,361.42	$ 35,237.77	$ 35,237.77	$ 969,836.96	$ 9,168,571.94
12/15/2053	$ 9,168,571.94	$ 902,509.19	$ 32,090.00	$ 32,090.00	$ 966,689.19	$ 8,266,062.75
6/15/2054	$ 8,266,062.75	$ 905,667.97	$ 28,931.22	$ 28,931.22	$ 963,530.41	$ 7,360,394.78
12/15/2054	$ 7,360,394.78	$ 908,837.81	$ 25,761.38	$ 25,761.38	$ 960,360.57	$ 6,451,556.97
6/15/2055	$ 6,451,556.97	$ 912,018.74	$ 22,580.45	$ 22,580.45	$ 957,179.64	$ 5,539,538.23
12/15/2055	$ 5,539,538.23	$ 915,210.81	$ 19,388.38	$ 19,388.38	$ 953,987.57	$ 4,624,327.42
6/15/2056	$ 4,624,327.42	$ 918,414.05	$ 16,185.15	$ 16,185.15	$ 950,784.34	$ 3,705,913.37
12/15/2056	$ 3,705,913.37	$ 921,628.49	$ 12,970.70	$ 12,970.70	$ 947,569.89	$ 2,784,284.88
6/15/2057	$ 2,784,284.88	$ 924,854.19	$ 9,745.00	$ 9,745.00	$ 944,344.19	$ 1,859,430.69
12/15/2057	$ 1,859,430.69	$ 928,091.18	$ 6,508.01	$ 6,508.01	$ 941,107.20	$ 931,339.50
6/15/2058	$ 931,339.50	$ 931,339.50	$ 3,259.69	$ 3,259.69	$ 937,858.88	$ 0.00
	TOTAL:	**$ 50,500,000**	**$ 5,575,951.46**	**$ 5,575,951.46**	**$ 61,651,902.93**	

ATTACHMENT B

PROJECT COSTS

COST CLASSIFICATION	ESTIMATED TOTAL COST
1) Administrative and legal expenses	$ 2,031,000
2) Land, structures, right-of-ways, appraisals, etc.	$ 407,000
3) Relocation expenses and payments	$ -
4) Architectural and engineering fees	$ 3,046,000
5) Project inspection fees	$ -
6) Site work, demolition and removal	$ 204,000
7) Construction	$ 40,603,000
8) Equipment	$ -
9) Miscellaneous	$ -
10) SUBTOTAL (sum of lines 1-9)	**$ 46,291,000**
11) Contingencies	$ 4,209,000
12) SUBTOTAL (sum of lines 10-11)	**$ 50,500,000**
Less project (program) income	$ -
TOTAL PROJECT COSTS (line 12 minus 13)	**$ 50,500,000**
SOURCE OF FUNDS	
OTHER PROJECT ASSISTANCE	
NDEE CWSRF Loan (Principal)	$ 50,500,000
NDEE CWSRF Loan Forgiveness	
TOTAL PROJECT ASSISTANCE	$ 50,500,000

Categories of loan eligibility are established by the Federal Act, the state Act, and state Regulation. Eligible items shall not include the costs of water rights, legal costs, fiscal agent's fees, operation and maintenance costs, and municipal or county administrative costs.

OUTLAY SCHEDULE

	2025	2026	2027	2028
January	$ -	$ 500,000	$ 500,000	$ 500,000
February	$ -	$ 500,000	$ 500,000	$ 500,000
March	$ -	$ 500,000	$ 750,000	$ 500,000
April	$ -	$ 500,000	$ 1,000,000	$ 500,000
May	$ -	$ 750,000	$ 1,500,000	$ 500,000
June	$ -	$ 3,000,000	$ 3,000,000	$ 500,000
July	$ -	$ 3,000,000	$ 3,000,000	$ 500,000
August	$ -	$ 3,000,000	$ 3,000,000	$ 500,000
September	$ -	$ 3,000,000	$ 3,000,000	$ 500,000
October	$ 500,000	$ 2,000,000	$ 1,500,000	$ 500,000
November	$ 500,000	$ 2,000,000	$ 1,000,000	$ 500,000
December	$ 500,000	$ 500,000	$ 500,000	$ 5,000,000
YEARLY TOTAL	$ 1,500,000	$ 19,250,000	$ 19,250,000	$ 10,500,000

ATTACHMENT C

FINANCIAL CAPABILITIES ANALYSIS

The City of Seward has requested CWSRF funding assistance of $50,500,000 to finance a sequencing batch reactor (SBR) upgrade to the wastewater treatment facility (WWTF) in addition to other ancillary upgrades at the WWTF. An abbreviated financial analysis is presented. The documents reviewed and used to complete this analysis are:

1. Audit waiver reports of the City of Seward, for the years 2021 through 2023;

2. Water/Wastewater Pre-application for Federal/State Assistance; and

3. Miscellaneous correspondence from the City of Seward in the project file.

Analysis of the Public Wastewater System:

The City of Seward manages and operates a Public Wastewater Collection System and utilizes sewer user rates as their User Charge System. Table 1 displays the City of Seward's revenue and expenses for their User Charge System. The City of Seward manages their wastewater utility which generates revenue by assessing sewer use fees on the residents and businesses in Seward. The revenue stream goes towards paying for the operation and maintenance expenses incurred to operate the wastewater utility. These revenues will be used to pay the debt service on the proposed clean water utility loan. Table 1 displays the revenue and expenses for the City of Seward's wastewater utility over three years.

Table 1
User Charge System Summary

Year	Revenue[1]	Expenses[2]	Gross Profit (Revenue minus Expenses)
2021	$1,788,144	$999.504	$788,640
2022	$1,930,875	$991,162	$939,713
2023	$2,165,664	$924,530	$1,241,134

[1]Includes interest income
[2]Excludes depreciation

As of September 30, 2023, the City of Seward has one series of 2021 sewer revenue refunding bonds with an outstanding principal of $2,265,000, with interest rates ranging from 0.25 percent to 1.50 percent, with a final maturity date of September 1, 2032.

The City is eligible for a 30-year CWSRF loan at a per annum interest rate of 0.7%, plus an annual 0.7% administrative fee, on the outstanding principal amount. The CWSRF loan funding assistance of $50,500,000 would have an annual debt service of approximately $2,220,046 plus the CWSRF contract required 10% debt-service coverage ($222,005), totaling $2,442,051 for the first-year debt service coverage.

Table 2
CWSRF C318082: Principal Loan of $50,500,000

CWSRF Loan Term (Years)	Interest Rate	Interest Rate	Estimated First Year Payment	First Year Payment + 10% Coverage
30	0.7%	0.7%	$2,220,046	$2,442,051

The City of Seward's sewer fees would be pledged to repay the CWSRF loan. For a typical residential connection, the current monthly rate is $31.40 per month, with an added charge of $0.04867 per cubic foot of sewer use. This results in an average monthly sewer bill of $59.70 for a typical 5,000-gallon monthly household sewer use. The long-term average annual CWSRF Debt Service (including 10% coverage, and interest and

admin payments) would be $2,442,051. The city has proactively increased rates by 15% annually for the past several years as shown by their positive revenues. Based on 2,897 active service connections, sewer rates may need to be raised by an additional $70.25 to address the new debt service. A final assessment of revenues and costs will be analyzed to determine the actual user charge adjustment as necessary.

The projected monthly sewer rate is $129.95 per month, or $1,559.36 annually. This projected household sewer rate total is 2.03% of the City of Seward's median household income of $76,755 and is slightly above EPA's 2.0% upper level of sewer rate affordability.

ATTACHMENT D

LIST OF FEDERAL LAWS AND AUTHORITIES

ENVIRONMENTAL:

- Archeological and Historic Preservation Act of 1974, Pub. L. 93-291, 16 U.S.C. §469a-1
- Clean Air Act, PL 95-95, as amended, 42 U.S.C. 7506(c)
- Coastal Barrier Resources Act, PL 97-348, 96 Stat. 1653, 16 U.S.C. 3501 et seq.
- Coastal Zone Management Act of 1972, PL 92-583, as amended, 16 U.S.C. §1451 et seq.
- Endangered Species Act, PL 93-205, as amended, 16 U.S.C. 1531 et seq.
- Essential Fish Habitat Consultation Process Under the Magnuson-Stevens Fishery Conservation and Management Act, PL 94-265, as amended, 16 U.S.C. §1801 et seq.
- Executive Order 11988, Floodplain Management, as amended; Executive Order 12148, as amended
- Executive Order 11990, Protection of Wetlands, as amended; Executive Order 12608, as amended
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, as amended
- Farmland Protection Policy Act, PL 97-98, 7 U.S.C. §4201 et seq.
- National Environmental Policy Act, PL 91-190, 42 U.S.C. §4321 et seq.
- National Historic Preservation Act of 1966, PL 89-665, as amended, 16 U.S.C. §740 et seq.
- Safe Drinking Water Act, as amended, PL 92-523, as amended, 42 U.S.C. 300f et seq.
- U.S. Fish and Wildlife Service National Wetlands Inventory
- Wild and Scenic Rivers Act, PL 90-542, as amended, 82 Stat. 913, 16 U.S.C. §1271 et seq.

ECONOMIC:

- Demonstration Cities and Metropolitan Development Act of 1966, PL 89-754, as amended, 42 U.S.C. §3331 et seq.
- Executive Order 12549, Debarment and Suspension, as amended
- Executive Order 13202, as amended; Executive Order 13208, as amended
- Section 306 of the Clean Air Act and Section 508 of the Clean Water Act, including Executive Order 11738, Administration of the Clean Air Act and the Federal Water Pollution Control Act, with Respect to Federal Contracts, Grants, or Loans, as amended
- Uniform Relocation and Real Property Acquisition Policies Act of 1970, PL 91-646, as amended, 42 U.S.C. §§4601-4655

SOCIAL LEGISLATION:

- Age Discrimination Act of 1975, PL 94-135, 42 U.S.C. §6102
- Department of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, PL 102-389
- Executive Order 11246, Equal Employment Opportunity, as amended
- Executive Orders 11625, 12138, and 12432 Women's and Minority Business Enterprise, as amended
- Section 129 of the Small Business Administration Reauthorization and Amendment Act of 1988, PL 100-590
- Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. §794
- Section 13 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. §1251
- Title VI of the Civil Rights Act of 1964, PL 88-352, 42 U.S.C. §200d

MISCELLANEOUS AUTHORITY:

- Nebraska Clean Water State Revolving Loan Fund #CS – 310001

**The list of Federal Laws and Authorities is based upon the EPA's listing of "Additional information on Cross-Cutting Federal Authorities" (http://water.epa.gov/grants_funding/dwsrf/xcuts.cfm) and the EPA's "Cross-Cutting Federal Authorities: A Handbook on Their Application in the Clean Water and Drinking Water State Revolving Fund Programs" (October 2003; https://www.epa.gov/sites/default/files/2015-08/documents/crosscutterhandbook.pdf) as of October 12, 2015. This list is subject to change based upon the federal authorities of the EPA.*

For Borrower's Legal/Bond Counsel: Please see notes on following page.

ATTACHMENT E

Form of Opinion of Borrower's Counsel

[USE BORROWER'S OR COUNSEL'S LETTERHEAD]

[Date]

[NOTE: Any of the opinions given below may be given in reliance upon the opinion of another Bond Counsel, and one Bond Counsel may give some of the opinions and another Bond Counsel may give others.]

Nebraska Department of Water, Energy, and Environment
Post Office Box 98922
Lincoln, NE 68509-8922
Attention: State Revolving Fund Program

To the Nebraska State Revolving Fund:

I have acted as **[Bond]** Counsel in connection with the execution and delivery by City of Seward (the "Borrower"), of an Agreement for Loan No. C318082 (the "Loan Agreement") between the Borrower and the Nebraska Department of Water, Energy, and Environment ("NDWEE") and the issuance of a promissory note (the "Note") by the Borrower to the NDWEE. All terms used in this opinion letter and not defined shall have the meanings given to them in the Loan Agreement.

In this connection, I have examined the following:

(a) Certified copies of the **[DESCRIBE RESOLUTION AND/OR ORDINANCE PURSUANT TO WHICH LOAN AGREEMENT AND NOTE ARE TO BE ENTERED INTO]**;

(b) An executed counterpart of the Loan Agreement;

(c) The executed Note; and

(d) Such other documents as I deemed relevant and necessary in rendering this opinion.

As to questions of fact material to my opinion, I have relied upon the certified proceedings and other certifications of public officials furnished to me without undertaking to verify the same by independent investigation.

Based upon the foregoing I am of the opinion that:

1. The Borrower is a city duly organized and validly existing under the laws of the State of Nebraska.

2. The Borrower is a governmental unit, as such term is used in Section 141(b)(6) of the Internal Revenue Code of 1986, as amended.

3. The Borrower has the power and authority to enter into the Loan Agreement, to issue the Note, to borrow the entire principal amount provided for in Section 2.01 of the Loan Agreement (the "Principal Amount") and to perform its obligations under the Loan Agreement and the Note.

4. The Loan Agreement and the Note have been duly authorized, executed and delivered by the Borrower and are, and would be if the entire Principal Amount were advanced to the Borrower pursuant to the Loan Agreement on the date of this opinion, valid and legally binding special obligations of the Borrower, payable solely from the sources provided therefor in the Loan Agreement, enforceable in accordance with

their respective terms, except to the extent that the enforceability thereof may be limited by laws relating to bankruptcy, insolvency or other similar laws affecting creditors' rights generally and general principles of equity.

5. Pursuant, where applicable, to Nebraska Revised State Statutes §§18-1803 through 18-1805; §§31-732, 31-739, and 31-740, and all other applicable statutes governing eligible municipalities, the Loan Agreement creates a valid lien on the funds pledged by the Borrower pursuant to Section 3.02 of the Loan Agreement for the security of the Loan Agreement and the Note and no other debt of the Borrower is secured by a superior lien on such funds.

6. The Borrower has obtained or made all approvals, authorizations, consents, or other actions of, and filings, registrations, or qualifications with, the Borrower or any other government authority which are legally required to allow the Borrower to enter into and perform its obligations under the Loan Agreement and the Note and borrow the full Principal Amount pursuant to the Loan Agreement and the Note.

Very truly yours,

For Borrower's Legal/Bond Counsel:

A Form of Opinion of Borrower's Counsel is required for this loan agreement. Attachment E is NDWEE's recommended language and attestations with areas of blue to be changed. The letter should be on counsel's letterhead, if applicable, and must be signed by a counselor.

Signing of the letter can be done in one of two ways:

1) A signed letter is provided to the SRF Project Manager to insert and incorporate into the loan before document is electronically signed; or

2) Counsel can sign a prepared letter inserted into the loan agreement at the time of electronic signing. Please provide an unsigned letter to the SRF Project Manager to incorporate into the loan document, and the name and email of the signee. When the loan goes out for electronic signing, the NDWEE Director will sign the document; the loan will then automatically be sent to the Borrower for signature. Once signed, the loan will then automatically be sent to the attorney/bond counsel for final review and approval via signature.

Any questions, please contact the SRF Project Manager.

ATTACHMENT F

PROMISSORY NOTE OF THE CITY OF SEWARD, NEBRASKA

FOR VALUE RECEIVED, the undersigned (the "Borrower") promises to pay, but solely from the sources described herein, to the order of the Nebraska Department of Water, Energy, and Environment ("NDWEE"), or its successors and assigns, the principal sum of not to exceed $50,500,000 [less any Loan Forgiveness as established by Section 2.01 of the Loan Agreement], to the extent disbursed pursuant to Section 2.01 and Section 2.05 of the Loan Agreement No. C318082 ("the Loan Agreement"), with interest on each such amount until paid, pursuant to Section 2.03 of the Loan Agreement between the NDWEE and the Borrower. In addition, the Borrower shall pay an Administrative Fee on the outstanding principal amount of this Note per annum pursuant to Section 2.04 of the Loan Agreement. The said principal, interest, and Administrative Fee shall be payable in semiannual installments each payable on June 15 and December 15 of each year in accordance with Section 2.06 of the Loan Agreement. Each installment shall be in the amount set forth in Attachment A to the Loan Agreement. The Borrower will pay any penalty or additional interest due pursuant to Section 2.06(d) of this Loan Agreement.

All payments under this Note shall be payable at the offices of the NDWEE in Lincoln, Nebraska, and upon the assignment of this Note to the NIFA, at the principal corporate trust office of a Trustee designated by the NIFA, or such other place as the NDWEE may designate in writing.

This Note is issued pursuant to and is secured by the Loan Agreement of the City of Seward, Nebraska, the terms and provisions of which are incorporated herein by reference.

All payments of principal of and interest on this Note and other payment obligations of the Borrower hereunder shall be limited obligations of the Borrower payable solely out of the Dedicated Source of Revenue for Repayment (as defined in the Loan Agreement) and shall not be payable out of any other revenues of the Borrower. The obligations of the Borrower under this Note shall never constitute or give rise to a charge against its general credit or taxing power. This note shall not be a debt of the Borrower within the meaning of any constitutional statutory or charter limitation upon the creation of general obligation indebtedness of the Borrower.

If default be made in the payment of any installment due under this Note, or by the occurrence of any one or more of the Events of Default specified in Article V of the Loan Agreement, and if such Event of Default is not remedied as therein provided, or at any time thereafter, may give notice to the Borrower that all unpaid amounts of this Note then outstanding, together with all other unpaid amounts outstanding under the Loan Agreement, are due and payable immediately, and thereupon, without further notice or demand, all such amounts shall become and be immediately due and payable. Failure to exercise this option shall not constitute a waiver of the right to exercise the same at any time in the event of any continuing or subsequent default.

The Borrower hereby waives presentment for payment, demand, protest, notice of protest and notice of dishonor.

This Note and all instruments securing the same are to be construed according to the laws of the State of Nebraska. Signed and sealed, if applicable, by the following:

[SEAL] *(if applicable)*

CITY OF SEWARD, NEBRASKA		NEBRASKA DEPARTMENT OF WATER, ENERGY, AND ENVIRONMENT
Attest: _____ *(signature)*	_____ *(signature)*	_____ *(signature)*
Title Clerk	Title Mayor	Title Director
Date _____	Date _____	Date _____

ATTACHMENT F

PROMISSORY NOTE OF THE CITY OF SEWARD, NEBRASKA

(continued)

Complete this section upon assignment of this Note to the NIFA.

Pursuant to the Pledge Agreement dated as of _____ as amended (the "Pledge Agreement"), by and between the NDWEE and the Nebraska Investment Finance Authority ("NIFA"), and the _____ dated as of _____, as supplemented and amended, by and between NIFA _____, as trustee (the "Trustee"), the NDWEE hereby assigns, grants and conveys any and all of the NDWEE's rights, title and interest in this Note to NIFA, except as provided in the Pledge Agreement, and NIFA hereby assigns such rights, title and interest to the Trustee and any successor Trustee.

Note For Borrower:

If there are no comments or corrections to be made to Attachment F: Promissory Note, please print page the previous page (page 1 of Attachment F), sign, date, and seal (if applicable). Then mail in to:

Nebraska Department of Environment & Energy
ATTN: SRF PROGRAM – Steve McNulty
PO Box 98922
Lincoln, NE 68509-8922

Please leave the second page of Attachment F blank. This page only needs to be completed if the Nebraska Investment Finance Authority (NIFA) is appointed as a Trustee to the project.

ATTACHMENT G

CERTIFICATE OF THE CITY OF SEWARD

The following certifications are made in connection with the Agreement for Loan No. C318082 (the "Loan Agreement") between the Nebraska Department of Water, Energy, and Environment ("NDWEE") and the City of Seward, Nebraska (the "Borrower") for the purpose of establishing compliance by the Borrower with requirements for the maintenance of the tax exemption of interest on any bonds (the “Bonds”) which may be from time to time issued by the Nebraska Investment Finance Authority (“NIFA”) to provide funds for deposit in the Fund (as defined in the Loan Agreement).

WHEREFORE, the undersigned hereby certifies on behalf of the Borrower to the NDWEE, the NIFA and any trustee for the Bonds, as follows:

1. The undersigned is authorized to make the following certifications on behalf of the Borrower.

2. The Borrower represents that it reasonably expects that the design and construction of the Project, as defined in this Loan Agreement, will commence within the stated Project Schedule established by Section 2.07 of this Loan Agreement and that the design and construction of the Project will proceed with due diligence thereafter to completion.

3. The proceeds of the loan pursuant to the Loan Agreement will be used for the project identified in Exhibit 1 of this Loan Agreement and will be owned and operated by the Borrower. There will be no Agreements for the use of the facility or Project other than Agreement on a rate scale basis. Specifically, the Borrower represents that there will be no Agreements for use of the Project that will require a non-governmental unit to make payments to the Borrower without regard to actual use of the Project.

Signed and dated as of _____.

City of Seward, Nebraska

DRAFT: PLEASE DO NOT SIGN THIS SECTION. THIS SECTION WILL BE SIGNED ELECTRONICALLY THROUGH DOCUSIGN.

(signature)

Title _____

Date _____

ATTACHMENT H

RESOLUTION _____

WHEREAS, the City of Seward, Nebraska recognizes that a properly functioning sanitary sewer system is necessary to the health and welfare of the citizens of the city; and

WHEREAS, the Mayor and City Board of Trustees have determined that portions of the city sanitary sewer system are in need of significant repair and improvement; and

WHEREAS, funding for the cost of the repair and improvement of portions of the city sanitary sewer system may be obtained by loan from the Nebraska Department of Water, Energy, and Environment, subject to certain requirements and obligations; and

NOW, THEREFORE, BE IT RESOLVED by the Mayor and City Board of Trustees of the City of Seward, Nebraska that they should execute the contract for loan between the Nebraska Department of Water, Energy, and Environment and the City of Seward, Nebraska designated as Project No. C318082, incorporated by reference into this Resolution as if fully set forth; and

BE IT FURTHER RESOLVED, _____, Mayor, is hereby directed to execute the Agreement and all other documents necessary to facilitate the Loan between the Nebraska Department of Water, Energy, and Environment and the City of Seward, Nebraska for the purpose of repairing and improving the city's sanitary sewer system; and

BE IT FURTHER RESOLVED THAT _____, Clerk, be authorized and directed to sign all necessary documents, to furnish such assurances to the State of Nebraska as may be required by law or regulations, and to receive payment on behalf of the applicant.

HEREBY the RESOLUTION has passed and approved as of _____.

City of Seward, Nebraska

_____
(signature)

Title Mayor

Date _____

IN WITNESS WHEREOF, I have hereunto set my hand and seal this day of _____.

_____
(signature)

Title Clerk

3. Consideration of a Change Order with Broken Arrow Excavating, LLC for the Wastewater Treatment Facility Improvements Soil Surcharge Project in the Amount of $70,821.50 - City Engineer Oneby

CHANGE ORDER NO.: 1

Owner:	City of Seward, NE	Owner's Project No.:	
Engineer:	Short Elliott Hendrickson Inc.	Engineer's Project No.:	SEWAC 163917
Contractor:	Broken Arrow Excavating	Contractor's Project No.:	
Project:	2024 WWTF Soil Surcharge		
Date Issued:	June 26, 2025	Effective Date of Change Order:	June 26, 2025

The Contract is modified as follows upon execution of this Change Order:

Description:

Excavation and embankment quantities are changing due to the contractor removing unsuitable material from the surcharge area prior to placement of the surcharge.

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT COST	AMOUNT
4A	EXCAVATION (ESTABLISHED QUANTITY)	CU YD	1,993.00	$4.50	$8,968.50
6A	EMBANKMENT FOR SURCHARGE (ESTABLISHED QUANTITY)	CU YD	1,993.00	$21.00	$41,853.00
29A	CONNECT TO EXISTING STORM SEWER	LUMP SUM	1.00	$20,000.00	$20,000.00
				TOTAL	**$70,821.50**

Attachments:

None.

Change in Contract Price	**Change in Contract Times**
Original Contract Price: $ 506,600.00	Original Contract Times: Substantial Completion: 06/30/2025 Ready for final payment: 12/27/2025
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. __: $ -	**[Increase] [Decrease]** from previously approved Change Orders No.1 to No. __: Substantial Completion: - Ready for final payment: -
Contract Price prior to this Change Order: $ 506,600.00	Contract Times prior to this Change Order: Substantial Completion: 06/30/2025 Ready for final payment: 12/27/2025
Increase this Change Order: $ 70,821.50	**[Increase] [Decrease]** this Change Order: Substantial Completion: No Change Ready for final payment: No Change
Contract Price incorporating this Change Order: $ 577,421.50	Contract Times with all approved Change Orders: Substantial Completion: 06/30/2025 Ready for final payment: 12/27/2025

	Recommended by Engineer (if required)	Accepted by Contractor
By:		
Title:		
Date:		

	Authorized by Owner	Approved by Funding Agency (if applicable)
By:		
Title:		
Date:		

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4. Consideration of a Construction Contract for $1,855,911.88 and Issuance of a Notice to Proceed to M.E. Collins Contracting Co., Inc. for the Worthman Blvd. Extension Project - City Engineer Oneby

SUGGESTED FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

THIS AGREEMENT is by and between City of Seward, Nebraska ("Owner") and M.E. Collins Contracting Co., Inc. ("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Furnish all labor, materials and equipment for WORTHMAN BOULEVARD EXTENSION. Work, per the plans and specifications, shall include clearing and grubbing, excavation, storm sewer construction, sanitary sewer construction, concrete paving, sidewalk construction, street lighting, signing, seeding, and all incidental work necessary to complete the Project as required by the plans and specifications.

ARTICLE 2 – THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

CITY OF SEWARD
WORTHMAN BOULEVARD EXTENSION
SCHEMMER PROJECT NO. 09336.001-C

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by the Schemmer Associates (Engineer), which is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

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4.02 *Days to Achieve Substantial Completion and Final Payment*

A. The Work will be completed per the CONTRACT TIME section of the special provisions after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions for WORTHMAN BOULEVARD WATERMAIN PHASE II.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner $500.00 for each day that expires after the time specified in Paragraph 4.02 above for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner $250.00 for each day that expires after the time specified in Paragraph 4.02 above for completion and readiness for final payment until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A below:

A. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the actual quantity of that item:

UNIT PRICE WORK

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
	"UNIT PRICE" AND "BID PRICE" AS DEVELOPED ON BID TAB				
Total of all Bid Prices (Unit Price Work)			$ 1,855,911.88		$

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The Bid prices for Unit Price Work set forth as of the Effective Date of the Agreement are based on estimated quantities. As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 20th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions.

a. 95 percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 99 percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07.

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ARTICLE 7 – INTEREST

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the rate of 8 percent per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified in Paragraph SC-4.02 of the Supplementary Conditions as containing reliable "technical data,"

E. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

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I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

A. The Contract Documents consist of the following:

1. Cover Page
2. Table of Contents
3. Notice to Contractors (page NC-1)
4. Instructions to Bidders (pages 200-1: 200-9)
5. Bid Form (pages 410-1: 410-9)
6. Bid Bond (pages 430-1: 430-2)
7. This Agreement (pages 520-1 to 520-8, inclusive).
8. Performance bond (pages 610-1 to 610-3, inclusive).
9. Payment bond (pages 615-1 to 615-3, inclusive).
10. Other bonds (pages – to --, inclusive).
    a. _____ (pages _____ to _____, inclusive).
    b. _____ (pages _____ to _____, inclusive).
    c. _____ (pages _____ to _____, inclusive).
11. General Conditions (pages 700-1 to 700-62, inclusive).
12. Supplementary Conditions (pages 800-1 to 800-9, inclusive).
13. Special Provisions (pages 1 to 66).
14. Drawings consisting of the Drawings listed on attached sheet index.
15. Addenda (numbers 1 to 3, inclusive).
16. Exhibits to this Agreement (enumerated as follows):
    a. Contractor's Bid (pages 1 to 9, inclusive).

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b. Documentation submitted by Contractor prior to Notice of Award (pages _____ to _____, inclusive).

17. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

a. Notice of Award (pages 1 to 1, inclusive).

b. Notice to Proceed (pages 1 to 1, inclusive).

c. Work Change Directives.

d. Change Orders.

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

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

10.03 *Successors and Assigns*

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

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10.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

This Agreement will be effective on July 2, 2025 (which is the Effective Date of the Agreement).

OWNER:	CONTRACTOR
City of Seward, Nebraska	M.E. Collins Contracting Co., Inc.
By:	By:
Title: Mayor	Title: Michael E. Collins, CEO
	(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)
Attest:	Attest:
Title: City Clerk	Title: Courtney L. Jacobsen, President
Address for giving notices:	Address for giving notices:
City of Seward	M.E. Collins Contracting Co., Inc.
537 Main Street, P.O. Box 38	P.O. Box 83
Seward, NE 68434	Wahoo, NE 68066
	License No.: (Where applicable)
(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)	*NOTE TO USER: Use in those states or other jurisdictions where applicable or required.*
	Agent for service of process:

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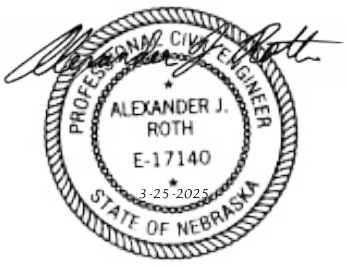
CONTRACT DOCUMENTS

CITY OF SEWARD, NE
WORTHMAN BOULEVARD EXTENSION

SCHEMMER PROJECT NO. 09336.001-C

SCHEMMER

Design with Purpose. Build with Confidence.



MARCH 2025

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NOTICE TO CONTRACTORS

CITY OF SEWARD, WORTHMAN BOULEVARD EXTENSION

Sealed proposals will be received by the CITY CLERK, CITY OF SEWARD – CITY HALL, 537 Main Street, P.O. Box 38, SEWARD, NE 68434 until 10:00 a.m. on the 29th day of April 2025, for furnishing all labor, tools, materials, and equipment required to complete all work designated as WORTHMAN BOULEVARD EXTENSION as per plans and specifications for such work now on file with the A&D Technical Supply website. An optional paper set of project documents is available for a non-refundable price through A&D Technical Supply. If you have any questions, contact Michael Oneby, P.E. at 402-643-4000 extension number 203. To bid the project, the contract documents must be issued directly by A&D Technical Supply.

The project consists of:

Extending Worthman Boulevard west from Pine Street on new alignment, which will consists of roadway embankment and detention basin grading, paving (approximately 9,700 square yards), 1,610 feet of storm sewer, 934 feet of sanitary sewer, curb inlets, sidewalk, and street lighting.

This project utilizes Community Development Block Grant (CDBG) funding, which includes Federal Labor Standards Provisions and Build America, Buy America (BABA) Requirements. The Contractor is required to follow all conditions set forth in the Bid Package Requirements.

Proposals will be taken for said construction work described above by unit prices, as an aggregate bid for the entire project. A general Davis-Bacon wage determination is attached to the Bid Package Requirements and will be updated via addenda 10 days prior to bid opening.

All proposals for said construction work must be made on blanks furnished by the Engineer and must be accompanied by Bid Security of not less than 5% of the amount bid. Bid Security to be made payable to the City of Seward as liquidated damages in case the bid is accepted and the bidder neglects or refuses, to enter into contract and furnish bond in accordance herewith.

No bidder may withdraw the submitted proposal for a period of forty-five (45) days after the date set for the opening of bids. The City of Seward reserves the right to reject any or all bids received and to waive informalities.

MICHAEL ONEBY, P.E.
PROJECT COORDINATOR/CITY ENGINEER
City of Seward, Nebraska – City Hall
537 Main Street
P.O. Box 38
Seward, NE 68434

Published: Seward County Independent, April 9th, April 16th, April 23rd, 2025

Defined Terms

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office* – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the advertisement or invitation to bid may be obtained from the Issuing Office.

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

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

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, within 5 days of Owner's request, Bidder shall submit written evidence such as financial data, previous experience or present commitments.

3.02 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 – EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.01 *Subsurface and Physical Conditions*

A. The Supplementary Conditions identify:

1. Those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site.

2. Those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. Copies of reports and drawings referenced in Paragraph 4.01.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.02 of the General Conditions has been identified and established in Paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation

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or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.02 *Underground Facilities*

A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

4.03 *Hazardous Environmental Condition*

A. The Supplementary Conditions identify any reports and drawings known to Owner relating to a Hazardous Environmental Condition identified at the Site.

B. Copies of reports and drawings referenced in Paragraph 4.03.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.06 of the General Conditions has been identified and established in Paragraph 4.06 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions.

4.05 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

4.06 A. Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, Owner will provide to each Bidder for examination access to or copies of contract documents (other than portions thereof related to price) for such other work.

B. Paragraph 6.13.C of the General Conditions indicates that if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.07 It is the responsibility of each Bidder before submitting a Bid to:

A. examine and carefully study the Bidding Documents, and the other related data identified in the Bidding Documents;

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B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;

D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in Paragraph 4.02 of the Supplementary Conditions as containing reliable "technical data,"

E. consider the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs;

F. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;

G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;

H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and

I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

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4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 – PRE-BID CONFERENCE

5.01 A pre-Bid conference will not be held for this project

ARTICLE 6 – SITE AND OTHER AREAS

6.01 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

ARTICLE 8 – BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price and in the form of a certified check, bank money order, or a Bid bond (on the form attached) issued by a surety meeting the requirements of Paragraphs 5.01 and 5.02 of the General Conditions.

8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults. The Bid security of other Bidders whom Owner believes to

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have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Agreement or 46 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.

8.03 Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

9.01 The number of days within which, or the dates by which, [Milestones are to be achieved and] the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND "OR-EQUAL" ITEMS

11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS AND OTHERS

12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, *without an increase in the Bid.*

12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06 of the General Conditions.

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12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

ARTICLE 13 – PREPARATION OF BID

13.01 The Bid Form is included with the Bidding Documents. Additional copies may be obtained from Engineer.

13.02 All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each [section, Bid item, alternative, adjustment unit price item, and unit price item] listed therein. In the case of optional alternatives the words "No Bid," "No Change," or "Not Applicable" may be entered.

13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown.

13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown.

13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.

13.06 A Bid by an individual shall show the Bidder's name and official address.

13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.

13.08 All names shall be printed in ink below the signatures**.**

13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.

13.10 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

13.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

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ARTICLE 14 – BASIS OF BID; COMPARISON OF BIDS

14.01 *Unit Price*

A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule.

B. The total of all estimated prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with Paragraph 11.03 of the General Conditions.

C. Discrepancies between the multiplications of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 15 – SUBMITTAL OF BID

15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the following documents:

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to CITY OF SEWARD, 142 N. 7TH STREET, SEWARD, NE 68434.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

16.02 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

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ARTICLE 17 – OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the Advertisement or Invitation to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

19.03 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

19.04 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.

19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work in accordance with the Contract Documents.

19.06 If the Contract is to be awarded, Owner will award the Contract to the Bidder whose Bid is in the best interests of the Project.

ARTICLE 20 – CONTRACT SECURITY AND INSURANCE

20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the

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Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by such bonds.

ARTICLE 21 – SIGNING OF AGREEMENT

21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement along with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

ARTICLE 22 – SALES AND USE TAXES

22.01 Owner is exempt from state sales and use taxes on materials and equipment to be incorporated in the Work. Refer to Paragraph 6.10 of the Supplementary Conditions for additional information.

ARTICLE 23 – RETAINAGE

23.01 Provisions concerning Contractor's rights to deposit securities in lieu of retainage are set forth in the Agreement.

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BID PACKAGE REQUIREMENTS

BID PACKAGE REQUIREMENTS

ATTACHMENT 1:
BONDING AND INSURANCE REQUIREMENTS

2 C.F.R § 200.326 Bonding Requirements.

Community Development Block Grant Regulations

For construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold[29], the Federal awarding agency or pass-through entity may accept the bonding policy and requirements of the non-Federal entity provided that the Federal awarding agency or pass-through entity has made a determination that the Federal interest is adequately protected. If such a determination has not been made, the minimum requirements must be as follows:

(a) A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.

(b) A performance bond on the part of the contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's requirements under such contract.

(c) A payment bond on the part of the contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

[29] 41 U.S.C.A. § 134 indicates the simplified acquisition threshold at $250,000.

ATTACHMENT 2:
CIVIL RIGHTS AND EQUAL OPPORTUNITY PROVISIONS

Public Law 88-352, Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000(d), et. seq.) (24 CFR part 1).
The law provides that, "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

Section 109 of the Housing and Community Development Act of 1974, As Amended.
The law requires that, "[n]o person in the United States shall on the ground of race, color, national origin, religion, or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this chapter. Any prohibition against discrimination on the basis of age under the Age Discrimination Act of 1975 [42 U.S.C. 6101 et seq.] or with respect to an otherwise qualified handicapped individual as provided in section 794 of Title 29 also shall apply to any such program or activity."

Age Discrimination Act of 1975, As Amended (42 U.S.C. 6101, Et, seq.).
The law provides that, "no person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any program or activity receiving Federal financial assistance."

Section 504 of the Rehabilitation Act of 1973, As Amended (29 U.S.C. 794).
"Section 504 provides that no otherwise qualified individual with a disability shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

Section 3 of the Housing and Urban Development Act of 1968, As Amended (12 U.S.C. 170lu).
The law provides that, "to the greatest extent feasible, recipients of HUD funds (and their contractors and subcontractors) provide jobs and other economic opportunities to low-income persons, particularly public housing residents. Section 3 helps create employment for low-income persons and contracting opportunities for businesses that are owned by low-income people or that provide employment to low-income people."

ATTACHMENT 3A:
CERTIFICATION OF BIDDER REGARDING SECTION 3 AND SEGREGATED FACILITIES

M.E. Collins Contracting Co., Inc.
Name of Prime Contractor

Worthman Boulevard Extension
Schemmes Project No. 09336.001-C
Project Name and Number

The undersigned herby certifies that:

(a) Section 3 provisions are included in the contract.

(b) A written Section 3 plan was prepared and submitted as part of the bidding proceedings (if bid equals or exceeds $100,000).

(c) No segregated facilities will be maintained.

Christopher Woodward, Vice President
Name & Title of Signer (Print or Type)

Signature

6-16-25
Date

ATTACHMENT 3B: CONTRACTOR

Section 3 Plan

M.E. Collins Contracting Co., Inc. agrees to implement the following specific affirmative action steps directed at increasing the utilization of lowest income residents and businesses within the ~~Village~~/City/~~County~~ of Seward .

A. To ascertain from the locality's CDBG program official the exact boundaries of the Section 3 covered project area and where advantageous, seek the assistance of local officials in preparing and implementing the affirmative action plan.

B. To attempt to recruit from within the city the necessary number of lower income residents through local advertising media; signs placed at the proposed site for the project; and community organizations and public or private institutions operating within or serving the project area, such as Service Employment and Redevelopment (SER), Opportunities Industrialization Center (OIC), Urban League, Concentrated Employment Program, Hometown Plan, or the U.S. Employment Service.

C. To maintain a list of all lower income residents who have applied either on their own or on referral from any source, and to employ such persons, if otherwise eligible and if a vacancy exists.

D. *To insert this Section 3 plan in all bid documents, and to require all bidders and subcontracts to submit a Section 3 affirmative action plan that includes utilization goals and the specific steps planned to accomplish these goals.

E. *To ensure that subcontracts (typically let on a negotiated rather than bid basis in areas other than Section 3 covered project areas), also are let on a negotiated basis, where feasible, when let in a Section 3 covered project area.

F. To formally contact unions, subcontractors and trade associations to secure their cooperation for this program.

G. To ensure that all appropriated project area business concerns are notified of pending sub contractual opportunities.

H. To maintain records, including copies of correspondence, memoranda, etc., that document all above affirmative action steps have been taken.

I. To appoint or recruit an executive official of the company or agency as Equal Opportunity Officer to coordinate the implementation of the Section 3 plan.

*Loans, grants, contracts and subsidies for less than $100,000 will be exempt.

ATTACHMENT 4:
SPECIAL EQUAL OPPORTUNITY PROVISIONS

A. Activities and Contracts Not Subject to Executive Order 11246, As Amended
(Applicable to Federally assisted construction contracts and related subcontracts $10,000 and under)
During the performance of this contract.

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor shall take affirmative action to ensure that applicants for employment are employed, and that employees are treated during employment, without regard to their race, color, religion, or national origin. Such action shall include, but not be limited to: employment upgrade, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay, or other forms of compensation; and selection for training, including apprenticeship.

(2) The contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by contracting officer setting forth the provisions of the nondiscrimination clause. The contractor shall state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) Contractors shall incorporate foregoing requirements in all subcontracts.

B. Executive Order 11246 (contract/subcontracts above $10,000)

1. SEC. 202. Except in contracts exempted in accordance with Section 204 of this order, all Government contracting agencies shall include in every government contract hereafter entered into the following:
During the performance of this contract:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to: employment upgrade, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay, or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of the nondiscrimination clause.

(2) The contractor will, in all solicitations or advancements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining contract or other contract or understanding, a notice, to be provided by the [Contract Compliance Officer], advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and the rules, regulations, and relevant orders of the U.S. Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to their books, records, and accounts by the [Department] and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract, or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept. 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor *will* take such action with respect to any subcontract or purchase order as may be directed by the [Department and the] Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction [by DED Department], the contractor may request the United States to enter into such litigation to protect the interests of the United States [italics added]."

ATTACHMENT 5:
ACCESS TO AND MAINTENANCE OF RECORDS

The Consultant/Contractor agrees to maintain such records and follow such procedures as may be required under HUD Community Planning and Development (CPD) subpart J, 570.502 (paragraph a. 16.) and 2 CFR 200.318(i) and any such procedures that DED may prescribe. In general, such records will include information pertaining to the contract, obligations and unobligated balances, assets and liabilities, outlays, equal opportunity, labor standards (as appropriate), and performance.

All such records and all other records pertinent to this contract and work undertaken under this contract shall be retained by the Consultant/Contractor or Subrecipient for a period of three years after the final audit of the Subrecipient's CDBG project, unless a longer period is required to resolve audit findings or litigation. In such cases, the Subrecipient shall request a longer period for record retention.

The Subrecipient, DED and duly authorized officials of the state and federal government shall have full access and the right to examine any pertinent documents, papers, records and books of the Consultant/Contractor involving transactions to this local program and contract.

Conflict of Interest
From 2 CFR 200.318(c)(1)., no officer, employee or agent of the Subrecipient who will participate in the selection, the award, or the administration of this grant, may obtain a personal or financial interest or benefit from the activity or have an interest in any contract, subcontract or contract with respect thereto, or the proceeds thereunder either for themselves or those with whom they have family or business ties, during their tenure or for one year thereafter. It is further required that this stipulation be included in all subcontracts to this contract. Upon written request, exceptions may be granted on a case-by-case basis when it is determined that such an exception will serve to further the purposes of the Act and the effective and efficient administration of the recipient's program or project. These exceptions are granted by the Department.

ATTACHMENT 6:
CLEAN AIR AND WATER ACTS – REQUIRED CLAUSES

This clause is required in all third-party contracts involving projects subject to the Clean Air Act (42 U.S.C. s/s 7401 et seq. (1970)), the Federal Water Pollution Control Act (33 U.S.C. 1251 et. seq.), and the regulation of the Environmental Protection Agency with respect to 40 CFR32 as amended. It also should be mentioned in the bid document.

During the performance of this contract:

(1) The CONTRACTOR will certify that any facility to be utilized in the performance of any nonexempt contract or subcontract is not listed on the List of Violating Facilities issued by the Environmental Protection Agency pursuant to 48 CFR 9.40 and 40CFR32.20.

(2) The CONTRACTOR agrees to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 U.S.C. 7414) and Section 308 of the Clean Water Act, as amended (33 U.S.C. 1318) relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.

(3) The CONTRACTOR agrees that as a condition for the award of the contract, prompt notice will be given of any notification received from the Director, Office of Federal Activities, and Environmental Protection Agency, indicating that a facility utilized, or to be utilized for the contract is under consideration to be listed on the Environmental Protection Agency List of Violating Facilities.

(4) The CONTRACTOR agrees that it will include or cause to be included the criteria and requirements in Paragraphs (1) through (4) of this section in every nonexempt subcontract and require every subcontractor to take such action as the government may direct as a means of enforcing such provisions.

A. APPLICABILITY

The Project or Program to which the construction work covered by this Contract pertains is being assisted by the United States of America, and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

1. Minimum wages and fringe benefits

i. All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in 29 CFR 5.5(d) and (e), the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(v) of these contract clauses; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under 29 CFR 5.5(a)(1)(iii)) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

ii. Frequently recurring classifications

A. In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to 29 CFR 5.5(a)(1)(iii), provided that:

1. The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;
2. The classification is used in the area by the construction industry; and
3. The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

B. The Administrator will establish wage rates for such classifications in accordance with 29 CFR 5.5(a)(1)(iii)(A)(3). Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

iii. Conformance

A. The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be

classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

1. The work to be performed by the classification requested is not performed by a classification in the wage determination; and
2. The classification is used in the area by the construction industry; and
3. The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

B. The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

C. If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

D. In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

E. The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under 29 CFR 5.5 (a)(1)(iii)(C) and (D). The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to 29 CFR 5.5 (a)(1)(iii)(C) or (D) must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

iv. Fringe benefits not expressed as an hourly rate

Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

v. Unfunded plans

If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in 29 CFR 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

vi. Interest In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. **Withholding**

   i. **Withholding requirements**

   The U. S. Department of Housing and Urban Development may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in 29 CFR 5.5(a) for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in 29 CFR 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work (or otherwise working in construction or development of the project under a development statute) all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in 29 CFR 5.5(a)(3)(iv), HUD may on its own initiative and after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

   ii. **Priority to withheld funds**

   The Department has priority to funds withheld or to be withheld in accordance with 29 CFR 5.5(a)(2)(i) or (b)(3)(i), or both, over claims to those funds by:

   A. A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

   B. A contracting agency for its reprocurement costs;

   C. A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

   D. A contractor's assignee(s);

   E. A contractor's successor(s); or

   F. A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.

3. **Records and certified payrolls**

   i. **Basic record requirements**

   A. Length of record retention. All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

   B. Information required Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

   C. Additional records relating to fringe benefits. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(v) that the wages of any laborer or mechanic include the amount of any

costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

D. **Additional records relating to apprenticeship** Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

ii. **Certified payroll requirements**

A. **Frequency and method of submission** The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to HUD if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the certified payrolls to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to HUD. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system

B. **Information required** The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i)(B), except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.*, the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347.pdf or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the sponsoring government agency (or the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records).

C. **Statement of Compliance** Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

1. That the certified payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information and basic records are being maintained under 29 CFR 5.5 (a)(3)(i), and such information and records are correct and complete;
2. That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly

from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; and

3. That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

D. **Use of Optional Form WH-347** The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by 29 CFR 5.5(a)(3)(ii)(C).

E. **Signature** The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

F. **Falsification** The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

G. **Length of certified payroll retention** The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

iii. **Contracts, subcontracts, and related documents** The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

iv **Required disclosures and access**

A. **Required record disclosures and access to workers** The contractor or subcontractor must make the records required under 29 CFR 5.5(a)(3)(i)–(iii), and any other documents that HUD or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by 29 CFR 5.1, available for inspection, copying, or transcription by authorized representatives of HUD or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

B. **Sanctions for non-compliance with records and worker access requirements** If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to 29 CFR 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

C. **Required information disclosures** Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to HUD if the agency is a party to

the contract, or to the Wage and Hour Division of the Department of Labor. If the Federal agency is not such a party to the contract, the contractor, subcontractor, or both, must, upon request, provide the full Social Security number and last known address, telephone number, and email address of each covered worker to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to HUD, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity

i. Apprentices

A. Rate of pay Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

B. Fringe benefits Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

C. Apprenticeship ratio The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to 29 CFR 5.5(a)(4)(i)(D). Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in 29 CFR 5.5(a)(4)(i)(A), must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

D. Reciprocity of ratios and wage rates Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

ii Equal employment opportunity The use of apprentices and journeyworkers under this part must be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

5 Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6 **Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (11), along with the applicable wage determination(s) and such other clauses or contract modifications as the U.S. Department of Housing and Urban Development may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate.

7 Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8 Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9 Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

i. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or 29 CFR 5.12(a).

ii. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or 29 CFR 5.12(a).

iii. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

11 **Anti-retaliation** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

- **i.** Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, or 29 CFR parts 1, 3, or 5;
- **ii.** Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5;
- **iii.** Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5; or
- **iv.** Informing any other person about their rights under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5.

B. Contract Work Hours and Safety Standards Act (CWHSSA)

The Agency Head must cause or require the contracting officer to insert the following clauses set forth in 29 CFR 5.5(b)(1), (2), (3), (4), and (5) in full, or (for contracts covered by the Federal Acquisition Regulation) by reference, in any contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses must

be inserted in addition to the clauses required by 29 CFR 5.5(a) or 4.6. As used in this paragraph, the terms "laborers and mechanics" include watchpersons and guards.

1. **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in 29 CFR 5.5(b)(1) the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchpersons and guards, employed in violation of the clause set forth in 29 CFR 5.5(b)(1), in the sum of $31 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in 29 CFR 5.5(b)(1).
3. **Withholding for unpaid wages and liquidated damages**

i. **Withholding process** The U.S Department of Housing and Urban Development or the recipient of Federal assistance may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in 29 CFR 5.5(b) on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in 29 CFR 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

ii **Priority to withheld funds** The Department has priority to funds withheld or to be withheld in accordance with 29 CFR 5.5(a)(2)(i) or (b)(3)(i), or both, over claims to those funds by:

- **A.** A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- **B.** A contracting agency for its reprocurement costs;
- **C.** A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- **D.** A contractor's assignee(s);
- **E.** A contractor's successor(s); or
- **F.** A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.

4. ***Subcontracts***. The contractor or subcontractor must insert in any subcontracts the clauses set forth in 29 CFR 5.5(b)(1) through (5) and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in 29 CFR 5.5(b)(1) through (5). In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss,

due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5 **Anti-retaliation** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

- **i.** Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in 29 CFR part 5;
- **ii.** Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or 29 CFR part 5;
- **iii.** Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or 29 CFR part 5; or
- **iv.** Informing any other person about their rights under CWHSSA or 29 CFR part 5.

C. CWHSSA required records clause In addition to the clauses contained in 29 CFR 5.5(b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other laws referenced by 29 CFR 5.1, the Agency Head must cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor must maintain regular payrolls and other basic records during the course of the work and must preserve them for a period of 3 years after all the work on the prime contract is completed for all laborers and mechanics, including guards and watchpersons, working on the contract. Such records must contain the name; last known address, telephone number, and email address; and social security number of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid; daily and weekly number of hours actually worked; deductions made and actual wages paid. Further, the Agency Head must cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph must be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview workers during working hours on the job.

D. Incorporation of contract clauses and wage determinations by reference Although agencies are required to insert the contract clauses set forth in this section, along with appropriate wage determinations, in full into covered contracts, and contractors and subcontractors are required to insert them in any lower-tier subcontracts, the incorporation by reference of the required contract clauses and appropriate wage determinations will be given the same force and effect as if they were inserted in full text.

E. Incorporation by operation of law The contract clauses set forth in this section (or their equivalent under the Federal Acquisition Regulation), along with the correct wage determinations, will be considered to be a part of every prime contract required by the applicable statutes referenced by 29 CFR 5.1 to include such clauses, and will be effective by operation of law, whether or not they are included or incorporated by reference into such contract, unless the Administrator grants a variance, tolerance, or exemption from the application of this paragraph. Where the clauses and applicable wage determinations are effective by operation of law under this paragraph, the prime contractor must be compensated for any resulting increase in wages in accordance with applicable law.

F. HEALTH AND SAFETY

The provisions of this paragraph (F) are applicable where the amount of the prime contract exceeds **$100,000**.

1. No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health and safety, as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.
2. The contractor shall comply with all regulations issued by the Secretary of Labor pursuant to 29 CFR Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96), 40 U.S.C. § 3701 et seq.
3. The contractor shall include the provisions of this paragraph in every subcontract, so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

XI. Subrecipient Compliance with BABA Requirements

"Pursuant to the Build America, Buy America Act (BABA), enacted as part of the Infrastructure Investment and Jobs Act (IIJA). Pub. L. 117-58, 41 U.S.C. § 8301 note, the Federal Financial Assistance used to fund this infrastructure project is required to apply a domestic content procurement preference (the "Buy America Preference" or "BAP") for all construction, alteration, maintenance, or repair of infrastructure, including buildings and real property, unless application of the BAP has been waived by HUD. Additional details on fulfilling the BABA requirements can be found at https://www.hud.gov/baba."



BUY AMERICA, BUILD AMERICA (BABA) SELF-CERTIFICATION

Nebraska Department of Economic Development (DED)

[*Please refer to DED's Build America Buy America Policy Guidance when completing this form.*]

NEBRASKA
DEPT. OF ECONOMIC DEVELOPMENT

SELF-CERTIFICATION FORM

Project: Worthman Boulevard Extension

Location: Seward, Nebraska

DED Award No. _____

For NEBRASKA DEPARTMENT OF ECONOMIC DEVELOPMENT (DED) programs, including HOME, HTF, and CDBG (not including CDBG-DR, CDBG-CV or HOME-ARP), subject to The Build America Buy America Act (BABA), subrecipients, developers, contractors, subcontractors and vendors, must complete and submit this Self-Certification to the next tier (e.g., subcontractor/vendor to contractor; contractor to subrecipient; subrecipient to non-federal entity, etc.) for each bid or offer relating to an "infrastructure project".

The undersigned understands and agrees that it must comply with the requirements of BABA, and any applicable regulations and notices, as amended from time to time, regarding funds obligated by the U.S. Department of Housing and Urban Development (HUD).

Under BABA, all "iron, steel, manufactured products, and construction materials" used for federally funded public "infrastructure projects" must be produced in the United States, unless subject to a waiver.

With respect to the above project, the undersigned hereby certifies to the best of his/her/its knowledge and belief after due inquiry, that [check one]:

☒ All iron, steel, manufactured products, and construction materials used in the project were produced in the United States; or

☐ Some or all iron, steel, manufactured products, and construction materials used in the project were not produced in the United States.

GENERAL WAIVERS. For iron, steel, manufactured products, and construction materials ***not produced in the United States***, the undersigned maintains documentation confirming its determination that a **General Waiver(s)** is applicable [check one or more, AND attach purchase order, contract, or brief description and cost of item(s) subject to waiver]:

☒ De Minimis Waiver – the total cost of the iron, steel, manufactured products, and construction materials not produced in the United States is equal to or less than 5% of the total project cost of iron, steel, manufactured products, and construction materials, up to $1 million;

☐ Small Grants Waiver - total project cost is equal to or less than $250,000;

☐ Exigent Circumstances - an urgent need existed by grantee to immediately complete the project because of a threat to life, safety, or property of residents and the community; or

☐ Tribal Consultations – regarding Tribal recipients.

SPECIFIC WAIVERS. For iron, steel, manufactured products, and construction materials ***not produced in the United States,*** the undersigned intends to or has applied for a project or product **Specific Waiver** on the **BABA Specific Waiver Submission Site** [check one or more, if applicable, and insert application date and approval status]:

☐ Public Interest, Application Date _____, Approved Yes/No/Pending _____
Requiring the use of the USA made product would be inconsistent with the public interest;

☐ Nonavailability, Application Date _____, Approved Yes/No/Pending _____
Product needed is not produced in the USA in sufficient quantities or of a satisfactory quality; or

☐ Unreasonable Cost, Application Date _____, Approved Yes/No/Pending _____
Inclusion of the product produced in the USA will increase the cost of the overall project by more than 25%.

The undersigned certifies and affirms the truthfulness and accuracy of each statement contained herein. In addition, the undersigned understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification.

M.E. Collins Contracting Co., Inc.

Legal Name of Entity or Sole Proprietorship

Signature of Authorized Individual or Official

Christopher Woodward, Vice President

Printed Name and Title of Authorized Official

6-16-25

Signature Date

"General Decision Number: NE20250053 03/14/2025

Superseded General Decision Number: NE20240053

State: Nebraska

Construction Type: Heavy

County: Seward County in Nebraska.

HEAVY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2025
1	03/14/2025

* ELEC0265-006 03/03/2025

	Rates	Fringes
Electricians:		
Zone 1	$ 33.50	18.20
Zone 2	$ 33.80	18.24
Zone 3	$ 34.10	18.27
Zone 4	$ 34.50	18.31

ZONE DEFINITIONS [Mileage from main Post Office in Lincoln]
Zone 1: 0 to 35 miles
Zone 2: 36 to 50 miles
Zone 3: 51 to 75 miles
Zone 4: 76 miles and over

FOOTNOTE:
Work on scaffolds, hanging scaffolds, boatswains chairs or ladders, etc., in any area where the worker is in a position to fall 40 ft. or more, or where objects above the worker can fall 40 ft. or more: to be paid one and one-half times the straight- time rate of pay.

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* SUNE2011-020 08/31/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 16.72 **	0.00
FORM WORKER	$ 17.59 **	5.74
LABORER: Common or General	$ 13.11 **	3.23
LABORER: Pipelayer	$ 16.33 **	5.60
OPERATOR: Backhoe/Excavator	$ 19.43	3.59
OPERATOR: Crane	$ 24.00	5.56
OPERATOR: Loader	$ 17.67 **	2.98
TRUCK DRIVER, Includes Dump and Tandem Truck	$ 13.62 **	2.60
TRUCK DRIVER: Lowboy Truck	$ 21.49	7.40

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 ($17.75) or 13658 ($13.30). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this

contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to

reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

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2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION"

"General Decision Number: NE20250027 03/14/2025

Superseded General Decision Number: NE20240027

State: Nebraska

Construction Type: Highway

Counties: Lancaster, Saunders and Seward Counties in Nebraska.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2025
1	03/14/2025

ELEC0022-018 06/01/2024

Saunders County - East of Highway 109 and North of Alternate Highway 30)

	Rates	Fringes
ELECTRICIAN	$ 44.50	19.69

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* ELEC0265-005 03/03/2025

REMAINDER OF SAUNDERS COUNTY

	Rates	Fringes
Electricians:		
Zone 1	$ 33.50	18.20
Zone 2	$ 33.80	18.24
Zone 3	$ 34.10	18.27
Zone 4	$ 34.50	18.31

ZONE DEFINITIONS [Mileage from main Post Office in Lincoln]
Zone 1: 0 to 35 miles
Zone 2: 36 to 50 miles
Zone 3: 51 to 75 miles
Zone 4: 76 miles and over

FOOTNOTE:
Work on scaffolds, hanging scaffolds, boatswains chairs or ladders, etc., in any area where the worker is in a position to fall 40 ft. or more, or where objects above the worker can fall 40 ft. or more: to be paid one and one-half times the straight- time rate of pay.

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* SUNE2011-023 08/29/2011

	Rates	Fringes
CARPENTER (Includes Form Work)	$ 18.51	
CEMENT MASON/CONCRETE FINISHER		
Lancaster County	$ 18.48	5.86
Seward, Saunders Counties	$ 18.17	5.86
ELECTRICIAN, Includes Installation of Traffic Signals		
Lancaster, Seward Counties	$ 28.83	
HIGHWAY/PARKING LOT STRIPING:		
Laborer		
Lancaster County	$ 11.82 **	
Saunders County	$ 12.37 **	
Seward County	$ 11.27 **	
IRONWORKER, REINFORCING	$ 19.35	
LABORER (COMMON OR GENERAL)		
Lancaster County	$ 12.58 **	
Saunders County	$ 12.55 **	
Seward County	$ 12.20 **	
LABORER: Concrete Saw (Hand		

Held/Walk Behind).....$ 16.07 ** 6.55

LABORER: Mason Tender
(Cement/Concrete).....$ 10.44 **

LABORER: Traffic Control -
Flagger and Cone/Barrel Setter
Lancaster County.....$ 11.87 **
Seward County.....$ 9.00 **

Operating Engineers: (Skid
Loader)
Lancaster County.....$ 10.56 **
Saunders County.....$ 12.51 **
Seward County.....$ 14.85 **

OPERATOR: Asphalt Spreader.....$ 18.74

OPERATOR: Backhoe Loader
Combo.....$ 15.94 **

OPERATOR: Backhoe/Excavator
Lancaster County.....$ 19.91 6.07
Saunders County.....$ 19.47 6.07
Seward County.....$ 16.15 **

OPERATOR: Broom/Sweeper.....$ 11.43 **

OPERATOR: Bulldozer
Lancaster County.....$ 16.78 **
Seward, Saunders Counties...$ 16.34 **

OPERATOR: Compactor.....$ 13.36 **

OPERATOR: Concrete Saw
Lancaster, Seward Counties..$ 20.87

OPERATOR: Crane.....$ 22.38

OPERATOR: Hydrohammer.....$ 17.03 **

OPERATOR: Loader
Lancaster County.....$ 17.44 **
Saunders County.....$ 17.19 **
Seward County.....$ 16.04 **

OPERATOR: Mechanic.....$ 19.58

OPERATOR: Milling Machine.....$ 12.80 **

OPERATOR: Oiler.....$ 16.21 **

OPERATOR: Paver (Asphalt,
Aggregate, and Concrete)
Lancaster County.....$ 14.79 **
Seward, Saunders Counties...$ 16.13 **

OPERATOR: Roller
Lancaster County.....$ 13.00 **
Saunders County.....$ 13.45 **
Seward County.....$ 14.04 **

OPERATOR: Scraper
Lancaster County.....$ 14.80 **
Seward, Saunders Counties...$ 14.83 **

OPERATOR: Tractor
Lancaster County.....$ 9.50 **
Seward, Saunders Counties...$ 10.65 **

OPERATOR: Grader/Blade
Lancaster County.....$ 16.09 **
Seward, Saunders Counties...$ 16.04 **

TRUCK DRIVER, Includes Dump
and Tandem Truck
Lancaster County.....$ 14.51 **
Saunders County.....$ 14.47 **
Seward County.....$ 14.16 **

TRUCK DRIVER: Lowboy Truck.....$ 15.93 **

TRUCK DRIVER: Semi-Trailer
Truck
Lancaster County.....$ 13.48 **
Seward, Saunders Counties...$ 14.09 **

TRUCK DRIVER: Water Truck.....$ 18.00 6.40

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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contract is covered by the EO, the contractor must provide
employees with 1 hour of paid sick leave for every 30 hours
they work, up to 56 hours of paid sick leave each year.
Employees must be permitted to use paid sick leave for their
own illness, injury or other health-related needs, including
preventive care; to assist a family member (or person who is
like family to the employee) who is ill, injured, or has other
health-related needs, including preventive care; or for reasons
resulting from, or to assist a family member (or person who is
like family to the employee) who is a victim of, domestic
violence, sexual assault, or stalking. Additional information
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Washington, DC 20210.

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END OF GENERAL DECISION"

BID FORM

Project Identification:

CITY OF SEWARD, WORTHMAN BOULEVARD EXTENSION

Contract Identification and Number:

Schemmer Project No. 09336.001-C

ARTICLE 1-BID RECIPIENT

1.01 This Bid is submitted to:

City of Seward, Nebraska – City Hall
Attn. Michael Oneby, P.E.
537 Main Street
P.O. Box 38
Seward, NE 68434

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 45 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
A1	4/11/25
A2	4/18/25
A3	4/24/25

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in SC-4.02 as containing reliable "technical data,"

E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.

1. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Worthman Boulevard Extension					
Item	Description	Estimate Quantity	Unit	Bid Unit Price	Bid Price
1	TRAFFIC CONTROL	1	LS	$6000.00	$ 6000.00
2	MOBILIZATION	1	LS	$82,000.00	$ 82,000.00
3	GENERAL CLEARING AND GRUBBING	1	LS	$9500.00	$ 9500.00
4	EARTHWORK MEASURED IN EMBANKMENT (ESTABLISHED QUANTITY)	12,526	CY	$6.70	$83,924.20
5	WATER	174	MGAL	$30.00	$ 5220.00
6	ROCK RIPRAP, TYPE B	149	TON	$132.80	$ 19787.20
7	SALVAGING AND PLACING TOPSOIL	52,525	SY	$0.70	$ 36,767.50
8	RIPRAP FILTER FABRIC	189	SY	$5.30	$ 1001.70
9	REMOVE PAVEMENT	775	SY	$11.40	$ 8835.00
10	SAWING PAVEMENT	314	LF	$4.90	$ 1538.60
11	REMOVE BRICK SURFACE	78	SY	$ 11.40	$ 889.20
12	REMOVE MANHOLE	2	EA	$777.00	$ 1554.00
13	REMOVE INLET	2	EA	$680.00	$ 1360.00
14	ADJUST WATER VALVE BOX TO GRADE	3	EA	$ 447.00	$ 1341.00
15	ADJUST MANHOLE TO GRADE	1	EA	$ 486.00	$ 486.00
16	STABILIZED CONSTRUCTION EXIT	1	EA	$2778.00	$ 2778.00
17	FOUNDATION COURSE	11,103	SY	$ 9.30	$ 103,257.90
18	EARTH SHOULDER CONSTRUCTION	42.4	STA	$ 112.00	$ 4748.80
19	SUBGRADE PREPARATION	11,103	SY	$ 2.50	$ 27,757.50
20	SWPPP SIGN	1	EA	$361.00	$ 361.00
21	DETECTABLE WARNING PANEL	100	SF	$ 35.30	$ 3530.00

22	4" CONCRETE CLASS 47B-3500 SIDEWALKS	160	SY	$ 62.30	$ 9968.00
23	8" DOWELED CONCRETE PAVEMENT, CLASS 47B-3500	9,721	SY	$ 70.80	$ 688,246.80
24	CURB INLET	18	EA	$ 6180.00	$ 111,240.00
25	MANHOLE	12	EA	$ 6872.00	$ 82,464.00
26	REMOVE CULVERT PIPE	55	LF	$ 17.50	$ 962.50
27	REMOVE STORM SEWER PIPE	154	LF	$ 17.50	$ 2695.00
28	CLASS 47B-3000 CONCRETE FOR CONCRETE COLLARS	1.30	CY	$ 738.00	$ 959.40
29	REINFORCING STEEL FOR COLLARS	116	LB	$ 4.60	$ 533.60
30	36" CONCRETE FLARED-END SECTION	2	EA	$ 2243.00	$ 4486.00
31	48" CONCRETE FLARED-END SECTION	4	EA	$ 2910.00	$ 11640.00
32	15" STORM SEWER PIPE, TYPE 2, CLASS III	388	LF	$ 69.80	$ 27,082.40
33	18" STORM SEWER PIPE, TYPE 2, CLASS III	805	LF	$ 69.80	$ 56,189.00
34	36" STORM SEWER PIPE, TYPE 2, CLASS III	44	LF	$ 148.40	$ 6529.60
35	48" STORM SEWER PIPE, TYPE 2, CLASS III	373	LF	$ 233.80	$ 87,207.40
36	BUILD HEADWALL	1	EA	$ 4397.00	$ 4397.00
37	BUILD PRINCIPAL SPILLWAY STRUCTURE	1	EA	$ 13264.00	$ 13264.00
38	12" P.V.C. SANITARY SEWER PIPE	934	LF	$ 74.40	$ 69,489.60
39	SANITARY MANHOLE	3	EA	$ 5337.00	$ 16011.00
40	REMOVE SIGN	3	EA	$ 112.00	$ 336.00
41	TYPE A SIGN	45	SF	$ 67.00	$ 3015.00
42	4" YELLOW POLYUREA PAVEMENT MARKING, GROOVED	3,685	LF	$ 1.80	$ 6633.00
43	12" WHITE POLYUREA PAVEMENT MARKING, GROOVED	154	LF	$ 8.90	$ 1370.60
44	24" WHITE POLYUREA PAVEMENT MARKING, GROOVED	282	LF	$ 53.60	$ 15,115.20

45	PERMANENT BARRICADE	2	EA	$ 1341.00	$ 2682.00
46	PULL BOX, TYPE PB-5	4	EA	$ 1937.00	$ 7748.00
47	INSTALL LIGHT POLE (POLE PROVIDED BY CITY, INSTALLED BY CONTRACTOR)	16	EA	$ 1693.40	$ 27,094.40
48	1 1/2-INCH CONDUIT IN TRENCH	3,513	LF	$ 14.80	$ 51,992.40
49	1 1/2-INCH CONDUIT UNDER ROADWAY	103	LF	$ 22.10	$ 2276.30
50	STREET LIGHTING CABLE, NO. 6 BARE	3,616	LF	$ 2.80	$ 10,124.80
51	STREET LIGHTING CABLE, NO. 6 USE	7,232	LF	$ 3.60	$ 26035.20
52	SPLICE CONDUIT	1	EA	$ 492.00	$ 492.00
53	REMOVE PULL BOX	2	EA	$ 249.50	$ 499.00
54	SEEDING, TYPE B	5.96	AC	$ 1453.00	$ 8659.88
55	SEEDING, TYPE C (FLOODPLAIN MIX)	2.74	AC	$ 1425.00	$ 3904.50
56	EROSION CONTROL, CLASS 1D	28,902	SY	$ 1.60	$ 46,243.20
57	EROSION CONTROL, CLASS 1E	13,265	SY	$ 1.90	$ 25,203.50
58	CURB INLET PROTECTION	18	EA	$ 312.00	$ 5616.00
59	FABRIC SILT FENCE ' LOW POROSITY'	5,310	LF	$ 2.80	$ 14868.00
				TOTAL BID	$ 1,855,911.88

Unit Prices have been computed in accordance with Paragraph 11.03.B of the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security in the form of Bid Bond of 5% ;

Defined Terms

7.02 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 8 – BID SUBMITTAL

9.01 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

By: _____
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name: M.E. Collins Contracting Co., Inc.
(SEAL)

State of Incorporation: Nebraska
Type (General Business, Professional, Service, Limited Liability): GB

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or printed): Michael E. Collins

Title: CEO
(CORPORATE SEAL)

Attest _____

Date of Qualification to do business in *[State where Project is located]* NE is
2 / 1 / 1977

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____
(SEAL)

By: _____
(Signature of first joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____
_____(SEAL)

By: _____
(Signature of second joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address PO Box 83

Wahoo, NE 68066

Phone No. 402-443-3663 Fax No. _____

E-mail chris@mccollinscontracting.com

SUBMITTED on 04/29, 2025.

State Contractor License No. 21303. *[If applicable]*

HOT

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

PENAL SUM FORM

BID BOND

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

BIDDER *(Name and Address)*:

M.E. Collins Contracting Co., Inc.
P O Box 83
Wahoo, NE 68066

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

Universal Surety Company
P.O. Box 80468
Lincoln, NE 68501

OWNER *(Name and Address)*:

City of Seward
537 Main St., PO Box 38
Seward, NE 68434

BID

Bid Due Date: **April 29, 2025**
Description *(Project Name— Include Location)*:
Worthman Boulevard Extension

BOND

Bond Number: **N/A**
Date: **April 29, 2025**
Penal sum **Five Percent of the Amount Bid** (Words) **$ 5%** (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
M.E. Collins Contracting Co., Inc. (Seal)	**Universal Surety Company** (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By:	By:
Signature	Signature (Attach Power of Attorney)
Michael E. Collins	**James M. King**
Print Name	Print Name
CEO	**Attorney-in-Fact**
Title	Title
Attest:	Attest:
Signature	Signature
Title , witness	Title , **Witness**

Note: Addresses are to be used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

UNIVERSAL SURETY COMPANY

Lincoln, Nebraska

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That the **UNIVERSAL SURETY COMPANY**, a corporation of the State of Nebraska having its principal office in the City of Lincoln, Nebraska, pursuant to the following Bylaw, which was adopted by the Board of Directors of the said Company on July 23, 1981, to wit:

"Article V-Section 6. RESIDENT OFFICERS AND ATTORNEYS-IN-FACT. The President or any Vice President, acting with any Secretary or Assistant Secretary, shall have the authority to appoint Resident Vice Presidents and Attorneys-In-Fact, with the power and authority to sign, execute, acknowledge and deliver on its behalf, as Surety: Any and all undertakings of suretyship and to affix thereto the corporate seal of the corporation. The President or any Vice President, acting with any Secretary or Assistant Secretary, shall also have the authority to remove and revoke the authority of any such appointee at any time."

does hereby make, constitute and appoint

James M. King or Tamala J. Hurlbut or Jacob J. Buss
or Thomas L. King, Lincoln, Nebraska or Seth Weedin, Gretna, Nebraska

its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver for and on its behalf, as Surety:
Any and all undertakings of suretyship

And the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its offices in Lincoln, Nebraska, in their own persons.

The following Resolution was adopted at the Regular Meeting of the Board of Directors of the **UNIVERSAL SURETY COMPANY**, held on July 23, 1981:

"RESOLVED, That the signatures of officers of the Company and the seal of the Company may be affixed by facsimile to any Power of Attorney executed in accordance with Article V-Section 6 of the Company Bylaws: and that any such Power of Attorney bearing such facsimile signatures, including the facsimile signature of a certifying Assistant Secretary and facsimile seal shall be valid and binding upon the Company with respect to any bond, undertaking or contract of suretyship to which it is attached."

All authority hereby conferred shall remain in full force and effect until terminated by the Company.

IN WITNESS WHEREOF, **UNIVERSAL SURETY COMPANY** has caused these presents to be signed by its President and its corporate seal to be hereunto affixed this 11th day of June, 20 24.

Carol J. Clark — Secretary/Treasurer

UNIVERSAL SURETY COMPANY

By Curtis L. Hartter — President

UNIVERSAL SURETY COMPANY CORPORATE SEAL LINCOLN, NEBRASKA

State of Nebraska }
County of } ss. Lancaster

On this 11th day of June, 20 24, before me personally came Curtis L. Hartter, to me known, who being by me duly sworn, did depose and say that (s)he resides in the County of Lancaster, State of Nebraska; that (s)he is the President of the **UNIVERSAL SURETY COMPANY**, the corporation described in and which executed the above instrument; that (s)he knows the seal of the said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; that (s)he signed (his) (her) name by like order; and that Bylaw, Article V-Section 6, adopted by the Board of Directors of said Company, referred to in the preceding instrument, is now in force.

Tara Martin

GENERAL NOTARY - State of Nebraska
TARA MARTIN
My Comm. Exp. February 16, 2026

My Commission Expires February 16, 2026.

Notary Public

I, Philip C. Abel, Director of **UNIVERSAL SURETY COMPANY**, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by said **UNIVERSAL SURETY COMPANY**, which is still in full force and effect.

Signed and sealed at the City of Lincoln, Nebraska this 29th day of April, 20 25.

Director

UNIVERSAL SURETY COMPANY CORPORATE SEAL LINCOLN, NEBRASKA

SUGGESTED FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

THIS AGREEMENT is by and between City of Seward, Nebraska ("Owner") and M.E. Collins Contracting Co., Inc. ("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Furnish all labor, materials and equipment for WORTHMAN BOULEVARD EXTENSION. Work, per the plans and specifications, shall include clearing and grubbing, excavation, storm sewer construction, sanitary sewer construction, concrete paving, sidewalk construction, street lighting, signing, seeding, and all incidental work necessary to complete the Project as required by the plans and specifications.

ARTICLE 2 – THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

CITY OF SEWARD
WORTHMAN BOULEVARD EXTENSION
SCHEMMER PROJECT NO. 09336.001-C

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by the Schemmer Associates (Engineer), which is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

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4.02 *Days to Achieve Substantial Completion and Final Payment*

A. The Work will be completed per the CONTRACT TIME section of the special provisions after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions for WORTHMAN BOULEVARD WATERMAIN PHASE II.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner $500.00 for each day that expires after the time specified in Paragraph 4.02 above for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner $250.00 for each day that expires after the time specified in Paragraph 4.02 above for completion and readiness for final payment until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A below:

A. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the actual quantity of that item:

UNIT PRICE WORK

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
	"UNIT PRICE" AND "BID PRICE" AS DEVELOPED ON BID TAB				
Total of all Bid Prices (Unit Price Work)			$ 1,855,911.88		$

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The Bid prices for Unit Price Work set forth as of the Effective Date of the Agreement are based on estimated quantities. As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 20th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions.

a. 95 percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 99 percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07.

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ARTICLE 7 – INTEREST

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the rate of 8 percent per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified in Paragraph SC-4.02 of the Supplementary Conditions as containing reliable "technical data,"

E. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

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I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

A. The Contract Documents consist of the following:

1. Cover Page
2. Table of Contents
3. Notice to Contractors (page NC-1)
4. Instructions to Bidders (pages 200-1: 200-9)
5. Bid Form (pages 410-1: 410-9)
6. Bid Bond (pages 430-1: 430-2)
7. This Agreement (pages 520-1 to 520-8, inclusive).
8. Performance bond (pages 610-1 to 610-3, inclusive).
9. Payment bond (pages 615-1 to 615-3, inclusive).
10. Other bonds (pages – to --, inclusive).
    a. _____ (pages _____ to _____, inclusive).
    b. _____ (pages _____ to _____, inclusive).
    c. _____ (pages _____ to _____, inclusive).
11. General Conditions (pages 700-1 to 700-62, inclusive).
12. Supplementary Conditions (pages 800-1 to 800-9, inclusive).
13. Special Provisions (pages 1 to 66).
14. Drawings consisting of the Drawings listed on attached sheet index.
15. Addenda (numbers 1 to 3, inclusive).
16. Exhibits to this Agreement (enumerated as follows):
    a. Contractor's Bid (pages 1 to 9, inclusive).

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b. Documentation submitted by Contractor prior to Notice of Award (pages _____ to _____, inclusive).

17. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

a. Notice of Award (pages 1 to 1, inclusive).

b. Notice to Proceed (pages 1 to 1, inclusive).

c. Work Change Directives.

d. Change Orders.

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

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

10.03 *Successors and Assigns*

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

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10.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

This Agreement will be effective on July 2, 2025 (which is the Effective Date of the Agreement).

OWNER:	CONTRACTOR
City of Seward, Nebraska	M.E. Collins Contracting Co., Inc.
By:	By:
Title: Mayor	Title: Michael E. Collins, CEO
	(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)
Attest:	Attest:
Title: City Clerk	Title: Courtney L. Jacobsen, President
Address for giving notices:	Address for giving notices:
City of Seward	M.E. Collins Contracting Co., Inc.
537 Main Street, P.O. Box 38	P.O. Box 83
Seward, NE 68434	Wahoo, NE 68066
	License No.: (Where applicable)
(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)	*NOTE TO USER: Use in those states or other jurisdictions where applicable or required.*
	Agent for service of process:

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PERFORMANCE BOND

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

CONTRACTOR (*Name and Address*):
M.E. Collins Contracting Co., Inc.
980 E. 25th
Wahoo, NE 68066

SURETY (*Name, and Address of Principal Place of Business*):
Universal Surety Company
PO Box 80468
Lincoln, NE 68501

OWNER (*Name and Address*):
City of Seward
537 Main Street
Seward, NE 68434

CONTRACT
Effective Date of Agreement: July 2, 2025
Amount: $ 1,855,911.88
Description (*Name and Location*): Worthman Boulevard Extension
1027 Worthman Boulevard, Seward, NE

BOND
Bond Number: 149360
Date (*Not earlier than Effective Date of Agreement*): July 2, 2025
Amount: $1,855,911.88
Modifications to this Bond Form: None

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

M E Collins Contracting Co. Inc. (Seal)
Contractor's Name and Corporate Seal

By: _____
Signature

Michael E. Collins
Print Name

CEO
Title

Attest: _____
Signature

President
Title

SURETY

Universal Surety Company (Seal)
Surety's Name and Corporate Seal

By: _____
Signature (Attach Power of Attorney)

James M. King
Print Name

Attorney-in-Fact
Title

Attest: _____
Signature

Witness
Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

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

1. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 2.1.

2. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
   2.1 Owner has notified Contractor and Surety, at the addresses described in Paragraph 9 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor, and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and
   2.2 Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 2.1; and
   2.3 Owner has agreed to pay the Balance of the Contract Price to:
      1. Surety in accordance with the terms of the Contract; or
      2. Another contractor selected pursuant to Paragraph 3.3 to perform the Contract.

3. When Owner has satisfied the conditions of Paragraph 2, Surety shall promptly, and at Surety's expense, take one of the following actions:

   3.1 Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
   3.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
   3.3 Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 5 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
   3.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
      1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
      2. Deny liability in whole or in part and notify Owner citing reasons therefor.

4. If Surety does not proceed as provided in Paragraph 3 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 3.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.

5. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 3.1, 3.2, or 3.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To the limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:

5.1 The responsibilities of Contractor for correction of defective Work and completion of the Contract;
5.2 Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions of or failure to act of Surety under Paragraph 3; and
5.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.

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

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

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

9. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.

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

11. Definitions.

11.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.
11.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
11.3 Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
11.4 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – (*Name, Address and Telephone*)
Surety Agency or Broker:
Owner's Representative (*Engineer or other party*):

UNIVERSAL SURETY COMPANY

Lincoln, Nebraska

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That the **UNIVERSAL SURETY COMPANY**, a corporation of the State of Nebraska having its principal office in the City of Lincoln, Nebraska, pursuant to the following Bylaw, which was adopted by the Board of Directors of the said Company on July 23, 1981, to wit:

"Article V-Section 6. RESIDENT OFFICERS AND ATTORNEYS-IN-FACT. The President or any Vice President, acting with any Secretary or Assistant Secretary, shall have the authority to appoint Resident Vice Presidents and Attorneys-In-Fact, with the power and authority to sign, execute, acknowledge and deliver on its behalf, as Surety: Any and all undertakings of suretyship and to affix thereto the corporate seal of the corporation. The President or any Vice President, acting with any Secretary or Assistant Secretary, shall also have the authority to remove and revoke the authority of any such appointee at any time."

does hereby make, constitute and appoint

James M. King or Tamala J. Hurlbut or Jacob J. Buss
or Thomas L. King, Lincoln, Nebraska or Seth Weedin, Gretna, Nebraska

its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver for and on its behalf, as Surety:
Any and all undertakings of suretyship

And the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its offices in Lincoln, Nebraska, in their own persons.

The following Resolution was adopted at the Regular Meeting of the Board of Directors of the **UNIVERSAL SURETY COMPANY**, held on July 23, 1981:

"RESOLVED, That the signatures of officers of the Company and the seal of the Company may be affixed by facsimile to any Power of Attorney executed in accordance with Article V-Section 6 of the Company Bylaws: and that any such Power of Attorney bearing such facsimile signatures, including the facsimile signature of a certifying Assistant Secretary and facsimile seal shall be valid and binding upon the Company with respect to any bond, undertaking or contract of suretyship to which it is attached."

All authority hereby conferred shall remain in full force and effect until terminated by the Company.

IN WITNESS WHEREOF, **UNIVERSAL SURETY COMPANY** has caused these presents to be signed by its President and its corporate seal to be hereunto affixed this 11th day of June, 20 24.

UNIVERSAL SURETY COMPANY

Carol J. Clark — Secretary/Treasurer

By Curtis L. Hartter — President

UNIVERSAL SURETY COMPANY CORPORATE SEAL LINCOLN, NEBRASKA

State of Nebraska }
County of } ss. Lancaster

On this 11th day of June, 20 24, before me personally came Curtis L. Hartter, to me known, who being by me duly sworn, did depose and say that (s)he resides in the County of Lancaster, State of Nebraska; that (s)he is the President of the **UNIVERSAL SURETY COMPANY**, the corporation described in and which executed the above instrument; that (s)he knows the seal of the said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; that (s)he signed (his) (her) name by like order; and that Bylaw, Article V-Section 6, adopted by the Board of Directors of said Company, referred to in the preceding instrument, is now in force.

Tara Martin

GENERAL NOTARY - State of Nebraska
TARA MARTIN
My Comm. Exp. February 16, 2026

My Commission Expires February 16, 2026.

Notary Public

I, Philip C. Abel, Director of **UNIVERSAL SURETY COMPANY**, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by said **UNIVERSAL SURETY COMPANY**, which is still in full force and effect.

Signed and sealed at the City of Lincoln, Nebraska this 2nd day of July, 20 25.

Director

UNIVERSAL SURETY COMPANY CORPORATE SEAL LINCOLN, NEBRASKA

PAYMENT BOND

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

CONTRACTOR (*Name and Address*):
M.E. Collins Contracting Co., Inc.
980 E. 25th
Wahoo, NE 68066

SURETY (*Name, and Address of Principal Place of Business*):
Universal Surety Company
P O Box 80468
Lincoln, NE 68501

OWNER (*Name and Address*):
City of Seward
537 Main Street, Seward, NE 68434

CONTRACT
Effective Date of Agreement: July 2, 2025
Amount: $ 1,855,911.88
Description (*Name and Location*): Worthman Boulevard Extension
1027 Worthman Boulevard, Seward, NE

BOND
Bond Number: 149360
Date (*Not earlier than Effective Date of Agreement*): July 2, 2025
Amount: $1,855,911.88
Modifications to this Bond Form: None

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

M. E. Collins Contracting Co, Inc. (Seal)
Contractor's Name and Corporate Seal

By: _____
Signature

Michael E. Collins
Print Name

CEO
Title

Attest: _____
Signature

President
Title

SURETY

Universal Surety Company (Seal)
Surety's Name and Corporate Seal

By: _____
Signature (Attach Power of Attorney)

James M. King
Print Name

Attorney-in-Fact
Title

Attest: _____
Signature

Witness
Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to Owner, this obligation shall be null and void if Contractor:

2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2 Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.

3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.

4. Surety shall have no obligation to Claimants under this Bond until:

4.1 Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2 Claimants who do not have a direct contract with Contractor:

1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
3. Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.

5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.

6. Reserved.

7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.

8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

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

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

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

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

15.1 Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

15.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

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

FOR INFORMATION ONLY – (*Name, Address, and Telephone*) Surety Agency or Broker: Owner's Representative (*Engineer or other*):

UNIVERSAL SURETY COMPANY

Lincoln, Nebraska

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That the **UNIVERSAL SURETY COMPANY**, a corporation of the State of Nebraska having its principal office in the City of Lincoln, Nebraska, pursuant to the following Bylaw, which was adopted by the Board of Directors of the said Company on July 23, 1981, to wit:

"Article V-Section 6. RESIDENT OFFICERS AND ATTORNEYS-IN-FACT. The President or any Vice President, acting with any Secretary or Assistant Secretary, shall have the authority to appoint Resident Vice Presidents and Attorneys-In-Fact, with the power and authority to sign, execute, acknowledge and deliver on its behalf, as Surety: Any and all undertakings of suretyship and to affix thereto the corporate seal of the corporation. The President or any Vice President, acting with any Secretary or Assistant Secretary, shall also have the authority to remove and revoke the authority of any such appointee at any time."

does hereby make, constitute and appoint

James M. King or Tamala J. Hurlbut or Jacob J. Buss
or Thomas L. King, Lincoln, Nebraska or Seth Weedin, Gretna, Nebraska

its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver for and on its behalf, as Surety:
Any and all undertakings of suretyship

And the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its offices in Lincoln, Nebraska, in their own persons.

The following Resolution was adopted at the Regular Meeting of the Board of Directors of the **UNIVERSAL SURETY COMPANY**, held on July 23, 1981:

"RESOLVED, That the signatures of officers of the Company and the seal of the Company may be affixed by facsimile to any Power of Attorney executed in accordance with Article V-Section 6 of the Company Bylaws: and that any such Power of Attorney bearing such facsimile signatures, including the facsimile signature of a certifying Assistant Secretary and facsimile seal shall be valid and binding upon the Company with respect to any bond, undertaking or contract of suretyship to which it is attached."

All authority hereby conferred shall remain in full force and effect until terminated by the Company.

IN WITNESS WHEREOF, **UNIVERSAL SURETY COMPANY** has caused these presents to be signed by its President and its corporate seal to be hereunto affixed this 11th day of June, 20 24.

UNIVERSAL SURETY COMPANY

Carol J. Clark — Secretary/Treasurer

By Curtis L. Hartter — President

UNIVERSAL SURETY COMPANY CORPORATE SEAL LINCOLN, NEBRASKA

State of Nebraska }
County of } ss. Lancaster

On this 11th day of June, 20 24, before me personally came Curtis L. Hartter, to me known, who being by me duly sworn, did depose and say that (s)he resides in the County of Lancaster, State of Nebraska; that (s)he is the President of the **UNIVERSAL SURETY COMPANY**, the corporation described in and which executed the above instrument; that (s)he knows the seal of the said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; that (s)he signed (his) (her) name by like order; and that Bylaw, Article V-Section 6, adopted by the Board of Directors of said Company, referred to in the preceding instrument, is now in force.

Tara Martin

GENERAL NOTARY - State of Nebraska
TARA MARTIN
My Comm. Exp. February 16, 2026

My Commission Expires February 16, 2026.

Notary Public

I, Philip C. Abel, Director of **UNIVERSAL SURETY COMPANY**, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by said **UNIVERSAL SURETY COMPANY**, which is still in full force and effect.

Signed and sealed at the City of Lincoln, Nebraska this 2nd day of July, 20 25.

Director

UNIVERSAL SURETY COMPANY CORPORATE SEAL LINCOLN, NEBRASKA

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by

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A Practice Division of the
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Endorsed by

CONSTRUCTION SPECIFICATIONS INSTITUTE

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These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*—The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.

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

10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

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12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*—See Paragraph 11.01 for definition.

17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

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

19. *Engineer*—The individual or entity named as such in the Agreement.

20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*—Sections of Division 1 of the Specifications.

22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.

23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

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27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*—Polychlorinated biphenyls.

31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.

37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

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41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.

46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.

47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.

48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

49. *Unit Price Work*—Work to be paid for on the basis of unit prices.

50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a

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Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

a. does not conform to the Contract Documents; or

b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

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2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

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2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

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3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work*: Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written

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interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work*: If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation , (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

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1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or

2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and

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Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and

2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

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then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review*: After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

    a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

    b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

    a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

    b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

    c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

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4.04 *Underground Facilities*

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

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

a. reviewing and checking all such information and data;

b. locating all Underground Facilities shown or indicated in the Contract Documents;

c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

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4.05 *Reference Points*

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

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to

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permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

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ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

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C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.

E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable. Insurance requirements for work around railroad property are detailed in the special provision "Railroad Special Provision". Reference that document for additional insurance requirements.

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

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

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

   a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

   b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting there from; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or

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entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

6. include completed operations coverage:

    a. Such insurance shall remain in effect for two years after final payment.

    b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors,

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members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;

2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

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E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

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5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

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ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

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

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

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6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and

3) it has a proven record of performance and availability of responsive service.

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

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2. *Substitute Items:*

   a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

   b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

   c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.

   d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

      1) shall certify that the proposed substitute item will:

         a) perform adequately the functions and achieve the results called for by the general design,

         b) be similar in substance to that specified, and

         c) be suited to the same use as that specified;

      2) will state:

         a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,

         b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

         c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

      3) will identify:

         a) all variations of the proposed substitute item from that specified, and

         b) available engineering, sales, maintenance, repair, and replacement services; and

      4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

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B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. *Engineer's Cost Reimbursement*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or

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entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor

2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

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

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its

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use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner

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and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

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

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6.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

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

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.

D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts

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any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

a. Submit number of Samples specified in the Specifications.

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b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the

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Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

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3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

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6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe

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access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.

C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

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ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

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

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws

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and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

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9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations

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on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of,

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and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of

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executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required*: All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action*: Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part;

2. approve the Claim; or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

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E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

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

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

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

5. Supplemental costs including the following:

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

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

    c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

    d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

    e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

    f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

    g. The cost of utilities, fuel, and sanitary facilities at the Site.

    h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.

    i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

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1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

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

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances:*

1. Contractor agrees that:

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

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in

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the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. *Contingency Allowance:*

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

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

11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

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

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect to any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

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B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

   a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

   b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

   c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

   d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

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

   f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

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12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

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ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.

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F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

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

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

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B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or

2. correct such defective Work; or

3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

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13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

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D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments:*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's

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review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

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a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Change Orders;

c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due:*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment:*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

c. there are other items entitling Owner to a set-off against the amount recommended; or

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

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

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14.04 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

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1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

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

14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;

   b. consent of the surety, if any, to final payment;

   c. a list of all Claims against Owner that Contractor believes are unsettled; and

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d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due:*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

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14.09 *Waiver of Claims*

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

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's repeated disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);

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2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

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

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other

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dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or

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2. agrees with the other party to submit the Claim to another dispute resolution process; or

3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC C-700 (2007 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

SC-2.02 *Copies of Documents*

SC-2.02 Delete Paragraph 2.02.A in its entirety and insert the following in its place:

A. Owner shall furnish to Contractor up to 5 printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

SC-4.02 *Subsurface and Physical Conditions*

SC-4.02 Add the following new paragraphs immediately after Paragraph 4.02.

B: Not Used

SC-4.06 *Hazardous Environmental Conditions*

SC-4.06 Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

B. Not Used.

SC-5.04 *Contractor's Liability Insurance*

SC-5.04 Add the following new paragraph immediately after Paragraph 5.04.B:

C The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than

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the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 5.04.A.1 and A.2 of the General Conditions:

a. State:	**Statutory**
b. Applicable Federal (e.g., Longshoreman's):	**Statutory**
c. Employer's Liability:	
Each Accident	**$1,000,000**

2. Contractor's General Liability under Paragraphs 5.04.A.3 through A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:

a. General Aggregate	**$2,000,000**
b. Products - Completed Operations Aggregate	**$2,000,000**
c. Personal and Advertising Injury	**$1,000,000**
d. Each Occurrence (Bodily Injury and Property Damage)	**$1,000,000**
e. Fire Damage Limit	**$50,000 any one fire**
f. Medical Damage Limit	**$5,000 any one person**
g. Excess or Umbrella Liability	
□ General Aggregate	**$3,000,000**

3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:

a. Combined Single Limit of	**$1,000,000**

SC-5.06 *Property Insurance*

SC-5.06.A. Delete Paragraph 5.06.A in its entirety and insert the following in its place:

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A. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. Contractor shall be responsible for any deductible or self-insured retention. This insurance shall:

1. **include the interests of Owner, Contractor, Subcontractors, Engineer, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or loss payee;**

2. **be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, falsework, and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by these Supplementary Conditions.**

3. **include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);**

4. **cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;**

5. **allow for partial utilization of the Work by Owner;**

6. **include testing and startup;**

7. **be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued; and**

8. **comply with the requirements of Paragraph 5.06.C of the General Conditions.**

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SC-SC-6.08 *Permits*

SC-6.08 Add the following paragraph 6.08 B. after Paragraph 6.08 A:

B. Contractor is responsible for complying with the requirements of permits for the project that Owner has obtained, or is in the process of obtaining (per Paragraph 6.08 A, Contractor is responsible for obtaining all other permits necessary for the project.)

1. Section 404 authorization: None required.

2. Floodplain Permit: None required.

3. Construction Storm Water Notice of Intent (SWPPP): Contractor shall take all necessary management measures, and conduct its work to comply with the requirements and regulations of NPDES that Owner is in the process of obtaining from the Nebraska Department of Environmental Quality also in compliance with Lower Platte River Natural Resources District.

4. Construction Permit for Sanitary Sewer Systems: Contractor shall familiarize himself with adherence to the permit requirements.

5. Contractor shall familiarize himself with the requirements and provisions of all necessary project permits and shall be solely responsible for implementing and maintaining all measures of these permits. To the fullest extent allowed by Laws and Regulations, the Contractor shall indemnify and hold harmless the Owner, Engineer and Engineer's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Contractor's failure to comply with the conditions and requirements of these permits.

SC-6.20 *Indemnification*

SC-6.20 Delete Article 6.20.C.2 in its entirety.

SC-9.03 *Project Representative*

SC-9.03 Add the following new paragraphs immediately after Paragraph 9.03.A:

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B. The Resident Project Representative (RPR) will be Engineer's employee or agent at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions. RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall be through or with the full knowledge and approval of Contractor. The RPR shall:

1. *Schedules:* Review the progress schedule, schedule of Shop Drawing and Sample submittals, and schedule of values prepared by Contractor and consult with Engineer concerning acceptability.

2. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.

3. *Liaison*:

a. Serve as Engineer's liaison with Contractor, working principally through Contractor's authorized representative, assist in providing information regarding the intent of the Contract Documents.

b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.

c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.

4. *Interpretation of Contract Documents:* Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.

5. *Shop Drawings and Samples:*

a. Record date of receipt of Samples and approved Shop Drawings.

b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.

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6. ***Modifications:*** **Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.**

7. ***Review of Work and Rejection of Defective Work*:**

    a. **Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.**

    b. **Report to Engineer whenever RPR believes that any part of Contractor's work in progress will not produce a completed Project that conforms generally to the Contract Documents or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.**

8. ***Inspections, Tests, and System Startups:***

    a. **Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.**

    b. **Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.**

9. ***Records:***

    a. **Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.**

    b. **Maintain records for use in preparing Project documentation.**

10. ***Reports:***

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a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawing and Sample submittals.

b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.

c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, damage to property by fire or other causes, or the discovery of any Hazardous Environmental Condition.

11. *Payment Requests:* Review Applications for Payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the schedule of values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

12. *Certificates, Operation and Maintenance Manuals:* During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Specifications to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

13. *Completion*:

a. Participate in a Substantial Completion inspection, assist in the determination of Substantial Completion and the preparation of lists of items to be completed or corrected.

b. Participate in a final inspection in the company of Engineer, Owner, and Contractor and prepare a final list of items to be completed and deficiencies to be remedied.

c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the Notice of Acceptability of the Work.

C. The RPR shall not:

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1. **Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).**

2. **Exceed limitations of Engineer's authority as set forth in the Contract Documents.**

3. **Undertake any of the responsibilities of Contractor, Subcontractors, Suppliers, or Contractor's superintendent.**

4. **Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work unless such advice or directions are specifically required by the Contract Documents.**

5. **Advise on, issue directions regarding, or assume control over safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.**

6. **Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.**

7. **Accept Shop Drawing or Sample submittals from anyone other than Contractor.**

8. **Authorize Owner to occupy the Project in whole or in part.**

SC-11.03 *Unit Price Work*

SC-11.03.D Delete Paragraph 11.03.D in its entirety and insert the following in its place:

1304. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:

1. **if the Bid price of a particular item of Unit Price Work amounts to <u>10</u> percent or more of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than <u>25</u> percent from the estimated quantity of such item indicated in the Agreement; and**

2. **if there is no corresponding adjustment with respect to any other item of Work; and**

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3. **if Contractor believes that Contractor has incurred additional expense as a result thereof or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, either Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Article 10 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.**

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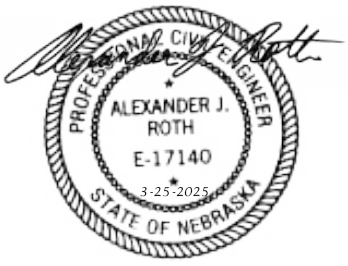
SPECIAL PROVISIONS

CITY OF SEWARD (2025)
WORTHMAN BOULEVARD EXTENSION

SCHEMMER PROJECT NO. 09336.001-C

SCHEMMER

Design with Purpose. Build with Confidence.



MARCH 2025

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GENERAL CONTRACT REQUIREMENTS

This project utilizes Community Development Block Grant (CDBG) funding, which includes Federal Labor Standards Provisions and Build America, Buy America (BABA) Requirements. The Contractor is required to follow all conditions set forth in the Bid Package Requirements.

This project will utilize Nebraska Department of Transportation Standard Plans and Specifications.

All sanitary sewer related construction will utilize the 2023 City of Lincoln Standard Specifications for Municipal Construction and 2023 Lincoln Standard Plans (LSP).

These Special Provisions amend or supplement the Nebraska Department of Transportation Standard Specifications for Highway Construction, 2017 Edition, and other provisions of the Contract Documents as indicated herein. All provisions that are not so amended or supplemented via these special provisions remain in full force and effect.

The Contractor shall not take advantage of any apparent error, discrepancy or omission in the plan, specifications or geotechnical reports. Upon discovery of such an error, discrepancy or omission, the Contractor shall notify the City's representative immediately. The City's Representative will then make such corrections or interpretations as necessary to fulfill the intent of the plans and specifications. Materials or work described in words which, so applied, have known technical or trade meaning shall be held to refer to such recognized standards.

Figured dimensions on the plans shall be taken as correct but shall be checked by the Contractor before starting construction. Any errors, omissions, or discrepancies shall be brought to the attention of the City's Representative and the City's Representative's decision thereon shall be final. Correction of errors or omissions on the drawings or specifications may be made by the City's Representative when such correction is necessary for the proper execution of the work.

LIMITATIONS OF THE WORK

The Contractor will not be permitted to use pavement along existing Worthman Boulevard or Pine Street for construction purposes and for the storage of materials and equipment. Side streets are allowed to be closed where immediate work is taking place. The location and extent of the areas so used shall be designated by the Owner. The Owner shall approve all materials to be stored on site prior to their delivery. No materials or equipment may be placed upon the property of the Owner until the Owner has agreed to the location contemplated by the Contractor to be used for storage.

It shall be understood that the responsibility for protection and safekeeping of equipment and materials on or near the site shall be entirely that of the Contractor and that no claims shall be made against the Owner by reason of any act of an employee or trespasser. It shall be further understood that should any occasion arise necessitating access to the sites occupied by these stored materials and equipment, the Contractor owning or responsible for the stored materials or equipment shall immediately move same.

The Contractor shall be solely responsible for obtaining and shall pay all costs in connection

with any additional work area, storage site, access to the site, or temporary right-of-way which may be required for proper completion of the work.

All prospective bidders shall visit the site to familiarize themselves with the existing site conditions, access locations, site constraints, existing site drainage, existing utilities and other construction currently underway or planned within the project area. In addition, the selected Contractor shall be required to verify the location, elevations and flowlines of existing utilities that may be in conflict with the proposed work or that will need to connect to the new work prior to start of construction. This may require the Contractor to pothole existing utilities in advance of the start of work to verify flowlines at outlets or connection points, location and depth of utilities, size and or material types of existing utilities. This verification work shall include but not be limited to connections to existing storm sewers, sanitary sewers and water mains. Verification of existing site conditions and utility locations shall not be paid for directly except where shown on the plans.

CONTRACT TIME

All work associated with this project shall be substantially complete by December 1, 2025 with an anticipated notice of proceed of August 1, 2025. Once construction begins, the Contractor shall have no more than 120 calendar days to complete all work associated with the project. Suspension of calendar days may be requested by the Contractor to be approved by the City.

Failure to meet the substantial completion date of the overall project shall result in liquidated damages of $500 per calendar day beyond the specified calendar days allowed.

Substantial completion shall be defined as all storm sewer construction complete; inlet and pipe shall be placed and backfilled, sanitary sewer complete, roadway and sidewalk paving complete, and all temporary construction signs and barricades removed, and site cleanup complete. Permanent seeding, permanent pavement marking, and street lighting must be complete before April 1, 2026. Final completion of all work shall be completed by April 1, 2026. Determination of Substantial Completion and Final Completion shall be subject to the City's Representative's approval.

SPECIAL PROSECUTION AND PROGRESS

The following prosecution and progress of work shall be used in developing the baseline schedule for the project. The contractor will be required to submit a schedule of construction tasks that identify an order of completion based on the complete dates identified for this construction project.

General

All work shall be confined within the limits of the existing right-of-way or easements unless the Contractor has obtained separate rights from an adjacent property owner. The Contractor shall provide to the City's Representative written copies of any agreements for separate property rights that are obtained.

CONSTRUCTION STAKING

Construction staking shall be done by the Engineer at the Owners cost. The Engineer will furnish and set construction stakes or benchmarks establishing lines and grades and will furnish the Contractor with all necessary information relating to them. The Contractor shall be responsible for the preservation of all stakes and marks. The cost of replacing any stakes or marks destroyed or disturbed by the Contractor shall be charged against, and deducted from, the payment for the work.

The Contractor shall provide one week's notice for stakes when moving onto the work and 48 hours notice for any additional staking needs.

Any errors or apparent discrepancies found in previous surveys, plans, specifications, or special provisions shall immediately be called to the attention of the Engineer by the Contractor for correction or interpretation before proceeding with the work.

STATUS OF PERMITS

The City of Seward is in the process of obtaining a Construction Permit for Wastewater Works through the Nebraska Department of Environment and Energy (NDEE).

A National Pollutant Discharge Elimination System (NPDES) permit will be required for this project. As outlined in the general conditions of the Construction Storm Water Notice of Intent, the project SWPPP shall be located on site and be accessible by the public at all times during construction. The SWPPP shall be placed at a location agreed upon by the Contractor and Engineer.

The Contractor shall understand the terms and conditions of the general NPDES permit that authorizes the storm water discharges associated with industrial activity from the construction site. Additionally, the Contractor, as evidenced by their signature on this project proposal, agrees and understands that, if awarded the contract on this project, he/she:

1. Becomes a co-permittee, along with the owner(s), to the Nebraska Department of Environmental Quality NPDES General Permit for Storm Water Discharges from construction sites on the project;

2. Is legally bound to comply with the Clean Water Act to ensure compliance with the terms and conditions of the storm water pollution prevention plan developed under the NPDES permit and the terms of the NPDES permit; and

3. Will hold the owners harmless for damages or fines arising as a result of noncompliance with the terms of the storm water permits and authorizations associated with the work on this project.

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices and stormwater management practices will be constructed and maintained according to the minimum standards and specifications of Chapter 2 of the Nebraska Department of

Transportation Drainage Design and Erosion Control Manual.

Following soil disturbance, permanent or temporary stabilization shall be completed within seven (7) calendar days to the surface of all perimeter sediment controls, topsoil stockpiles, and any other disturbed or graded areas on the project site which are not being used for material storage, or on which actual earth moving activities are being performed.

If existing BMPs need to be modified or additional BMPs are necessary for any reason, implementation must be completed before the next storm event whenever practicable. If implementation before the next storm is impracticable, the situation must be documented and the alternative BMPs must be implemented as soon as possible.

Permanent Stabilization: Disturbed areas that will not be hard surfaced will be sodded with grasses.

Stormwater Runoff and Management: Runoff from the roadway will be routed through the proposed underground enclosed storm sewer system. The storm sewer system will be designed to accommodate the runoff and discharge the peak flows without creating increased erosion.

Spill and Mitigation Plan: Spills of hazardous materials shall be contained and cleaned up immediately. Any contaminated soils or materials shall be removed and treated or disposed of (as appropriate) in accordance with NDEQ and EPA guidelines. Spills large enough to reach the storm sewer system will be reported to the National Response Center at 1-800-424-8802.

Northern Long-eared Bat

This project is within the range of the state and federally listed threatened northern long-eared bat (Myotis septentrionalis). The following conservation measures must be implemented in order to avoid adverse impacts on northern long-eared bat. No removal of suitable trees or removal of roosting structures between May 15 and July 31.

Western Prairie Fringed Orchid

This project is within the range of the state and federally listed threatened western prairie fringed orchid (Platanthera praeclara). The following conservation measures must be implemented in order to avoid adverse impacts. Survey according to protocol required during flowering period (June 15 – July 15) prior to ground disturbing activities or herbicide application. If species not found during the survey, work may proceed. Knife in outside of April 15 – October 1 growing season or have a blooming presence survey completed.

Migratory Bird Treaty Act

Clearing and grubbing of any identified trees will be allowed prior to the primary nesting season and prior to the issuance of the project Notice to Proceed when requested in writing by the Contractor. The primary nesting season in Nebraska has been determined to generally occur between April 1 and September 1. These nesting dates are a guide only, nesting can occur outside of those dates. Work outside of those dates is not exempt from compliance with the Migratory Bird Treaty Act.

The Contractor shall, to the extent possible, schedule clearing and grubbing activities to occur outside the primary nesting season in Nebraska if possible. However, if circumstances dictate that project construction or demolition must be done when nesting migratory birds may be present, a survey of the number of active nests and species of birds shall be conducted by a qualified bird surveyor provided by the Owner and a representative of the Contractor. If the survey finds that nests will be impacted by the proposed construction, delays may occur requiring adjustment of the phasing, project schedule, or daily production to comply with the Migratory Bird Treaty Act and meet the desired completion date.

If an active nest is found during the survey, the Contractor should do everything possible to restructure his activities and leave the nest undisturbed until the young fledge. Fledging could occur within a week, or up to a month, after the survey depending on the species of bird and whether the nest contained eggs or young. Also depending on the species of bird and their sensitivity to disturbance, a buffer of up to 30 feet surrounding the tree with the active nest could be required. If construction operations result in unavoidable conflict with nesting migratory bird's eggs or young, which will result in "taking" nests and their contents, the Contractor should notify the Engineer as soon as practicable. If construction cannot be rescheduled to allow the birds to fledge, and it is determined as an unavoidable "take" circumstance, the Contractor shall stop all work within 30 feet of the active nest and coordinate with the Engineer to determine how to proceed. The Engineer will facilitate coordination with the US Fish and Wildlife Service to determine the appropriate way to address the active nest. No work shall occur within 30 feet of the active nest until US Fish and Wildlife Service coordination is complete and the requirements of the Migratory Bird Treaty Act are satisfied.

Once a bird survey is conducted, it is the Contractor’s responsibility to use any legal and practical method to prevent the nesting of birds in order to prevent the need for additional surveys. The Contractor shall schedule his/her work to accommodate the process of conducting a survey(s) and remove cleared trees as soon as practicable. It is understood and agreed that the Contractor has considered in the bid all of the pertinent requirements concerning migratory birds (including endangered species) and that no additional compensation, other than time extensions if warranted, will be allowed for any delays or inconvenience resulting in these requirements.

TRAFFIC CONTROL

Prior to construction, the Contractor shall submit a traffic control plan and construction schedule for road closure to the City Engineer for approval. The Contractor shall provide any project status changes or updated information to the Engineer on a daily basis.

Total road closures to through traffic will be allowed on Worthman Boulevard or Pine Street during the period of construction. The Contractor will need to provide access to local traffic during construction. The Contractor will also need to identify a location to store materials and equipment during construction hours.

All temporary traffic control items required for the project shall be supplied, installed and removed per NDOT Standard Specifications for Highway Construction. "TRAFFIC CONTROL" shall be paid for at the contract unit price bid per lump sum. The Contractor shall be responsible for determining the Traffic Control needs for the project, including all devices and personnel, and to develop the bid amount accordingly. This payment includes the set-up, maintenance, removal, and any traffic control devices required.

STATUS OF EASEMENT

No additional land rights have been acquired for this project.

STATUS OF UTILITIES

Utility facilities, aerial and/or underground exist within this project. The Contractor shall avoid damaging any utility(s). Any such damage caused by Contractor, Contractor's employees, sub-contractors, suppliers or agents will be the responsibility of Contractor to repair at Contractor's expense. No additional compensation will be allowed for protecting utility(s) or for repair of any damage caused by Contractor, Contractor's employees, subcontractors, suppliers or agents. Contractor shall coordinate utility relocation or reconstruction with the appropriate utility company. Any relocation work necessary will be concurrent with construction.

CITY OF SEWARD UTILITIES

The City of Seward has existing power, water mains, sanitary sewers, and storm sewers within the limits of the project. Impacts to these utilities are not anticipated outside of improvements outlined within the plans. All work within this area which may impact public water, sewer, or power facilities will require coordination with the City of Seward Engineer and the City's Representative to minimize impact to daily activities.

The Contractor shall notify the City of any unforeseen conflicts with power lines. The City of Seward shall be responsible for any relocation and/or structural support of power lines.

The point of contact for the City of Seward is:
City of Seward Engineer
Contact: Michael Oneby, P.E.
Phone: (402) 643-4000

PRIVATE UTILITIES

There are no known private utilities located within the project limits based upon a February 2024 One Call utility locate. The Contractor shall notify the City of any unforeseen conflicts with private utilities. The Contractor shall complete their own One Call utility locate to verify.

SEPARATION OF WATER MAIN AND SEWERS

See attached Water Main and Sanitary/Storm Separations (2023) guidance from NDEE.

GENERAL CLEARING AND GRUBBING

The work area consists of grasses, shrubs and pavement. With this in mind, clearing and grubbing of vegetation within the project area may be required. The Contractor will not be allowed to dispose of trees, stumps, logs, down timber, shrubs, brush, weeds, or other herbaceous material resulting from clearing and grubbing operations on the Project Right-of-Way.

SALVAGING AND PLACING TOPSOIL

Subsection 207.01 in the Standard Specifications is amended to provide that the topsoil shall be salvaged from all existing grassed areas to be covered by new pavement and embankment. Salvaged topsoil shall be placed 4 inches thick over all areas to be seeded.

CONTAMINATED SOIL REMOVAL

During the execution of the work on this project the Contractor may encounter contaminated soils, debris or groundwater (media). If contaminated media is encountered the Contractor shall immediately cease excavation operations and contact the City's Representative. If it is determined by the City's Representative that the contaminated soils cannot be used on-site (e.g. as backfill for the utility trenches), the Contractor shall be required to dispose of any contaminated media in accordance with all federal, state and local laws.

In the event the Contractor or on-site construction management personnel suspect that contaminated media is encountered or will be during the performance of the work, they shall immediately notify the City's Representative and follow their direction for resolution on how to manage the contaminated media. Typical indications of potentially contaminated media include discoloration and/or odors associated with the media removed as part of boring, trenching or other excavation work.

During the course of the project the Contractor shall not haul any excavated material that is suspected to be contaminated off-site without the prior approval of the City's Representative. As such, the Contractor shall provide locations on-site to temporarily stockpile all excavated material that may be suspected to contain contaminated soils. All temporary stockpiles of contaminated soils shall be kept separate from clean soils and shall comply with the requirements set forth in the Construction Storm Water Pollution Prevention Plan (SWPPP) (if required). The City's Representative will determine the appropriate method for disposal of the excavated material if it is determined to be contaminated and make a recommendation to the Contractor. Work associated with removal and disposal of contaminated material will be considered on an 'Extra Work' basis.

SWPPP SIGN

"SWPPP SIGN" shall be paid at the contract unit price per each and shall be full payment for the contractor to furnish and install project signs as stated in the storm water pollution plan for the project. The contract price shall be full compensation for furnishing all labor, materials, equipment, tools, and all incidentals necessary to complete the work.

REMOVE BRICK SURFACE

This work will consist of removing the existing brick pavers. The brick pavers that are removed shall become property of the Contractor and removed from the site.

Payment will be made at the contract price per square yard for "REMOVE BRICK SURFACE" that are properly removed.

ROADWAY LIGHTING REQUIREMENTS

INSTALL LIGHT POLE

This work shall include the installation of Standard Street Lighting Poles. Street poles, fixtures, mast arms, and screw in bases shall be provided by the City of Seward.

All work associated with the installation of street light pole shall comply with all applicable provisions. Light pole complete, in place, and accepted by the ENGINEER, shall be measured for payment as single units and shall be paid for at the contract unit price bid per each. This price and payment shall be full compensation for all excavation, for installing the pole, luminaire arms, fixture, wiring, and power installed foundations.

DETECTABLE WARNING PANELS

Section 607 of the Standard Specifications shall be amended to include the following:

Detectable warning panels shall be cast-in-place replaceable glass and carbon reinforced polyester based composite material manufactured by ADA Solutions.

Color: Black, Federal Standard Color No. 37038

Contractor shall install detectable warning panels per the manufacturer's specifications.

NDOT STANDARD CURB INLET, PLAN 443

Section 916 of the Standard Specifications shall be amended to include the following:

Payment for Inlets and Junction Boxes shall be measured by the each and paid for at the contract price.

EROSION CONTROL, CLASS 1D

Section 810 of the Standard Specifications shall be amended to include the following:

A. The work included in this item shall consist of providing an accepted uniform stand of perennial turf grasses by fine grading and furnishing and placing fertilizer, seed, and mulch on all areas to be treated as shown on the plans. This shall include, but not be limited to: disking, harrowing, leveling/fine grading, planting, fertilizing, mulching, establishment, and maintenance till acceptance.

PART 1 SUBMITTALS:

A. The Contractor shall submit the following samples, certifications, or test results prior to use on the project:

a) Fertilizer - Form for Affidavit (on official stationery of supplier) certifying compliance with State and Federal regulations and standards of the Association of Official Agricultural Chemists.

b) Seed - Form for Affidavit (on official stationery of supplier) certifying compliance with State and Federal regulations and testing provisions of the Association of Official Seed Analysts for each shipment of seed for this project.

c) Sample and product information on erosion control blankets and hold down pins.

d) Sample and product information on hydromulch.

e) All original seed tags for all bags (and partial bags) of seeds used on the project shall be submitted to the Engineer.

f) Soil test identifying the lawn and garden package values before the seed bed preparation process has been started. Soil report is to include the cation exchange capacity (CEC), levels of phosphorus, potassium, calcium, magnesium and other nutrients, soil PH and soil buffer PH and suggested pounds per Acre recommendations to achieve a prepared soil for seeding on bare ground.

g) Typical desired nutrient levels for the area are; Organic matter 3%, PH 6-7.2, Phosphorus 25-30ppm, Potassium 150-200 ppm.

PART 2 - PRODUCTS

2.01 GENERAL:

All materials furnished in accordance with the requirements of this specification shall be delivered, where applicable, in sealed, unbroken packages bearing the brand and maker's name, and shall be stored on platforms and be properly covered to protect them from the weather and damage.

2.02 FERTILIZER/NUTRIENTS:

Commercial composite fertilizer or nutrients, uniform in composition, dry and free flowing. It shall bear the manufacturer's guaranteed statement of analysis which shall be as designated in the soils report for original fertilization/nutrient modification to the insitu soils. Any fertilizer/nutrients which becomes caked or otherwise damaged, rendering it unsuitable for use, will not be accepted.

2.03 SEED:

A. Acceptable Seed Mixtures (Nebraska Central and Eastern Region)

CENTRAL AND EASTERN – Type "B"

Type "B" – Central & Eastern	Minimum Purity (%)	Broadcast Application Rate in lb. of Pure Live Seed/Acre	Approved Mech. Drill Application Rate in lb. of Pure Live Seed/Acre
Perennial ryegrass – Linn, Norlea, Amazon	85		15
Western wheatgrass – Barton	85		3.5
Slender wheatgrass	85		12
Tall fescue	85		15
Red fescue (Festuca rubra)	85		6
Buffalograss – Bison, Cody, Sundancer, Texoka	80		3.5
Fults alkali grass (Puccinellia distans)	85		2
Sideoats grama – Butte, El Reno, Trailway, Pierre	75		4
Sand dropseed (Sporobolus cryptandrus)	90		0.5
Oats/wheat (wheat in the fall)	90		16

All seeds shall be origin Nebraska, adjoining states, or as specified. A contractor proposing to use a substitute variety or origin shall submit for the Engineer's consideration a seed tag representing the seed, which shows the variety, origin and analysis of the seed.

Or Approved Equivalent.

2.04 WATER: Potable.

Verify that prepared soil base is ready to receive work of this Section. Fill all depressions and rivulets with topsoil to establish a smooth grade. Beginning of installation means acceptance of existing site conditions.

2.05 PREPARATION OF TOPSOIL:

A. Conditioned soil:

1. The Contractor shall be responsible for determining the availability of organic soil additive material prior to bidding the project. If there is not sufficient supply of organic soil additive material, the Contractor shall condition the soil by nutrients and fertilizer per the requirements of this specification

2. 2 inches of organic soil additive shall be incorporated into the topsoil as described above.
3. The Contractor shall notify the Engineer five (5) days prior to the start of amended soil activities.
4. Once the Contractor is allowed to use manufactured organic soil, the Contractor shall notify the Engineer five (5) days in advance to schedule pick up of the manufactured organic soil material.

5. The Contractor shall place the conditioned soil in accordance with the Contract Documents.
6. Conditioned soil may be accomplished by mixing the organic soil additive with a stockpile of topsoil material then placing, or by spreading the organic soil additive over replaced topsoil and mixing together in place.
7. Organic soil additive may be spread over undisturbed native soil to a depth of two (2) inches and incorporated into the native soil to a total depth of six (6) inches.
8. Fertilizer shall not be added when using manufactured organic soil.

B. Soil conditioning by nutrients/fertilizer, only if compost is not available.
   1. Apply if needed according to recommendations from a soil test
   2. Apply 19-19-19 or equivalent nutrients fertilizer at the rate of 450 lbs/AC as a minimum.
   3. Incorporate recommended nutrients/fertilizer into the top 4-6 inches of the soil by discing or other means.

C. Seedbed preparation
   1. Harrow, disk or rake the topsoil to a depth of three (3") on slopes flatter than 3:1 and one to three (1-3") inches for slopes steeper than 3:1 in a minimum of two directions.
   2. When an area is compacted, crusted or hardened, the soil surface shall be loosened by discing, raking, or harrowing.
   3. Seed bed preparation should not be undertaken when excessively wet conditions exist.
   4. Remove all debris and stones having any dimension greater than one inch.
   5. Rake finish surface smooth

2.06 RATE OF APPLICATION:

A. Initial Fertilizing: Application rate shall be obtained from the required soils report.
B. General Lawn Seed: 12 pounds per 1,000 SF.
C. Refertilizing: As required by the engineer if the establishment is not as required to complete the seeding.

2.07 SEEDING:

A. Drill seed or sow (broadcast) grass seed, applying half the quantity in one direction, and the remaining quantity at right angles to it.
B. Do not sow seed on a windy day, or when the ground is frozen, wet or otherwise non-tillable.
C. Cover seed with a thin layer of topsoil by raking or dragging.

D. Cover newly seeded area with hydromulch or erosion control blankets. Hydromulch or erosion control blankets shall be applied within twenty four (24) hours after planting seed.

E. Install erosion control blankets where shown on the Drawing(s) and as per manufacturer's instructions. Hold down pins shall be installed two (2) pins per square yard.

2.08 SEEDING SEASON:

A. The suggested calendar dates for seeding are:

Spring:	March 15 to June 1.
Fall:	August 15 to October 1.

B. All disturbed soil areas shall be treated during the seeding season.

C. Areas at final grade: Permanent seeding will be accomplished

2.09 MAINTENANCE:

A. To achieve better germination of seed, the Contractor may water the seeded areas in order to maintain a moist seed bed at all times. If the Contractor chooses to water the seeded areas, water should be applied so that the topsoil is wet to a depth of two inches. Apply one complete coverage to the seeded area in an eight-hour period.

B. Protect the seed bed with barricades, if necessary, to keep all traffic off the area.

C. After the seed mixture has germinated, reseed all areas which have failed to show a uniform stand of germinated seed.

D. Maintain all seeded areas until acceptance. Suggested maintenance items shall include, but not be limited to any or all of the following, whichever are necessary:

1. Regrading.
2. Refertilizing.
3. Reseeding.
4. Re-Hydromulching or repositioning or replacing erosion control blankets.
5. Watering.
6. Weeding.
7. Rolling.
8. Filling in eroded areas.

2.10 INSPECTION AND ACCEPTANCE OF SEEDED AREAS:

A. Submit written notice requesting inspection by the Engineer at least ten days prior to the anticipated date.

B. No seeded areas will be inspected for acceptance prior to sixty (60) days from date of seeding.

D. A satisfactory stand of grass which is acceptable is defined as consisting of a uniform stand of at least eighty-five percent (85%) established permanent grass species. An acceptable stand of grass will be determined by the Engineer.

E. Appropriate materials to be furnished and installed by the contractor for Erosion Control Class 1D can be obtained from the NDOT approved products list.

F. Other items required to be furnished and installed before payment are; testing, soil conditioning with fertilization/nutrients, conditioned soil, seed bed preparation, and seeding will all be incidental to the direct pay items for erosion control

1. Soil Test required by this special provision are subsidiary.
2. Conditioned soil added to the area to be seeded shall not be paid for directly but will have to be completed in accordance with this special provision. The cost for the Contractor to provide, haul, and mix the organic soil additive shall be considered incidental to items for which the Contract provides direct payment
3. Fertilizer/ Nutrients added to the area to be seeded shall not be paid for directly but will have to be completed in accordance with the soils report.

EROSION CONTROL, CLASS 1E

Section 810 of the Standard Specifications shall be amended to include the following:

B. The work included in this item shall consist of providing an accepted uniform stand of buffer area grasses by fine grading and furnishing and placing fertilizer, seed, and mulch on all areas to be treated as shown on the plans. This shall include, but not be limited to: disking, harrowing, leveling/fine grading, planting, fertilizing, mulching, establishment, and maintenance till acceptance.

PART 1 SUBMITTALS:

A. The Contractor shall submit the following samples, certifications, or test results prior to use on the project:

a) Fertilizer - Form for Affidavit (on official stationery of supplier) certifying compliance with State and Federal regulations and standards of the Association of Official Agricultural Chemists.

b) Seed - Form for Affidavit (on official stationery of supplier) certifying compliance with State and Federal regulations and testing provisions of the Association of Official Seed Analysts for each shipment of seed for this project.

c) Sample and product information on erosion control blankets and hold down pins.

d) Sample and product information on hydromulch.

e) All original seed tags for all bags (and partial bags) of seeds used on the project shall be submitted to the Engineer.

f) Soil test identifying the lawn and garden package values before the seed bed preparation process has been started. Soil report is to include the cation exchange capacity (CEC), levels of phosphorus, potassium, calcium, magnesium and other nutrients, soil PH and soil buffer PH and suggested pounds per Acre recommendations to achieve a prepared soil for seeding on bare ground.

g) Typical desired nutrient levels for the area are; Organic matter 3%, PH 6-7.2, Phosphorus 25-30ppm, Potassium 150-200 ppm.

PART 2 - PRODUCTS

2.01 GENERAL:

All materials furnished in accordance with the requirements of this specification shall be delivered, where applicable, in sealed, unbroken packages bearing the brand and maker's name, and shall be stored on platforms and be properly covered to protect them from the weather and damage.

2.02 FERTILIZER/NUTRIENTS:

Commercial composite fertilizer or nutrients, uniform in composition, dry and free flowing. It shall bear the manufacturer's guaranteed statement of analysis which shall be as designated in the soils report for original fertilization/nutrient modification to the insitu soils. Any fertilizer/nutrients which becomes caked or otherwise damaged, rendering it unsuitable for use, will not be accepted.

2.03 SEED:

A. Acceptable Seed Mixtures: Type “C*” (Buffer Areas)

Buffer Areas – adjacent to wetlands, streambanks, and similar areas

Species	Minimum Purity (percent)	Lbs. of PLS/acre
Canada wildrye – Mandan (see note below)	85	4
Slender wheatgrass	85	5
Thickspike wheatgrass (see note below)	85	4
Western wheatgrass – Barton	85	5
Sand lovegrass – Nebraska-27, native	90	0.5
Big bluestem – Bonanza, Champ, Pawnee, Roundtree	60	3
Prairie cordgrass (Spartina pectinata)	85	0.75
Switchgrass – Nebraska-28, Trailblazer	90	1.25
Indiangrass – Holt, Chief, native	75	2.5
Sideoats grama – Butte (Trailway is suitable in all except Region F and western Region D)	75	3.5
Little bluestem – (Regions A, B, C use Blaze or Camper, Regions D, E, F use Cimarron or Pastura)	60	2.5
Oats or wheat (wheat in the fall)	90	Oats 12 Wheat 19

*(**Canada wildrye** should not be included in Perkins, Chase, Dundy, Hayes, Frontier, Hitchcock, or Red Willow Counties)*

*(**Thickspike wheatgrass** is appropriate in Region D (western portion) and Region F)*

Or Approved Equivalent.

2.05 WATER: Potable.

Verify that prepared soil base is ready to receive work of this Section. Fill all depressions and rivulets with topsoil to establish a smooth grade. Beginning of installation means acceptance of existing site conditions.

2.05 PREPARATION OF TOPSOIL:

D. Conditioned soil:

9. The Contractor shall be responsible for determining the availability of organic soil additive material prior to bidding the project. If there is not sufficient supply of organic soil additive material, the Contractor shall condition the soil by nutrients and fertilizer per the requirements of this specification

10. 2 inches of organic soil additive shall be incorporated into the topsoil as described above.

11. The Contractor shall notify the Engineer five (5) days prior to the start of amended soil activities.

12. Once the Contractor is allowed to use manufactured organic soil, the Contractor shall notify the Engineer five (5) days in advance to schedule pick up of the manufactured organic soil material.
13. The Contractor shall place the conditioned soil in accordance with the Contract Documents.
14. Conditioned soil may be accomplished by mixing the organic soil additive with a stockpile of topsoil material then placing, or by spreading the organic soil additive over replaced topsoil and mixing together in place.
15. Organic soil additive may be spread over undisturbed native soil to a depth of two (2) inches and incorporated into the native soil to a total depth of six (6) inches.
16. Fertilizer shall not be added when using manufactured organic soil.

E. Soil conditioning by nutrients/fertilizer, only if compost is not available.
4. Apply if needed according to recommendations from a soil test
5. Apply 19-19-19 or equivalent nutrients fertilizer at the rate of 450 lbs/AC as a minimum.
6. Incorporate recommended nutrients/fertilizer into the top 4-6 inches of the soil by discing or other means.

F. Seedbed preparation
6. Harrow, disk or rake the topsoil to a depth of three (3") on slopes flatter than 3:1 and one to three (1-3") inches for slopes steeper than 3:1 in a minimum of two directions.
7. When an area is compacted, crusted or hardened, the soil surface shall be loosened by discing, raking, or harrowing.
8. Seed bed preparation should not be undertaken when excessively wet conditions exist.
9. Remove all debris and stones having any dimension greater than one inch.
10. Rake finish surface smooth

2.06 RATE OF APPLICATION:

A. Initial Fertilizing: Application rate shall be obtained from the required soils report.
B. 15-20 pounds per Acre.
C. Refertilizing: As required by the engineer if the establishment is not as required to complete the seeding.

2.07 SEEDING:

E. Drill seed or sow (broadcast) grass seed, applying half the quantity in one direction, and the remaining quantity at right angles to it.
F. Do not sow seed on a windy day, or when the ground is frozen, wet or otherwise non-tillable.
G. Cover seed with a thin layer of topsoil by raking or dragging.

H. Cover newly seeded area with hydromulch or erosion control blankets. Hydromulch or erosion control blankets shall be applied within twenty four (24) hours after planting seed.

E. Install erosion control blankets where shown on the Drawing(s) and as per manufacturer's instructions. Hold down pins shall be installed two (2) pins per square yard.

2.08 SEEDING SEASON:

A. The suggested calendar dates for seeding are:

Spring:	March 15 to June 1.
Fall:	August 15 to October 1.

G. All disturbed soil areas shall be treated during the seeding season.

H. Areas at final grade: Permanent seeding will be accomplished

2.09 MAINTENANCE:

A. To achieve better germination of seed, the Contractor may water the seeded areas in order to maintain a moist seed bed at all times. If the Contractor chooses to water the seeded areas, water should be applied so that the topsoil is wet to a depth of two inches. Apply one complete coverage to the seeded area in an eight-hour period.

B. Protect the seed bed with barricades, if necessary, to keep all traffic off the area.

C. After the seed mixture has germinated, reseed all areas which have failed to show a uniform stand of germinated seed.

D. Maintain all seeded areas until acceptance. Suggested maintenance items shall include, but not be limited to any or all of the following, whichever are necessary:

1. Regrading.
2. Refertilizing.
3. Reseeding.
4. Re-Hydromulching or repositioning or replacing erosion control blankets.
5. Watering.
6. Weeding.
7. Rolling.
8. Filling in eroded areas.

2.10 INSPECTION AND ACCEPTANCE OF SEEDED AREAS:

A. Submit written notice requesting inspection by the Engineer at least ten days prior to the anticipated date.

B. No seeded areas will be inspected for acceptance prior to sixty (60) days from date of

seeding.

I. A satisfactory stand of grass which is acceptable is defined as consisting of a uniform stand of at least eighty-five percent (85%) established permanent grass species. An acceptable stand of grass will be determined by the Engineer.

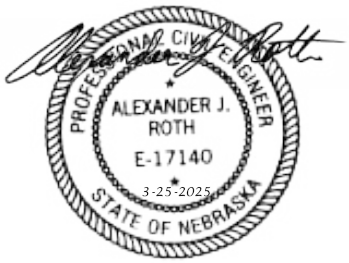
J. Appropriate materials to be furnished and installed by the contractor for Erosion Control Class 1E can be obtained from the NDOT approved products list.

K. Other items required to be furnished and installed before payment are; testing, soil conditioning with fertilization/nutrients, conditioned soil, seed bed preparation, and seeding will all be incidental to the direct pay items for erosion control

1. Soil Test required by this special provision are subsidiary.
2. Conditioned soil added to the area to be seeded shall not be paid for directly but will have to be completed in accordance with this special provision. The cost for the Contractor to provide, haul, and mix the organic soil additive shall be considered incidental to items for which the Contract provides direct payment
3. Fertilizer/ Nutrients added to the area to be seeded shall not be paid for directly but will have to be completed in accordance with the soils report.

APPENDIX A – CITY OF LINCOLN, NEBRASKA STANDARD SPECIFICATIONS

CHAPTER 20 – CONSTRUCTION FOR UTILITIES AND STRUCTURES
CHAPTER 22 – SANITARY SEWERS
WATER MAIN AND SANITARY/STORM SEPARATIONS (2023) GUIDANCE FROM NDEE.



NEBRASKA
Good Life. Great Resources.
DEPT. OF ENVIRONMENT AND ENERGY

Jim Pillen. Governor

3/20/2025

Michael Oneby
City of Seward, Nebraska
142 N. 7th Street
Seward, NE 68434

RE: PERMIT TRACKING NUMBER: CSW-202509446
Issuance of storm water discharge authorization for the Seward - Worthman Boulevard Extension construction project located at Seward Rail Campus in Seward, NE.

Dear Michael Oneby:

This is to acknowledge receipt of the CSW-NOI form on 3/18/2025, for the project referenced above. This project has authorization to discharge storm water under the terms and conditions of NPDES General Permit NER210000. Please review the entire permit to ensure compliance.

When final stabilization (Part I.C.5.d of the permit) has been completed, login and access the storm water portal to submit Notice of Termination form.

Local jurisdiction requirements may apply.

For Lincoln, contact the City of Lincoln Watershed Management Division via email at NPDES@lincoln.ne.gov; by phone at (402) 309-5936, or go to lincoln.ne.gov and reference keyword "NOI".
For Omaha, contact James Kee at (402) 444-3915 for grading permit requirements.

Portal can be located at: NDEE Website

If you have any questions concerning this NPDES storm water discharge authorization, please contact our office at (402) 471-8330.

Sincerely,

Emma Lichtenfeld, Environmental Specialist
NPDES and State Permits Section
Nebraska Department of Environment and Energy

Department of Environment and Energy
P.O. Box 98922
Lincoln, Nebraska 68509-8922

OFFICE 402-471-2186 FAX 402-471-2909
ndee.moreinfo@nebraska.gov

CITY OF LINCOLN, NEBRASKA, STANDARD SPECIFICATIONS

CHAPTER 20

CONSTRUCTION FOR UTILITIES AND STRUCTURES

ARTICLE	TITLE	
20.00	GENERAL	2002
20.01	MATERIALS	2002
	A. SMOOTH STEEL PIPE CASING	2002
	B. CORRUGATED METAL PIPE	2002
	C. FOUNDATION	2002
	D. BEDDING	2002
	E. GROUT	2003
	F. FLOWABLE FILL	2003
20.02	EARTHWORK	2003
	A. CLEARING AND GRUBBING	2003
	B. TREE REMOVAL	2003
	C. EXCAVATION	2003
	D. BACKFILL	2004
	E. BASIS OF PAYMENT	2005
	F. MAINTENANCE AND PROTECTION OF EXCAVATIONS	2005
	G. DISPOSAL OF SURPLUS MATERIAL	2006
	H. SOIL EROSION CONTROL	2006
20.03	UTILITY ALIGNMENT AND GRADE	2006
20.04	GROUND WATER	2007
20.05	FOUNDATION AND BEDDING	2008
	A. GENERAL	2008
	B. BASIS OF PAYMENT	2008
20.06	HORIZONTAL DIRECTIONAL DRILLING	2009
	A. GENERAL	2009
	B. SUBMITTALS	2009
	C. MATERIALS	2010
	D. INSTALLATION	2011
	E. REJECTION	2012
	F. TOLERANCES	2012
	G. CLEAN UP AND DISPOSAL OF MATERIALS	2013
	H. BASIS OF PAYMENT	2013

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CITY OF LINCOLN, NEBRASKA, STANDARD SPECIFICATIONS

CHAPTER 20

CONSTRUCTION FOR UTILITIES AND STRUCTURES

ARTICLE	TITLE	
20.07	CONCRETE AND REINFORCING STEEL FOR STORM DRAINAGE	2014
	A. GENERAL	2014
	B. BASIS OF PAYMENT	2014
20.08	CONCRETE AND REINFORCING STEEL FOR SANITARY SEWER	2014
	A. GENERAL	2014
	B. BASIS OF PAYMENT	2014
20.09	CONCRETE AND REINFORCING STEEL FOR WATER MAIN	2015
	A. GENERAL	2015
	B. BASIS OF PAYMENT	2015
20.10	PAVEMENT CONSTRUCTION AND RECONSTRUCTION	2015
20.11	FINAL CLEANUP	2016
	A. GRAVEL OR ROCK ROADWAY SURFACE	2016
	B. FINAL CLEANUP AND PARKING SPACE FINISH	2016
	C. SODDING AND SEEDING	2016
20.12	COLD WEATHER CONSTRUCTION	2016
	A. LIMITS OF CONSTRUCTION	2016
	B. SUSPENSION OF WORK	2017
20.13	SUBSTANTIAL COMPLETION	2017
20.14	FINAL ACCEPTANCE	2017
20.15	GUARANTEE	2017

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CHAPTER 20

CONSTRUCTION FOR UTILITIES AND STRUCTURES

20.00 GENERAL

Construction for utilities and structures shall include the excavation and backfill of all materials necessary to complete the Work in conformance with the plans and these Standard Specifications; all necessary sheeting, shoring and bracing; and any pumping that may be necessary to keep the trench free from water. Construction for utilities and structures shall also include the removal and replacement of pavement, driveways and sidewalks; disposal of surplus materials, borrow, maintenance and protection of excavation, and the restoration of all surfaces to a satisfactory condition.

These Standard Specifications shall apply to all utility and structure work regardless of the type of Work being performed.

20.01 MATERIALS

The following materials are approved for use in the City of Lincoln pursuant to the Standard Specifications described herein. Alternate materials maybe requested in writing to the Director of Public Works and Utilities.

A. SMOOTH STEEL PIPE CASING

Smooth steel pipe used for encasement shall be of the diameter, length, and wall thickness shown on the Plans. The encasement shall be new welded steel pipe conforming to ASTM Designation A 139, Grade B. All joints shall be welded.

B. CORRUGATED METAL PIPE

Corrugated metal pipe used for encasement shall be copper steel galvanized and shall conform to the requirements of AASHTO “Standard Specifications for Corrugated Metal Culvert Pipe”, Designation M-36, and shall be of the diameter, length and gauge as shown on the Plans.

C. FOUNDATION

Foundation material shall conform to the requirements of ASTM “Standard Specifications for Concrete Aggregates”, Designation C-33. The gradation for foundation material shall be size Number 357 (2" to #4).

D. BEDDING

For Lincoln Water System and Lincoln Wastewater System projects, bedding material shall be a well graded “crusher run” crushed rock with a percent passing gradation range of 1" - 100, #4 - 20 to 60, #10 - 0 to 30 and #200 - 0 to 10, unless otherwise designated on the plans or Special Provisions or approved by the City’s Project Manager.

For Lincoln Watershed Management projects, limestone rock and crushed concrete will also be permitted, provided that the gradation range requirements listed above are satisfied.

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20.01 MATERIALS (Continued)

E. GROUT

The grout shall be mixed in the volumetric proportions of 2 parts Portland cement, 1 part fly ash, and not to exceed 6 parts sand. Enough water shall be used to produce a pumpable grout.

F. FLOWABLE FILL

Flowable fill material shall meet the requirements of Chapter 3 of these Standard Specifications.

20.02 EARTHWORK

A. CLEARING AND GRUBBING

Clearing and grubbing shall be accomplished as provided in Chapter 2 of these Standard Specifications.

B. TREE REMOVAL

The removal of trees and stumps shall be accomplished as provided in Chapter 2 of these Standard Specifications.

C. EXCAVATION

In general, all excavation shall be made by open cut from the surface of the ground and at the width and to the depth necessary for the proper construction of the utility and its appurtenances, according to the plans and these Standard Specifications. The Work shall be performed in conformance with Occupational Safety and Health requirements. Nothing contained in these Standard Specifications or Contract Documents shall relieve the Contractor from complying with any Local, State, or Federal safety requirements. The Work shall be performed within the limits of construction as shown on the plans. All necessary precautions must be made to prevent slides and cave-ins. Bracing or sheeting, shall be provided to maintain the sides and bottom of the trench in unstable material.

The excavated material shall be handled in such a manner as to cause a minimum of inconvenience to public travel and to permit safe and convenient access to public and private property along the line of Work. If a utility excavation is to remain open overnight in the built environment, all material (spoil) excavated, shall be properly covered and protected. If the excavation is to remain open for more than five (5) business days, all excavated material shall be removed from the job site. If excavating and backfilling on the same day, all unsuitable material (spoil) shall not be used for backfill. It shall be the Contractor's responsibility to secure the necessary permission and make all necessary arrangements for all required storage, borrow, and disposal sites.

Access shall be provided at all times to fire hydrants and water valves in the vicinity of the Work and firefighting equipment shall have access to any structure at all times. Trenches shall not be opened more than 100' in advance of the installed utility or as directed by the City's Project Manager. All trenches shall be backfilled as soon as practical after the pipe is in place, or as ordered by the City's Project Manager. Unless otherwise specified or authorized by the City's Project Manager, all excavated material shall be placed on the street side of the trench.

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C. EXCAVATION (Continued)

Holes for pipe bells shall be provided at each joint, but shall be no larger than necessary for joint assembly and assurance that the pipe barrel will lie flat on the trench bottom. Other than the bell holes, the trench bottom shall be true and even in order to provide support for the full length of the pipe barrel.

Excavation below subgrade with subsequent refilling with loose earth will not be permitted. Should the Contractor inadvertently excavate below subgrade, such over excavation shall be filled and brought up to grade with compacted soil, crushed rock, or sand or gravel as approved by the City's Project Manager.

The width of the utility trench at the top of the pipe shall be no greater than the width specified in the standard bedding details. Excessive trench width may be cause for providing a higher class bedding at no cost to the City. The width of excavation for utility lines 6" or greater in diameter shall be a minimum of 3'. In no case shall the excavation be less than 2' greater than the outside diameter of the pipe or the outside dimensions of the structure to be built. The bottom of all excavations shall be finished to the true profile grade, of full width, and cleared of any rocks, clods, roots, or other material that may interfere with properly placing the pipe or structure.

No measurement or direct payment will be made for any excavation required as part of the Work. The costs of excavation will be considered subsidiary to other items for which direct payment is made.

D. BACKFILL

Backfilling and compaction of excavations shall follow as closely after the construction as possible. All excavations shall be backfilled with approved material up to the original surface of the ground unless otherwise indicated on the plan. No backfill shall be made with material containing stone, large clods, frozen earth or debris of any kind. The backfill shall be placed in loose lifts not to exceed the thickness required to attain 12" thick compacted layers or as noted in a geotechnical report signed and sealed by an Engineer registered in the State of Nebraska.

Backfilling shall not be done in freezing weather, except by permission of the City's Project Manager, nor shall any fill be made where the material already in the trench is frozen. If construction proceeds at any time when frozen material is encountered and frozen material is placed in the trench line, all such trenches shall be re-compacted in the spring after frost conditions are no longer present in the ground. This re-compaction of the trench shall include the removal of all material to a depth of 12" below the depth of the frozen material and the replacement and re-compaction of the trench to the proper grade with suitable material.

Care shall be exercised in backfilling so as not to damage any finished Work. The backfill shall be brought up evenly on both sides of the utility or structure.

Backfilling against any concrete structure shall not be started until test specimens of the concrete develop a compressive strength of at least 2000psi.

Unless otherwise directed by the City's Project Manager, compaction of backfill within 3' of all structures and utility appurtenances, including but not limited to, valves, hydrants, manholes, and inlets, shall be accomplished by mechanical compaction using hand operated tampers, rammers, or other approved devices for the soil type(s) encountered.

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D. BACKFILL (Continued)

Jetting or hydro-flushing of the backfill shall not be permitted. Care shall be taken to ensure that the utility is properly bedded with material of an approved density or in conformance with these Standard Specifications. The initial 12" of backfill above the top of the pipe shall be carefully placed to protect the pipe bedding from further backfilling operations.

Backfill shall be mechanically compacted to a minimum density of 96% of the maximum dry density of the material as determined by AASHTO Method T-99. The moisture content of the soils shall be between 2% below and 4% above the optimum moisture content as determined by the above test.

When the moisture content of the material is too low to obtain specified density, sufficient water shall be added to the material and/or lift thickness shall be decreased before compaction.

After backfilling, the Work area shall be kept maintained in a smooth and well drained condition.

E. BASIS OF PAYMENT

No measurement or direct payment will be made for any backfilling or compaction required as a part of this Work. The costs of backfilling and compaction will be considered subsidiary to other items for which direct payment is made. When directed by the City's Project Manager, additional water shall be mixed in with backfill materials to allow compaction to be completed. Such water quantities shall be paid as an "EXTRA WORK" item. Lincoln Water System hydrant meter readings immediately before/after the addition of water shall establish the volume of water used.

F. MAINTENANCE AND PROTECTION OF EXCAVATIONS

Temporary support, adequate protection and maintenance of all underground and surface utilities, structures, drains, sewers, and other obstructions encountered in the progress of the Work shall be furnished by the Contractor at Contractor's own expense. Contractor shall take all reasonable precautions to prevent movement of the sides of such excavations. The Contractor shall protect all excavations from surface water by the construction of adequate dikes. The Contractor shall furnish and put in place such sheeting and bracing as may be required to support the sides of the excavations and the Contractor shall remove such sheeting and bracing as the trenches or excavations are filled. The City's Project Manager may order the sheeting be left in place if, in the City's Project Manager's opinion, the utility or structure might be damaged by its being removed.

In lieu of sheeting and bracing, the Contractor may use a trench box of adequate design during the construction of the utility to protect the utility and all personnel.

The Contractor shall satisfy the City's Project Manager that the proposed methods of bedding and foundation material placement is in compliance with the requirements of the Standard Drawings for pipe bedding details when the trench box is moved. The Contractor shall protect the integrity of the pipe embedment zone when utilizing or moving the trench box.

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F. MAINTENANCE AND PROTECTION OF EXCAVATIONS (Continued)

No measurement or direct payment shall be made for maintenance and protection of excavations, except for sheeting left in place as required above. Payment for sheeting left in place shall be made as an "EXTRA WORK" item. Such payment shall be the value of the sheeting minus the cost of removal. The cost of maintaining and protecting excavations shall be considered subsidiary to the other items for which direct payment is made.

G. DISPOSAL OF SURPLUS MATERIAL

The Contractor shall dispose of all surplus excavated material not needed for fills or other designated purposes. All material deemed unsuitable by the City's Project Manager shall be disposed of properly and replaced with approved material.

No measurement or direct payment shall be made for disposal or stock piling surplus materials. The costs of disposal or stock piling surplus materials shall be considered subsidiary to the other items for which direct payment is made.

All material deemed unsuitable by the City's Project Manager and required to be removed from the job site, as well as approved replacement material not readily available at the job site, shall be measured and paid for as an "EXTRA WORK" item.

H. SOIL EROSION CONTROL

Soil Erosion Control shall be accomplished as provided in Chapter 32 of these Standard Specifications.

20.03 UTILITY ALIGNMENT AND GRADE

Prior to excavation, investigation shall be made to the extent necessary to determine the location of underground structures and utilities. Care shall be exercised by the Contractor during excavation to avoid damage to existing structures or utilities. Where shown on the plans, or as requested by the City's Project Manager, the Contractor shall make such excavation as may be necessary to ascertain the vertical and horizontal location of existing utilities.

The utilities and structures shall be constructed and maintained to the lines and grades established by the plans and Standard Specifications. When crossing existing utilities or other structures, alignment and grade may be adjusted by the City's Project Manager to provide clearance as required or deemed necessary to maintain minimum clearance, or to prevent future damage or contamination of either utilities or structures.

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20.04 GROUND WATER

The Contractor is required to follow proper dewatering (e.g. includes sediment bags or use of sediment basins) to avoid eroding the soil on the construction site. Best management practices must be followed when water is being pumped to lakes, wetlands or directly to storm sewer inlets. When selecting discharge areas from a dewatering process, the Contractor shall not permit the water to be pumped directly into slopes, if available, dewatering activities should be directed to a vegetated area such as a well-established grassed area.

The Contractor shall discontinue dewatering if the area being discharged to shows signs of instability or erosion. If utilizing channels, the Contractor must ensure they are stable and protected with grass or vegetation. The Contractor shall avoid dewatering during heavy rain conditions. The Contractor shall never discharge water that has been contaminated with oil, grease, or chemical products, as these would need to be collected and disposed of properly and legally.

The Contractor shall provide and maintain adequate equipment to remove and dispose of ground water entering the excavations, trenches, or other parts of the Work. Each excavation shall be kept dry during subgrade preparation and continually thereafter until the structure to be built, or the pipe to be installed therein, is completed to the extent that no damage from hydrostatic pressure, flotation or other cause will result.

All excavations for concrete structures or trenches which extend down to or below ground water shall be dewatered by lowering and keeping the ground water below the bottom of the pipe or as required to maintain a stable foundation.

The Contractor will be held responsible for the condition of any existing storm sewer system which may be used for drainage purposes on this contract, and all storm sewers shall be left clean and free of sediment. The Contractor shall not pump or drain any ground water or surface runoff into any part of the sanitary sewer system.

No measurement or direct payment shall be made for removal and disposal of ground water unless otherwise provided in the proposal or Special Provisions. The costs of removal and disposal of ground water shall be considered subsidiary to the other items of Work for which direct payment is made.

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20.05 FOUNDATION AND BEDDING

A. GENERAL

Foundation and bedding materials shall meet the requirements of these Standard Specifications.

Foundation materials generally will be required where unstable soil conditions exist at the bottom of the trench. Foundation material shall be placed to the satisfaction of the City's Project Manager.

Bedding material shall be placed and compacted as called for on the plans. After the pipe has been properly placed to grade and line on the initial bedding course, additional bedding material shall be placed in 6" lifts and thoroughly settled by mechanical compaction in order to fill all voids below, around and above the top of the pipe as shown on the Standard Plans details for pipe bedding.

B. BASIS OF PAYMENT

Foundation material when placed in conformance with these Standard Specifications as directed by the City's Project Manager shall be paid as an "EXTRA WORK" item. Weight tickets for material installed shall be submitted prior to any payment for this "EXTRA WORK" item. This "EXTRA WORK" payment shall be full compensation for furnishing all materials, installation, labor, equipment, tools and incidentals necessary to create a stable foundation.

No measurement or direct payment shall be made for bedding material, except that all weight tickets for bedding material shall be submitted prior to any payment for pipe being installed. The cost of bedding materials, in the appropriate classes for the type of pipe material utilized, as shown on the drawings or for the structures constructed, shall be considered subsidiary to the other items of Work for which direct payment is made.

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20.06 HORIZONTAL DIRECTIONAL DRILLING

A. GENERAL

Horizontal directional drilling (HDD) is a trenchless excavation method which is accomplished in three phases. The first phase consists of drilling a small diameter pilot hole along a designed directional path. The second phase consists of enlarging the pilot hole to a diameter suitable for installation of the pipe. The third phase consists of pulling the pipe into the enlarged hole. The Contractor shall furnish all labor, materials, tools, equipment, drilling fluids, and other items as necessary for a complete and functional installation as required, to the lines and grades shown on the Plans and as specified.

B. SUBMITTALS

1. Shop drawings, catalog data, and manufacturer's technical data showing complete information on material composition, physical properties, and dimensions of new pipe, fittings and drilling fluids. Include manufacturer's recommendation for handling, storage, and repair of pipe and fittings damaged.

2. The proposed phasing and schedule of the Work including location of launching and receiving pits, services affected, length of pipe effected during each phase, and proposed traffic disruptions. The phasing and schedule of the Work must be approved by the City's Project Manager prior to Work starting.

3. The proposed methods for monitoring, prevention, containment, and clean-up of drilling fluid surface returns at unauthorized locations.

4. The tabulation of pilot hole survey coordinates.

5. Written record of the installation pullback loads on the utility during the installation process.

6. Plan and profile drawings of the documented as-built location of the installed utility.

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C. MATERIALS

1. Water main installed by HDD shall use Certa-Lok C900 RJ, Class 200 DR 14 pipe as manufactured by Certainteed, or approved equal. Pipe material other than Certa-Lok must be approved prior to ordering. Restrained joint pipe shall also meet all performance requirements of AWWA C900.

2. The Contractor shall at all times provide and maintain instrumentation which will accurately locate the pilot hole, measure drill string axial and torsional loads, and measure drilling fluid discharge rate and pressure. The City's Project Manager shall have access to these instruments and their readings at all times. A log of all recorded readings shall be maintained by the Contractor and will become a part of the Project Record Documents supplied by Contractor. Instrumentation systems shall be calibrated immediately prior to beginning the work.

3. The Drilling Fluid System shall be capable of mixing and delivering the drilling fluid to the drill head or the reamer in the volumes and pressures required. Contractor shall maximize recirculation of drilling fluid surface returns. Contractor shall provide solids control and fluid cleaning equipment of a configuration and capacity that can process surface returns and produce drilling fluid suitable for reuse.

4. The Drilling Fluid shall be used as required during the installation of the pilot hole, enlarging of the pilot hole, and installation of the water pipe. No drilling fluid will be accepted or utilized that does not comply with permit requirements and environmental regulations.

5. Drill Pipe (drill stem) shall be of sufficient size and strength to resist all installation loadings including tensile, compressive, bending, and torsional loads. An appropriate safety factor shall be used by the Contractor in sizing the drill pipe.

6. Drill Head configuration shall be as selected by Contractor and compatible with requirements for location system.

7. Reamer and Swivels shall be as selected by Contractor. Reamer and swivel assembly shall be capable of enlarging borehole while preventing damage due to rotation of the pipe during its pullback into its final position.

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D. INSTALLATION

1. BORING OF THE PILOT HOLE

Install pilot hole using steerable drilling head. Pilot hole shall be drilled along the path shown on the Drawings to the tolerances listed herein. Listing of tolerances shall not relieve Contractor from responsibility for safe operations or damage to adjacent utilities and structures.

Monitor location of drill head as required to install pilot hole to indicated lines and grades, but in no instance shall the interval between locating the drilling head exceed 15' in length along the alignment.

Use drilling fluids as required to lubricate and support the pilot hole excavation.

Pilot hole shall be free from abrupt changes in line or grade that could result in unacceptably high loadings on the drill pipe or the water pipe during installation.

After completion of pilot hole drilling, Contractor shall provide a tabulation of coordinates, referenced to the drilled entry point, which accurately describe the location of the pilot hole. This tabulation shall be in addition to the log of recorded readings required.

2. PRE-REAMING OF THE PILOT HOLE

Subsequent to the City's Project Manager's acceptance of pilot hole, Contractor may, at his option, pre-ream the pilot hole as necessary for installation of the water pipe.

Pre-reaming operations shall be conducted at the discretion of the Contractor. Contractor shall insure that a hole sufficient to accommodate the pull section of water pipe has been produced. Any damage to the water pipe resulting from inadequate pre-reaming shall be the responsibility of the Contractor. All provisions of this Specification relating to simultaneous reaming and pulling back operations shall also pertain to pre-reaming operations.

Use drilling fluids as required to lubricate and to support the reamed pilot hole.

Use of pre-reaming shall be at the option of the Contractor; however, lack of pre-reaming shall not result in excessive installation loads on the water pipe.

3. REAMING AND PULLBACK OF THE MAIN

Contractor shall utilize a reamer to enlarge the pilot hole to sufficient size for installation of the main without imposing excessive installation loadings on the water pipe.

Grippers used on the water pipe shall not damage adjacent sections of the pipe. Sections of the pipe utilized by the grippers shall be removed from the pipe after installation.

Contractor shall handle and support the pull section of water pipe so as to prevent damage and minimize pullback forces. Pull section of water pipe shall be supported as it proceeds during pull back so that it moves freely and the pipe is not damaged.

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D. INSTALLATION (Continued)

Contractor shall use drilling fluids as required to lubricate and support the reamed pilot hole, lubricate installation of the water pipe, and completely fill all overcut of the reamed pilot hole.

The pull section of water pipe shall be installed in the reamed hole in such a manner that external pressures are minimized and an appropriate counter-balancing internal pressure is maintained. Any damage to the pipe resulting from external pressure during installation shall be the responsibility of Contractor. The pipe shall be filled with water as it enters the ground to ensure that adequate internal pressure is maintained at all points to counter balance external collapse pressures. Contractor shall submit pipe filling procedure proposed for use to the City's Project Manager for review and acceptance.

Contractor shall continuously monitor the pulling loads imposed upon the water pipe. The maximum allowable tensile load imposed on the water pipe shall not exceed the recommendations of the pipe manufacturer. Contractor shall take all required measures necessary to prevent installation loads on the water pipe from exceeding those recommended by the pipe manufacturer. If necessary, Contractor shall at his own expense, stop the pullback of the water pipe, remove the section of pipe installed within the enlarged pilot hole, and pre-ream the pilot hole as required to allow installation of the water pipe without exceeding the allowable pullback forces.

After the installation, Contractor shall determine and log the installed location and depth of the water pipe. Contractor shall submit to the City's Project Manager a drawing detailing the installed location of the water pipe in both plan and profile view.

E. REJECTION

1. If the pilot hole is rejected by the City's Project Manager, the Contractor shall, at his own expense, backfill the rejected pilot hole with bentonite, and install a pilot hole acceptable to the City's Project Manager.

2. Monitoring records indicate that pullback loads exerted on pipe exceeded the loadings recommended by pipe manufacturer.

3. Installation outside of the allowable tolerances.

F. TOLERANCES

Tolerances for the pilot hole and the installed water pipe shall be as listed below.

1. For vertical tolerance, the water pipe shall be installed at the grade indicated on the plans. Minor deviations from the grade indicated on the plans may be allowed, provided that:

   a. The soil cover above the top of the water pipe shall not be less than shown on the drawings.

   b. Except at crossings under water courses, the water pipe shall maintain downward slope towards all blowoff points to provide for positive drainage of the water pipe.

   c. The water pipe shall maintain upward slope towards all venting points to provide for positive venting and air release from the water pipe.

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F. TOLERANCES (Continued)

2. For horizontal tolerance, the water pipe shall be installed at the locations indicated on the plans. Minor deviations from the locations indicated on the plans may be allowed, provided that:

   a. The horizontal deviation of the water pipe from the location required on the drawings shall not exceed one (1) foot at any location along the water pipe without prior authorization of the City's Project Manager.

   b. The horizontal deviation shall not cause the water pipe to interfere with existing structures, utilities, or result in any part of the finished work being installed outside of the permanent easements.

G. CLEAN UP AND DISPOSAL OF MATERIALS

1. Contractor shall remove all construction debris and spoil material and dispose of it at an acceptable location.

2. Drilling fluid shall be removed from pits and then the pits backfilled as required.

3. Disposal of excess drilling fluids shall be the responsibility of the Contractor and shall be conducted in compliance with all environmental regulations, right-of-way and workspace agreements, and permit requirements. Disposal of drilling fluids shall not be allowed on the project site.

4. Contractor shall employ his best efforts to maintain full annular circulation of drilling fluids. Drilling fluid returns at location other than the entry and exit points shall be minimized. In the event that annular circulation is lost, Contractor shall take steps to restore circulation. If inadvertent surface returns of drilling fluids occur, they shall be immediately contained as required and collected. If the amount of the surface return is not great enough to allow practical collection, the affected area shall be diluted with fresh water and the fluid will be allowed to dry and dissipate naturally. If the amount of the surface return exceeds that which can be contained and collected using practical methods, drilling operations shall be suspended until surface return volumes can be brought under control.

H. BASIS OF PAYMENT

Directional Drilling for carrier pipes completed in conformance with these Specifications and accepted by the City's Project Manager shall be measured and paid for at the contract unit price bid per linear foot for DIRECTIONAL DRILLING FOR __" WATER MAIN, for each size and type called for in the Contract Documents. Such payment shall be full compensation for all materials, equipment, tools, labor and incidentals necessary to produce the directional drill and install the carrier pipe as required in the Contract Documents.

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20.07 CONCRETE AND REINFORCING STEEL FOR STORM DRAINAGE

A. GENERAL

When called for on the plans, the Contractor shall construct reinforced concrete collars, elbows, plugs and headwalls for storm drainage at the locations indicated. The collars, elbows, plugs and headwalls shall conform to the details shown in the Lincoln Standard Plans.

B. BASIS OF PAYMENT

When called for in the proposal, concrete for storm water collars, elbows, plugs and headwalls placed in conformance to these Standard Specifications and accepted by the City's Project Manager shall be paid for at the contract unit price bid per cubic yard for CONCRETE FOR COLLARS, ELBOWS, PLUGS AND HEADWALLS, IN PLACE. The concrete shall not be measured separately for payment, but the quantities shall be established based upon the volume of concrete required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all mixing, hauling, forming, placing, jointing, curing, finishing, excavation, backfill, materials, equipment, tools, labor, and incidentals necessary to complete the structure.

When called for in the proposal, payment for reinforcing steel for collars, elbows, plugs and headwalls placed in conformance with these Standard Specifications and accepted by the City's Project Manager shall be made at the contract unit price bid per pound for REINFORCING STEEL FOR COLLARS, ELBOWS, PLUGS AND HEADWALLS, IN PLACE. The reinforcing steel shall not be measured separately for payment, but the quantities shall be established based upon weight of steel required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all placing, tying, chairs, materials, equipment, tools, labor, and incidentals necessary to place the steel in the proper locations in conformance with the plans.

20.08 CONCRETE AND REINFORCING STEEL FOR SANITARY SEWER

A. GENERAL

When called for on the plans, the Contractor shall construct reinforced concrete plugs and collars for sanitary sewer at the locations indicated. The plugs and collars shall conform to the details shown in the Lincoln Standard Plans.

B. BASIS OF PAYMENT

When called for in the proposal, concrete for sanitary sewer plugs and collars placed in conformance to these Standard Specifications and accepted by the City's Project Manager shall be paid for at the contract unit price bid per cubic yard for CONCRETE FOR PLUGS AND COLLARS, IN PLACE. The concrete shall not be measured separately for payment, but the quantities shall be established based upon the volume of concrete required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all mixing, hauling, forming, placing, jointing, curing, finishing, excavation, backfill, materials, equipment, tools, labor, and incidentals necessary to complete the structure.

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20.08 CONCRETE AND REINFORCING STEEL FOR SANITARY SEWER (Continued)

B. BASIS OF PAYMENT (Continued)

When called for in the proposal, payment for reinforcing steel for sanitary sewer plugs and collars placed in conformance with these Standard Specifications and accepted by the City's Project Manager shall be made at the contract unit price bid per pound for REINFORCING STEEL FOR PLUGS AND COLLARS, IN PLACE. The reinforcing steel shall not be measured separately for payment, but the quantities shall be established based upon weight of steel required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all placing, tying, chairs, materials, equipment, tools, labor, and incidentals necessary to place the steel in the proper locations in conformance with the plans.

20.09 CONCRETE AND REINFORCING STEEL FOR WATER MAIN

A. GENERAL

When called for on the plans, the Contractor shall construct reinforced concrete thrust collars, thrust blocks, anchorages, gravity blocks, tee blocks and plug blocks for water main at the locations indicated. The thrust blocks, anchorages, tee blocks and plug blocks shall conform to the details shown in the Lincoln Standard Plans.

Concrete shall be L3500 conforming to Chapter 3 of these Standard Specifications. Reinforcing steel shall conform to "Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement" ASTM Designation A615, Grade 40 or 60, or "Standard Specification Axle-Steel Deformed and Plain Bars for Concrete Reinforcement" ASTM Designation A617, Grade 60.

B. BASIS OF PAYMENT

When called for in the proposal, concrete for water main thrust collars, thrust blocks, anchorages, gravity blocks, tee blocks and plug blocks placed in conformance to these Standard Specifications and accepted by the City's Project Manager shall be paid for at the contract unit price bid per cubic yard for CONCRETE FOR COLLARS, BLOCKS AND ANCHORAGES, IN PLACE. The concrete shall not be measured separately for payment, but the quantities shall be established based upon the volume of concrete required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all mixing, hauling, forming, placing, jointing, curing, finishing, excavation, backfill, materials, equipment, tools, labor, and incidentals necessary to complete the structure.

When called for in the proposal, payment for reinforcing steel for water main thrust collars, thrust blocks, anchorages, gravity blocks, tee blocks and plug blocks placed in conformance with these Standard Specifications and accepted by the City's Project Manager shall be made at the contract unit price bid per pound for REINFORCING STEEL FOR COLLARS, BLOCKS AND ANCHORAGES, IN PLACE. The reinforcing steel shall not be measured separately for payment, but the quantities shall be established based upon weight of steel required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all placing, tying, chairs, materials, equipment, tools, labor, and incidentals necessary to place the steel in the proper locations in conformance with the plans.

20.10 PAVEMENT CONSTRUCTION AND RECONSTRUCTION

Pavement reconstruction and miscellaneous masonry reconstruction shall be accomplished in conformance as described in these Standard Specifications.

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20.11 FINAL CLEANUP

A. GRAVEL OR ROCK ROADWAY SURFACE

Where the Work of the Contract crosses or is parallel to any unpaved roadway and where the roadway surface is affected in any way by operations under the contract, the Contractor shall repair and restore the same to at least its original condition. Such restoration shall include, but not be limited to, regrading ditches and roadway surface, restoration of culverts and drives, and placement of rock or gravel surfacing as directed by the City's Project Manager.

The cost of regrading ditches, roadway surfaces, and drives shall not be paid for directly but shall be considered subsidiary to other items of Work for which direct payment is made.

Culverts required to be removed and re-laid shall be measured and paid for as provided in Chapter 21 of these Standard Specifications. Crushed rock or gravel surfacing shall be measured and paid for as provided in Chapter 9 of these Standard Specifications.

B. FINAL CLEANUP AND PARKING SPACE FINISH

When all other Work has been completed, the Contractor shall thoroughly clean all pavement, parking spaces, sidewalks, rights-of-way, storage areas, access roads, and private property of all earth and other debris by use of approved equipment. All pavement, parking spaces, sod, sidewalks, storage areas, access roads and private property shall be restored to a condition at least equal to that existing prior to any operations under this Contract.

No measure or direct payment shall be made for cleanup or parking space finish. The costs of cleanup and parking space finish shall be considered subsidiary to other items for which direct payment is made.

C. SODDING AND SEEDING

Sodding and seeding shall be accomplished as provided in Chapter 30 of these Standard Specifications.

20.12 COLD WEATHER CONSTRUCTION

A. LIMITS OF CONSTRUCTION

Work to be performed in developed areas, or Work affecting the operation, capacity, and safety of arterial and collector streets, between December 1 and March 15, shall be limited by the following provisions:

1. A maximum of 650 linear feet within the limits of the project may be under construction at one time.

2. A maximum of 2 intersections may be closed at one time within project limits, even though the third intersection may not violate the 650' limit described in Paragraph 1 above.

3. "Under Construction" shall include all operations which disrupt or limit the use of public facilities, such as pavement removal, sidewalk removal, excavation, backfilling, pipe laying, material storage, equipment storage, and/or any other operation deemed by the City's Project Manager as a disruption of normal ingress and egress to the public right- of-way within project limits.

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20.12 COLD WEATHER CONSTRUCTION (Continued)

A. LIMITS OF CONSTRUCTION (Continued)

4. Temporary restoration will be required to reduce long-term disruptions and inconvenience during construction. 2 weeks after beginning Work in an area, the City's Project Manager shall require temporary restoration of facilities by the Contractor. The entire cost of installation, maintenance, and removal of such temporary installations shall be the Contractor's responsibility.

B. SUSPENSION OF WORK

Suspension of Work during the winter construction period, December 1 to March 15, may be requested by the Contractor under the following conditions:

1. The request must be made in writing to the City's Project Manager and shall include the beginning date and duration. If Work is to be resumed prior to expiration of time requested, 48 hours written notice of such intent will be required.

2. The Contractor shall be required to restore all vehicular and pedestrian facilities to full use by either permanent or temporary restoration before the suspension period will become effective.

3. Calendar days included in the period that Work is actually suspended shall be counted from the effective suspension date, and the governing completion date shall be adjusted accordingly.

In no case shall a granted suspension of Work be cause for requesting or granting additional calendar days for completion of this Contract.

The City's Project Manager shall state to the Contractor, in writing, the effective suspension date and the date on which the suspension expires.

In addition, following the suspension period, the City's Project Manager shall notify the Contractor, in writing, of the new completion date of the Contract as provided above.

20.13 SUBSTANTIAL COMPLETION

Refer to Chapters 21 through 23 for a specific definition of Substantial Completion for each type of utility Work.

20.14 FINAL ACCEPTANCE

Refer to Chapters 21 through 23 for a specific definition of Final Acceptance for each type of utility Work.

20.15 GUARANTEE

Refer to Chapters 21 through 23 for a specific definition of guarantee for each type of utility Work.

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CITY OF LINCOLN, NEBRASKA, STANDARD SPECIFICATIONS

CHAPTER 22

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CITY OF LINCOLN, NEBRASKA, STANDARD SPECIFICATIONS

CHAPTER 22

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CHAPTER 22

SANITARY SEWERS

22.00 GENERAL

The Work covered in this chapter shall include the installation of sanitary sewers and their appurtenances.

A. REFERENCED STANDARDS

1. ASTM A48/48M – Standard Specification for Gray Iron Castings
2. ASTM C76 – Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
3. ASTM C361 – Standard Specification for Reinforced Concrete Low-Head Pressure Pipe
4. ASTM C425 – Standard Specification for Compression Joints for Vitrified Clay Pipe and Fittings
5. ASTM C443 – Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
6. ASTM C478 – Standard Specification for Circular Precast Reinforced Concrete Manhole Sections
7. ASTM C655 – Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe
8. ASTM C700 – Standard Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated
9. ASTM C877 – Standard Specification for External Sealing Bands for Concrete Pipe, Manholes, and Precast Box Sections
10. ASTM C828 – Standard Test Method for Low-Pressure Air Test of Vitrified Clay Pipe Lines
11. ASTM C900 – Standard Test Method for Pullout Strength of Hardened Concrete
12. ASTM C920 – Standard Specification for Elastomeric Joint Sealants
13. ASTM C923 – Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals
14. ASTM C969 – Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines
15. ASTM C990 – Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants
16. ASTM C1103 – Standard Practice for Joint Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines

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A. REFERENCED STANDARDS (Continued)

17. ASTM C1173 – Standard Specification for Flexible Transition Couplings for Underground Piping Systems

18. ASTM C1244 – Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test Prior to Backfill

19. ASTM C1619 – Standard Specification for Elastomeric Seals for Joining Concrete Structures

20. ASTM D1784 – Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds

21. ASTM D2321 – Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications

22. ASTM D2412 – Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading

23. ASTM D3034 – Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings

24. ASTM D3139 – Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals

25. ASTM D3212 – Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals

26. ASTM D3262 – Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer Pipe

27. ASTM D3575 – Standard Text methods for Flexible Cellular Materials Made From Olefin Polymers

28. ASTM D3681 – Standard Test Method for Chemical Resistance of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe in a Deflected Condition

29. ASTM D3753 – Glass-Fiber Reinforced Polyester Manholes and Wetwells

30. ASTM D4161 – Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Joints Using Flexible Elastomeric Seals

31. ASTM D4819-13 – Standard Specification for Flexible Cellular Materials Made From Polyolefin Plastics

32. ASTM F1417 – Standard Practice for Installation Acceptance of Plastic Non-pressure Sewer Lines Using Low-Pressure Air

33. ASTM F2764 – Standard Specification for 6 to 60 in. [150 to 1500 mm] Polypropylene (PP) Corrugated Double and Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications

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22.00 GENERAL (Continued)

A. REFERENCED STANDARDS (Continued)

34. ASTM F477 – Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe

35. ASTM F593 – Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs

36. ASTM F594 – Standard Specification for Stainless Steel Nuts

37. ASTM F679 – Standard Specification for Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings

38. AWWA C900 – Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 In. Through 60 In. (100 mm Through 1,500 mm)

22.01 MATERIALS

The materials listed in this article are approved for use in the City of Lincoln pursuant to the Standard Specifications described herein. Developers, consultants, and Contractors may request consideration of alternate materials to the Director of the Transportation and Utilities Department. Only one type of pipe shall be used between manholes on each project unless specifically called for on the plans or authorized by the City's Project Manager.

A. VITRIFIED CLAY PIPE (VCP) - 8" to 48" Gravity Pipe

1. Pipe and Fittings (Extra Strength): ASTM C700.

2. Compression Joints: ASTM C425, polyester or polyurethane material factory applied to both the bell and spigot or plain end of every pipe.

B. CENTRIFUGALLY CAST FIBERGLASS REINFORCED POLYMER MORTAR PIPE (CCFRPM) - 18" to 104" Gravity Pipe

1. Pipe and Fittings: ASTM D2412, ASTM D3262, and ASTM D3681.

2. Pipe Joints: ASTM D4161, field connected with fiberglass sleeve couplings that utilize elastomeric sealing gaskets as the sole means to maintain joint water tightness.

3. Elastomeric Gaskets: ASTM F477, supplied by qualified gasket manufacturers and be suitable for the service intended.

C. SOLID WALL POLYVINYL CHLORIDE (PVC) - 8" to 60" Gravity Pipe

1. Pipe and Fittings 15 IN and smaller: ASTM D3034, DR 35 minimum.

2. Pipe and Fittings 18 IN through 60 IN: ASTM F679.

3. Pipe Joints: Integral bell and spigot joints with elastomeric seals complying with ASTM D3212 and ASTM F477.

4. Laying Lengths: All pipe shall be furnished in standard laying lengths.

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D. REINFORCED CONCRETE PIPE (RCP) - 48" to 144" Gravity Pipe

1. Certification:

   Manufactured by a plant certified under the American Concrete Pipe Association's (ACPA) "Quality Cast" Plant Certification Program. All RCP delivered to the jobsite shall be stamped with the "Q-Cast" certification stamp.

2. Pipe:

   a. ASTM Designation C76 or C-655 as specified on the plans or Special Provisions, except as herein provided.

   b. Circular in cross-section.

   c. The coarse aggregate used in the manufacture of the RCP shall conform to the requirements of Article 11.01.

   d. All RCP shall have an antimicrobial admixture: 1 gallon per cubic yard of concrete of Con^{mic}Shield® by Conshield Technologies Inc. Additive shall be included in the concrete mix design as part of the total water content. The additive shall be added to the concrete mix water to ensure even distribution throughout the concrete mixture.

3. Pipe Joints: ASTM C361 and ASTM C1619. Elastomeric seal shall be Class B.

   a. Joints shall be water tight with no visible water leaking or weeping from the joint.

4. Laying Lengths: All pipe shall be furnished in standard laying lengths.

5. Lifting holes will not be allowed.

E. POLYPROPYLENE (PP) - 12" to 42" Gravity Pipe

1. Pipe and Fittings 12 IN through 30 IN: dual wall, ASTM F2764, ASTM D2412 minimum PS of 46 pounds/inch/inch.

2. Pipe and Fittings 30 IN through 42 IN: triple wall, ASTM F2764, ASTM D2412 minimum PS of 46 pounds/inch/inch.

3. Pipe Joints: Integral bell and spigot joints complying with ASTM F2764. Watertight seals complying with ASTM D3212, with the addition of a 15-psi pressure requirement.

4. Laying Lengths: All pipe shall be furnished in standard laying lengths of 13 feet and 20 feet.

F. POLYVINYL CHLORIDE (PVC) - 4" to 60" Pressure Pipe

1. Pipe and Fittings: AWWA C900, ASTM D1784. Pressure class of pipe shall be as indicated in the Contract Documents.

2. Joints: ASTM D3139 with a push-on joint and ASTM F477.

3. Laying Lengths: All pipe shall be furnished in standard laying lengths of 14 feet.

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G. OTHER SEWER PIPE

1. Other sewer pipe material may be authorized only by special permission from Lincoln Wastewater.

H. PRECAST CONCRETE MANHOLE

1. As per the Lincoln Standard Plans.

2. Circular precast: ASTM C478.

3. Base:

   a. Integral base with riser wall and base slab cast monolithically as a single unit with benching.

   b. Base consisting of a riser section with a secondary poured integral base slab with benching.

4. Minimum inside dimension of 48 IN.

5. Flexible watertight connector: ASTM C923.

6. Joint sealants:

   a. Rubber O-ring or profile gasket complying with ASTM C443.

   b. Exterior cold-applied mastic compound recommended by the manufacturer and complying with ASTM C990 or Butyl Sealant Wrap complying with ASTM C877.

7. Manholes on sanitary sewer trunk lines (15 inch or larger pipe) shall have an antimicrobial admixture.

   a. Antimicrobial Admixture: 1 gallon per cubic yard of concrete of Con^{mic}Shield® by Conshield Technologies Inc. Additive shall be included in the concrete mix design as part of the total water content. The additive shall be added to the concrete mix water to ensure even distribution throughout the concrete mixture.

I. FIBERGLASS MANHOLE

1. As per the Lincoln Standard Plans.

2. Fiberglass: ASTM D3753. Use resin only from a single manufacturer.

3. Minimum inside dimension of 48 IN.

4. Flexible watertight connector: ASTM C923.

5. Manhole top: Shall have a fiberglass neck that extends inside grade rings to extend 1 IN past the flat surface of the manhole cone.

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J. ADJUSTING RISERS

1. Reinforced concrete: ASTM C478, risers shall be free from cracks, voids, and other defects.

    a. Use manufacturer's recommended adhesive.

    b. Use antimicrobial admixture as outlined in 22.01 H7a. if manhole contains the admixture.

2. Polypropylene: ASTM D3575 and ASTM D4819-13.

    a. Use manufacturer's recommended adhesive.

3. Adjusting riser shall be approved by City's Project manager prior to installation.

K. ADJUSTING RINGS

1. Polypropylene: ASTM D3575 and ASTM D4819-13.

    a. Use manufacturer's recommended adhesive.

2. Adjusting ring shall be approved by City's Project Manager prior to installation.

L. EXTERNAL FRAME SEAL

1. Flexible external rubber sleeve: ASTM C 923.

2. Stainless steel compression bands: ASTM F593 and F594, Type 304.

3. External frame seal shall be approved by City's Project Manager prior to installation.

M. FRAME AND COVER

1. Frame and Cover: ASTM A48/48M, Class 35B.

2. Rated: Suitable for H-20 Traffic Loading.

3. As per the Lincoln Standard Plans.

N. WATERTIGHT FRAME AND COVER

1. To be used in areas prone to flooding, areas adjacent to creeks, and other areas as specified by the City's Project Manager.

2. Frame and Cover: Heavy Duty, R-1755-F2LM Frost/Watertight LiftMate Frame, Solid Gasketed Lid and Inner Lid, with hinge as manufactured by Neenah Foundry.

3. Furnish unit with manufacturer recommended anchoring system.

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22.01 MATERIALS (Continued)

O. WASTEWATER SERVICE PIPE/PRIVATE SEWERS

1. Wastewater service pipe for new or reconstructed sanitary sewer services not owned by the City shall conform to the material requirements as provided in Title 24 of the Lincoln Municipal Code.

P. PIPE CONNECTIONS

1. Flexible watertight connector for pipes to manholes: ASTM C923.

2. Concrete collar for RCP pipe to RCP pipe connections: As per the Lincoln Standard Plans.

3. Connecting dissimilar pipe: ASTM C1173. Stainless steel clamped elastomeric couplings with stainless steel shielding band factory fabricated specifically for the use intended. The following manufacturers are acceptable:

   a. Fernco Strong Back series or equal.

22.02 EXCAVATION, FOUNDATION, BEDDING AND BACKFILL

A. GENERAL

1. Trench excavation methods, pipe foundation materials, pipe bedding materials, pipe backfill materials and methods shall conform to Chapter 20 of these Standard Specifications, except as hereinafter modified for sanitary sewer construction.

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22.03 CONNECTING NEW SANITARY TO EXISTING SANITARY

A. TAP EXISTING MANHOLE AND REPLACE INVERT

1. Maintain sewer service at all times.

2. Remove existing manhole channel/invert and bench.

3. Tap shall be core drilled through existing manhole wall. Exceptions to core drilling shall require approval by the City's Project Manager prior to construction.

4. Install flexible watertight connector into new opening.

5. Insert pipe through flexible connector. Pipe is allowed to penetrate inside wall of structure a maximum of two inches.

6. Reconstruct invert flow channel and bench in existing manhole.

B. CONVERT EXISTING MANHOLE TO DROP MANHOLE

1. Obtain approval from the City's Project Manager.

2. Construct drop as per the Lincoln Standard Plans.

3. Maintain sewer service at all times.

4. Remove existing manhole channel/invert and bench.

5. Taps shall be core drilled through existing manhole wall. Exceptions to core drilling shall require approval by the City's Project Manager prior to construction.

6. Install flexible watertight connector into new openings.

7. Insert pipes through flexible connector. Pipe is allowed to penetrate inside wall of structure a maximum of two inches.

8. Install other pipes and fittings for outside drop structure.

9. Place concrete encasement on crushed rock.

10. Reconstruct invert flow channel and bench in existing manhole.

C. CONNECTING DISSIMILAR PIPE

1. Contractor shall connect dissimilar pipe as per 22.01 and per City's Project Manager approval.

2. Unless specifically designated in the contact documents, connecting dissimilar pipe shall not be paid for separately. The cost of these items shall be considered subsidiary to the other items for which direct payment is made.

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D. TEMPORARY SEWER PLUGGING REQUIREMENTS

1. Install plugs in the appropriate locations of all new sanitary sewers prior to, or during construction, and remove the plugs after construction using approved plugging methods and types to prevent any and all storm runoff, ground water and other foreign material from entering wastewater collection lines.

2. Check each plug daily and, if required, immediately take corrective action by repairing or replacing the plugs, as applicable to the situation.

3. Unless specifically designated in the contact documents, temporary sewer plugging shall not be paid for separately. The cost of these items shall be considered subsidiary to the other items for which direct payment is made.

E. MANHOLE REMOVAL

1. Verify with City's Project Manager the manhole is not in use.

2. Excavate as necessary to accomplish the required removal.

3. Saw cut a true line to separate the pipes from the manhole.

4. Completely remove and dispose of existing manhole.

5. Construct concrete sewer plugs by filling the end of the pipes with concrete as per the Lincoln Standard Plans.

6. Backfill and compact the resulting voids in conformance with Chapter 20 of these Standard Specifications.

F. MANHOLE ABANDONMENT

1. Verify with City's Project Manager the manhole is not in use.

2. Excavate as necessary to accomplish the required removal.

3. Remove the upper portion of the structure to a minimum of three feet below the proposed finished elevation of the surrounding ground.

4. Remove all rubble and debris from the remaining portion of the structure.

5. Fill manhole with approved backfill material, compacted in the abandoned manhole to the densities in conformance with Chapter 20 of these Standard Specifications.

6. Construct concrete sewer plugs by filling the end of the pipes with concrete as per the Lincoln Standard Plans.

7. Backfill and compact the resulting voids in conformance with Chapter 20 of these Standard Specifications.

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22.03 CONNECTING NEW SANITARY TO EXISTING SANITARY (Continued)

G. BASIS OF PAYMENT

1. Reconstructed manholes built in conformance with these Standard Specifications and accepted by the City's Project Manager shall be counted and paid for at the contract unit price bid per each for TAP EXISTING MANHOLE AND REPLACE INVERT, or for CONVERT EXISTING MANHOLE TO DROP MANHOLE. Such payment shall be full compensation for all excavation, backfill, materials, equipment, tools, labor and incidentals necessary to complete the Work in accordance with the Contract Documents.

2. Plugging of existing sewer pipes shall be considered subsidiary to other items of Work for which direct payment is made. REMOVE EXISTING SANITARY SEWER MANHOLE shall be counted and paid for at the contract unit price bid per each. FILL AND ABANDON EXISTING MANHOLE shall be counted and paid for at the contract unit price bid per each. Such payments shall be full compensation for all excavation, backfill, materials, equipment, tools, labor and incidentals necessary to complete the Work in accordance with the Contract Documents.

22.04 ABANDONMENT OF SANITARY SEWER MAIN

A. GENERAL

1. Verify with City's Project Manager the sanitary sewer main is not in use.

2. Excavate as necessary to accomplish the required abandonment.

3. Construct concrete sewer plugs by filling the end of the pipes with concrete as per the Lincoln Standard Plans.

4. All sewer pipes beneath pavement shall be filled with flowable fill as specified in Chapter 3 of these Standard Specifications unless specifically designated otherwise in the contact documents.

B. BASIS OF PAYMENT

1. ABANDONMENT OF SANITARY SEWER MAIN shall be measured and paid for at the contract unit price per cubic yard. Such payment shall be full compensation for all labor, tools, materials, and incidentals necessary to complete the work in accordance with the Contract Documents.

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22.05 PIPE INSTALLATION

A. DELIVERY, STORAGE, AND HANDLING OF PRODUCTS

1. Deliver, handle and store products in accordance with the manufacturer's instructions.

    a. Protect PVC pipe from UV degradation if stored outside for more than the manufacturer's recommended number of days.

2. Protect pipeline sections stored at the site from damage.

3. Repair or replace any new pipe, fittings, and system appurtenances damaged before or during installation at Contractor's expense, before proceeding further.

    a. Utilize repair methods as recommended by the manufacturer.

    b. Replace damaged materials as directed by City's Project Manager.

B. LAYING THE PIPE

1. Excavate trench and provide pipe foundation materials, pipe bedding materials and pipe backfill materials as specified in Chapter 20 of these Standard Specifications.

2. Do not lay pipe in water or on saturated soil or bedding, or allow water to rise in trench around pipe prior to placing backfill material. Provide ground water management as specified in Chapter 20 of these Standard Specifications.

3. Install temporary watertight sewer plugs to prevent trench water, mud, dirt, or other foreign substances from entering the sanitary sewer system.

4. Clean pipe interior and joints prior to installation. Keep pipe clean during construction.

5. Begin at the lowest point in the line with the bell end pointing upstream.

6. Assemble joints.

    a. Clean joint surfaces to remove soil or foreign material prior to joining pipe.

    b. Assemble joints according to pipe manufacturer's recommendations.

7. Provide manholes as specified in the Contract Documents. Use a saw to cut ends of pipe flush with inside wall of manholes and structures. Do not use hammer or other means to break pipe.

8. Remove material at the bottom of the trench if determined to be unsuitable by the City's Project Manager.

9. Grade bottoms of trenches such that when bedding is placed between the trench bottom and the pipe, each section of pipe is installed to the specified depth or elevation with uniform support.
10. Determine and fix alignment and grade or elevation of each pipeline from offset stakes or calibrated laser instruments.

11. Calculate required elevation of each pipe joint and survey installed elevation at each joint prior to connecting the next joint to verify grade.

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B. LAYING THE PIPE (Continued)

12. Install pipelines on the line and grade shown on the drawings. Relay pipe to proper grade if any joint elevation deviates from the following tolerances:

    a. Horizontal and vertical alignment shall not vary from design line and grade at any structure by more than 1% of the inside diameter of the pipe or ¼ inch, whichever is larger.

    b. Horizontal alignment of the pipe shall not vary from design line at any point along the pipe by more than 1% of the inside diameter of the pipe.

    c. Low spots holding water shall not exceed the following depths for each pipe size:

TABLE 22.05 A - PIPELINE TOLERANCES

Pipe Diameter	Maximum Low Spot Depth
8 IN	½ IN
10 IN	½ IN
12 IN	¾ IN
15 IN	¾ IN
18 IN and larger	5% of Pipe Diameter*

13. Do not disturb installed pipe and bedding when using movable trench boxes or supports. Block or anchor pipe as necessary to prevent joint displacement. Voids created by movement of trench boxes or supports shall be properly filled and compacted as described in Chapter 20 of these Standard Specifications.

14. Backfill trench with approved material as described in Chapter 20 of these Standard Specifications, provided all inspection and testing requirements are met.

15. Install wastewater service wyes at each location specified in the Contract Documents and detailed in the Lincoln Standard Plans.

16. Flexible piping construction shall be installed in conformance with ASTM D2321 and manufacturer recommended installation guidelines.

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C. CURVILINEAR ALIGNMENT

1. Bending of the pipe barrel to achieve curvilinear alignment shall not be permitted.

2. Follow the allowable joint deflection:

   a. PVC: 1° of deflection at the joint. Standard 14 feet laying length has a minimum radius of 785 feet.

   b. PP: 3° of deflection at the joint. Standard 13 feet laying length has a minimum radius of 248 feet and standard 20 feet laying length has a minimum radius of 382 feet.

   c. RCP: As per manufacturer's recommendations.

   d. VCP: As per manufacturer's recommendations.

   e. Additional joint deflection using factory-made 3° couplings is allowed. The quantity and location shall be included in the Contract Documents and will not be determined in the field.

D. BASIS OF PAYMENT

1. All pipe of the various types shall be measured and paid for at the contract unit price bid for each size per linear foot for SANITARY SEWER PIPE, ___". All pipe shall be measured, center to center, through manholes. Said payment shall be full compensation for all excavations, backfill, testing, materials, equipment, tools, labor and incidentals necessary to install the pipe in accordance with the Contract Documents. Special measurement and payment for all fittings and pipe materials necessary to achieve desired radius, including beveled or radius pipe, will not be considered. The extra costs, if any, shall be merged with and considered subsidiary to the cost of the various sizes of pipe called for in the Contract Documents.

2. SANITARY SEWER PLUG, ___" shall be measured and paid for at the contract unit price bid per each for each type and size of sanitary sewer plug. This price shall be full compensation for all excavations, backfill, testing, labor, materials, tools, equipment and incidentals necessary to complete each type and size of sanitary sewer plug in accordance with the Contract Documents.

3. 3 DEGREE COUPLING, ___" shall be measured and paid for at the contract unit price bid per each for each type and size of 3-degree coupling. This price shall be full compensation for all excavations, backfill, testing, labor, materials, tools, equipment and incidentals necessary to complete each type and size of 3 degree coupling in accordance with the Contract Documents.

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22.06 HIGHWAY, STREET, RAILROAD AND UTILITY CROSSINGS

A. GENERAL

1. Highway, street, railroad and utility crossings shall be constructed in accordance with the approved permit.

2. The City will obtain the necessary permits.

3. Encasements shall conform to Chapter 20 of these Standard Specifications.

4. In laying pressure type sewer pipe over/under a water main, the center of a standard length of pipe shall be centered with the centerline water main. See Chapter 23 of these Standard Specifications.

22.07 SANITARY MANHOLE CONSTRUCTION

A. DELIVERY, STORAGE, AND HANDLING OF PRODUCTS

1. Deliver, handle and store products in accordance with the manufacturer's instructions.

2. Store all products on level ground and not in mud or water.

3. Keep products free from dirt and other foreign matter.

4. Use approved lifting devices that will safely lift the weight of the manhole unit with applicable OSHA requirements safety factor.

B. GENERAL REQUIREMENTS FOR INSTALLATION

1. Excavate and provide foundation materials, bedding materials, and backfill materials as specified in Chapter 20 of these Standard Specifications.

2. Manhole construction shall conform to the Lincoln Standard Plans.

3. Install rubber plug or an approved non-shrink grout in lift holes.

4. Prepare subgrade to accurate elevation required to place manhole bedding material.

C. MANHOLE BASE, RISERS, AND CONE

1. Set the manhole base on a graded bedding making sure the flexible watertight connectors or pipe openings match design elevations. If necessary, pour anti-flotation concrete base.

2. Level the top of the manhole base in both directions.

3. Install each additional manhole component, ensuring each is plumb as installed before installing the next component.

4. Install manhole eccentric cone.

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D. PIPE CONNECTIONS

1. Place flexible watertight connectors according to manufacturers' recommendation.

2. Install and bed pipes and connect to manhole. Install pipe flush with inside wall of structure. Place bedding and pipe embedment material as specified in Chapter 20 of these Standard Specifications.

E. MANHOLE JOINTS

1. Ensure joints are free of debris.

2. Install rubber O-ring or profile gasket.

3. Apply cold-applied mastic compound or butyl sealant wrap to exterior of all sanitary sewer manhole joints.

F. MANHOLE FLOW CHANNEL AND BENCH

1. Flow channel construction shall conform to the Lincoln Standard Plans.

2. Construct minimum manhole flow channel of one-half the pipe inner diameter to produce a smooth half-pipe shape between pipe inverts.

3. Slope the manhole bench no less than ½ IN per foot perpendicular to flow line.

G. MANHOLE ADJUSTING RISERS AND RINGS

1. On new and existing manholes, construct:

   a. Maximum 21 inch adjusting riser.

   b. Adjusting rings for the top 4 inches.

2. On manholes in paved areas, match the slope of the finished surface with sloped adjusting rings.

3. Bed each concrete adjusting riser with manufacturer's approved product.

4. Bed each polypropylene riser or ring with manufacturer's approved product and according to manufacturer's recommended installation procedure.

H. FRAME AND COVER

1. Install the frame and cover to place the cover at the elevation specified in the Contract Documents.

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22.07 SANITARY MANHOLE CONSTRUCTION (Continued)

I. MANHOLE EXTERNAL FRAME SEAL

1. Install in accordance with the manufacturer's instructions.

2. All sealing surfaces shall be smooth, clean and free of any form offsets.

3. Extend seal a minimum of 3 inches below the lowest adjustment riser.

4. Extend seal above the flange of the manhole frame.

J. COLD WEATHER CONSTRUCTION

1. Take all reasonable precautions to protect all parts of the Work from damage due to freezing or as a result of winter weather conditions.

K. BASIS OF PAYMENT

1. Standard manholes and standard drop manholes shall be measured and paid for at the contract unit price bid per each for STANDARD MANHOLE, TYPE __ and STANDARD DROP MANHOLE, TYPE __. This price shall be full compensation for the manhole base, risers, and cone; pipe connections; manhole joints; manhole flow channel and bench; manhole adjusting risers and rings; frame and cover; external frame seal; drop pipes; fittings and all labor, tools, equipment and incidentals necessary to install these items. Standard manholes and standard drop manholes shall also be measured from the lowest flow line to the top of cover and paid for at the contract unit price bid per vertical foot for STANDARD MANHOLE, TYPE V.F. and STANDARD DROP MANHOLE, TYPE V.F. This payment shall be full compensation for all manhole base, risers, and cone; pipe connections; manhole joints; manhole flow channel and bench; manhole adjusting risers and rings; frame and cover; external frame seal; drop pipes; fittings and all labor, materials, tools, equipment and incidentals necessary to complete each type of manhole in accordance with the Contract Documents.

22.08 WASTEWATER SERVICES/PRIVATE SEWERS

A. NEW CONSTRUCTION

1. Construction of new wastewater services not owned by the City shall conform to the construction requirements as provided in Title 24 of the Lincoln Municipal Code and the Lincoln Standard Plates.

B. RECONSTRUCTION

1. Reconstruction of wastewater services not owned by the City shall conform to the construction requirements as provided in Title 24 of the Lincoln Municipal Code and the Lincoln Standard Plates.

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C. BASIS OF PAYMENT

1. WYE, __" x__", shall be measured and paid for at the contract unit price bid per each for each size. This price shall be full compensation for all excavations, backfill, testing, labor, materials, tools, equipment and incidentals necessary to complete the Work in accordance with the Contract Documents.

2. Measurement and payment will be made at the contract unit price bid per each for CONSTRUCT or RECONSTRUCT SEWER SERVICE. Such payment shall be full compensation for all labor, tapping permits, plumbing permit, fittings, and materials, except as otherwise provided, excavation for taps and abandonments, backfill for taps and abandonments, sod, equipment, tools and incidentals necessary to complete the reconstruction in a workmanlike manner in accordance with the Contract Documents. Tapping saddles, taps, and plugs for abandonment will be supplied at no additional cost to the Contractor.

3. Measurement and payment will be made at the contract unit price bid per linear foot for SEWER SERVICE PIPE, __". Such payment shall be full compensation for furnishing and installing all pipe materials, all labor, excavation, backfill, equipment, tools, collars or connecting devices, and incidentals necessary to place the pipe in service in accordance with the Contract Documents.

22.09 TESTING

A. GENERAL

1. Line acceptance testing is required for each section of sanitary sewer constructed between manholes or junction structures.

2. Manhole performance testing is required.

3. The tests specified herein shall not be initiated until the related backfill is compacted in place; the line, manholes, and structures have been cleaned of all interfering debris; and suitable access for necessary testing equipment is provided.

4. The Contractor shall furnish all labor, tools, and equipment to perform all the tests specified hereinafter and only in the presence of the City's Project Manager or observer, except where such tests are specifically designated as being the responsibility of the City.

5. The methods and the equipment used for the tests shall be in conformance with the ASTM standards.

6. The costs associated with the testing are to be considered subsidiary to the costs of the sewer lines and manholes.

7. Except for pipe replacement projects where existing services must be reconnected as the new replacement pipe is being laid, or as otherwise directed by the City's Project Manager, live wastewater flow shall not be permitted in the sanitary sewer line until all of the following tests are completed and found acceptable.

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B. LINE ACCEPTANCE TESTING

1. Alignment Test:

   a. For straight section of sewer, an alignment test using either a lamp or a laser beam shall be performed. The light or laser beam shall be visible through the sewer between adjacent manholes.

   b. Repair or replace defective pipe or joints, or remove and relay pipe not meeting alignment tolerances.

2. Leakage Testing:

   a. Joint Testing for RCP in accordance with ASTM C1103 and C969.

   b. Low Pressure Air Testing for VCP in accordance with ASTM C828.

   c. Low Pressure Air Testing for CCFRPM, PVC and PP shall meet the minimum time allowance per ASTM F1417.

3. Television Inspection

   a. Contractor shall prepare the project site for safe entry and access.

   b. Internal television inspection of new sanitary sewers will be performed by the City at no cost to the Contractor.

   c. Television inspection will be scheduled no earlier than 30 days after the installation of the pipe and shall be done at the same time and in conjunction with final deflection testing and after all line leakage and manhole testing has been completed and found acceptable.

   d. Televised lines shall be termed ‘acceptable’ if no defects are found, such as open joints, breaks, cracks, excessive pipe deformation, intrusions, ground water infiltration, depositions and debris left in the line, sag in the line, or excessive vertical or horizontal misalignment.

   e. Follow-up TV inspection activities that may be required as a result of repairs to defective new sanitary sewers will be billed as an additional cost at the prevailing TV inspection rate.

   f. The prevailing TV inspection cost can be obtained from the Lincoln Transportation and Utilities Department Business Office.

4. Deflection Testing

   a. Perform deflection testing on all flexible pipe installed on the project.

      (i) On any pipe size 8" to 15" the City will perform the deflection test, at no cost to the Contractor.

      (ii) On any pipe size greater than 15", it will be the responsibility of the Contractor to perform the deflection test with City staff in observance.

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C. LINE ACCEPTANCE TESTING

4. Deflection Testing (Continued)

b. Final deflection testing shall be performed after the backfill has been in place at least 30 days.

c. Pull deflection mandrel sized at 95% of the inside diameter of the pipe through the test segment using a pulling force equivalent to hand power.

d. Ensure pipe deflection does not exceed 5% of average inside diameter as established by ASTM standards.

e. The line shall be termed "acceptable" if, during final deflection testing, the mandrel passes completely through the line without restriction.

f. In no case shall excessive force be applied in pulling the mandrel that may damage the pipe or that may erroneously indicate that deflection was within acceptable limits by temporarily expanding the pipe.

g. Remove and replace pipe exceeding deflection limits at no additional cost to the City. No additional time waiting period shall apply for retesting following repair of the line and proper compaction of the backfill, unless otherwise directed by the City's Project Manager.

h. Retest the line until found acceptable.

D. MANHOLE PERFORMANCE TESTING

1. General

a. All manholes shall be constructed to be free from infiltration. The manhole shall also remain free from visible infiltration during the two-year period of guarantee.

b. If any infiltration is observed during that period, the Contractor shall be required to make any necessary repairs.

2. Vacuum Testing

a. Vacuum test manholes in accordance with ASTM C1244.

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22.10 SUBSTANTIAL COMPLETION

Sanitary sewer work shall be considered substantially complete when all pipe is laid and backfilled; all manholes are complete and backfilled; all testing for all pipe and manholes is complete and accepted.

22.11 FINAL ACCEPTANCE

The project shall be considered eligible for final acceptance by the City when all required Work is complete and accepted by the City's Project Manager, including internal television inspection, mandrel testing of all plastic pipe, all items on plan completed, and correction of all deficiencies found as a result of testing and/or final inspection by the City's Project Manager. Eligibility for final acceptance shall not be delayed for more than 60 calendar days past the date of substantial completion on account of the City's failure to complete internal television inspection and mandrel testing of plastic pipe because of equipment problems, scheduling conflicts, or other unforeseen circumstances attributable to the City's own responsibilities and actions.

22.12 GUARANTEE

At any time during the two-year guarantee period, and within the time period allowed, the Contractor shall correct any defect in material or workmanship which has been brought to his attention. Such items shall include but not be limited to trench settlement including subsequent pavement damage, pipe leaks, and failures.

22.13 ENVIRONMENTAL PROTECTION

Refer to Chapter 32 of these Standard Specifications for environmental protection during construction.

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NEBRASKA

DEPT. OF ENVIRONMENT AND ENERGY

This guidance document is advisory in nature but is binding on an agency until amended by such agency. A guidance document does not include internal procedural documents that only affect the internal operations of the agency and does not impose additional requirements or penalties on regulated parties or include confidential information or rules and regulations made in accordance with the Administrative Procedure Act. If you believe that this guidance document imposes additional requirements or penalties on regulated parties, you may request a review of the document.

23-006 August 2023

Water Main and Sanitary/Storm Sewer Separations

The Department recognizes the challenges and difficulties in designing and installing distribution mains, especially in areas fraught with existing utilities. This guide is developed to assist design engineers with sewers and water main separation design and installation. In the design and installation of water mains, design engineers must strive to achieve the separation distances required for water mains and fire hydrants from sanitary sewer, storm sewer and other potential sources of contamination as per the Recommended Standards for Water Works, 2007 Edition (RSFWW). In cases where it is ***impractical*** to achieve those separations required in the RSFWW, the protocols provided in this document should be followed to be considered substantial conformance by the Department.

I. Sanitary Sewer and Water Main Separations

A. Sanitary sewer and water main horizontal separations for parallel installations.

1. Scenario 1
    - **a.** A 10-foot radial separation is considered equivalent to the 10-foot horizontal separation requirement if the water main is above the sanitary sewer and not within 5 feet horizontally.

2. Scenario 2
    - **a.** If the horizontal separation is **greater than 8 feet but less than 10 feet**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions; **and**
        - **ii.** Reasons are provided as to why it is not practical to provide the 10 feet of separation.

3. Scenario 3
    - **a.** If the horizontal separation is **greater than 4 feet but less than 8 feet**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        - **ii.** Reasons are provided as to why at least 8 feet of separation cannot be provided; **and**
        - **iii.** The water main is laid in a separate trench or on an undisturbed earth shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer **or**
        - **iv.** The engineer may encase either the water or sewer pipe for protection (rigid welded piping or cement/concrete-at least 4 to 6 inches thick etc.) at locations where the separation cannot be met **or**
        - **v.** The sewer pipe needs to be water works grade 150 psi pressure rated pipe meeting AWWA Standards and pressure tested to ensure water tightness **or**
        - **vi.** An alternate method of protection with approval from the Department prior to construction.

4. Scenario 4
    a. If the horizontal separation **is less than 4 feet, written approval from the Department is required prior to installation.**

B. Sanitary sewer and water main vertical separations at crossings.

1. Scenario 1
    a. If the water main **is above** the sanitary sewer pipe and the vertical separation is **greater than 12 inches but less than 18 inches**, the installation would be acceptable if the following is provided:
        i. Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        ii. Reasons are provided as to why the 18-inch separation cannot be met; **and**
        iii. One full length of water pipe needs to be located so that both joints will be as far from the sanitary sewer crossing as possible.

2. Scenario 2
    a. If the water main **is above** the sanitary sewer pipe and the vertical separation is **greater than 6 inches but less than 12 inches**, the installation would be acceptable if the following is provided:
        i. Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        ii. Reasons are provided as to why at least 12 inches separation cannot be met;
        iii. One full length of water pipe needs to be located so that both joints will be as far from the sanitary sewer crossing as possible;
        iv. Proper support is provided to prevent settlement and breaking pipe; **and**
        v. The engineer may encase either the water or sewer pipe for protection (rigid welded piping or cement/concrete-at least 4 to 6 inches thick etc.) for at least 12 feet on each side of the crossing with the ends sealed **or**
        vi. The sewer pipe needs to be water works grade 150 psi pressure rated pipe meeting AWWA Standards and be pressure tested to ensure water tightness **or**
        vii. An alternate method of protection with approval from the Department prior to construction.

3. Scenario 3
    a. If the water main **is below** the sanitary sewer, and the vertical separation is **greater than 6 inches but less than 18 inches**, the installation would be acceptable if the following is provided:
        i. Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        ii. Reasons are provided as to why at least 18 inches separation cannot be met;
        iii. One full length of water pipe needs to be located so that both joints will be as far from the sanitary sewer crossing as possible;
        iv. Proper support is provided to prevent settlement and breaking pipe; **and**
        v. The engineer may encase either the water or sewer pipe for protection (rigid welded piping or cement/concrete-at least 4 to 6 inches thick etc.) for at least 12 feet on each side of the crossing with the ends sealed **or**
        vi. The sewer pipe needs to be water works grade 150 psi pressure rated pipe meeting AWWA Standards and be pressure tested to ensure water tightness **or** An alternate method of protection with approval from the Department prior to construction.

4. Scenario 4
    a. If the vertical separation between the sewer line and the water main **will be less than 6 inches, written approval from the Department is required prior to installation.**

II. Storm Sewer and Water Main Separations

In general, the pollution hazards from a storm sewer are not as significant as a sanitary sewer since the storm sewer does not have flow in it year-round. However, during rainstorm events, it may carry surface runoff which contains chemical pollutants, but the pathogenic microbial impact is likely to be less than that of a sanitary sewer. For storm sewer and water main separation, the protocols provided in Sections II.A and II.B must be followed.

A. Storm sewer and water main horizontal separations for parallel installations.

1. Scenario 1
    - **a.** If the horizontal separation is **greater than 4 feet but less than 10 feet**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        - **ii.** Reasons are provided as to why the 10 feet of separation cannot be met; **and if necessary,**
        - **iii.** Additional protection deemed necessary by the design engineer.

2. Scenario 2
    - **a.** If the horizontal separation **will be less than 4 feet, written approval from the Department is required prior to installation.**

B. Storm sewer and water main vertical separations at crossings.

1. Scenario 1
    - **a.** If the water main **is above** the storm sewer pipe and the vertical separation is **greater than 6 inches but less than 18 inches**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        - **ii.** Reasons are provided as to why the 18-inch separation cannot be met; **and**
        - **iii.** One full length of water pipe needs to be located so that both joints will be as far from the storm sewer crossing as possible - preference shall be given to keep joints further from any sanitary sewer than a storm sewer.

2. Scenario 2
    - **a.** If the water main **is below** the storm sewer pipe and the vertical separation is **greater than 6 inches but less than 18 inches**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        - **ii.** Reasons are provided as to why the 18-inch separation cannot be met;
        - **iii.** One full length of water pipe needs to be located so that both joints will be as far from the storm sewer crossing as possible - preference shall be given to keep joints further from any sanitary sewer than a storm sewer;
        - **iv.** Proper support is provided to prevent settlement and breaking pipe; **and**
        - **v.** The engineer may encase either the water or sewer pipe for protection (rigid welded piping or cement/concrete-at least 4 to 6 inches thick etc.) for at least 12 feet on each side of the crossing with the ends sealed **or**
        - **vi.** The sewer pipe needs to be water works grade 150 psi pressure rated pipe meeting AWWA Standards and be pressure tested to ensure water tightness (the storm sewer pipe needs be watertight when pressure tested to at least 10 psi test pressure) **or**
        - **vii.** An alternate method of protection with approval from the Department prior to construction.

3. Scenario 3
    a. If the vertical separation between the storm sewer and the water main **will be less than 6 inches, written approval from the Department is required prior to installation.**

III. Force Main Separations

At least **10 feet of horizontal separation** between water mains and sanitary sewer force mains must be provided. There must be at least **18 inches of vertical separation** at crossings between water mains and force mains and one full length of water pipe shall be located so both joints will be as far from the sewer as possible at the crossing. **Where it is impossible to meet these separation requirements for force mains, the installation must not proceed prior to consulting and obtaining written approval from the Department.**

IV. Fire Hydrants Separations

A. Fire Hydrants and Sanitary Sewer Separations

1. Hydrant drains must not be connected to or located within **10 feet of sanitary sewers. Where it is impossible to provide 10 feet of horizontal separation between sanitary sewer and fire hydrant drains, written approval from the Department is required prior to installation.**

B. Fire Hydrants and Storm Sewer Separations

1. Where it is impractical to meet the 10-foot horizontal separation requirement for storm sewer and hydrant drains, less than 10 feet of horizontal separation would be acceptable if the following is provided:
    a. Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
    b. Reasons are provided as to why the 10 feet of horizontal separation cannot be met; **and**
    c. At least 5 feet of horizontal separation is provided.

2. **Where it is impossible to provide at least 5 feet of horizontal separation between storm sewers and hydrant drains, written approval from the Department is required prior to installation.**

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PROJECT NO.	SHEET NO.
SCHEMMER NO. 09336.001-C	A1

PLANS FOR CONSTRUCTION

WORTHMAN BOULEVARD EXTENSION

CITY OF SEWARD

THE 2017 ENGLISH EDITION OF THE NEBRASKA STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS APPLY TO THIS PROJECT.

ALL SANITARY SEWER CONSTRUCTION SHALL ADHERE TO THE SPECIAL PROVISIONS

THE WORK ON THIS PROJECT CONSISTS OF GROUPS
1-GRADING, 3-SURFACING, 4-DRAINAGE,
7-PAVEMENT MARKING & SIGNING, A-STREET LIGHTING,
L-EROSION CONTROL

◣ GROUPS 1, 3, 4, 7, A, L ARE INCLUDED IN THE LETTING OF _____

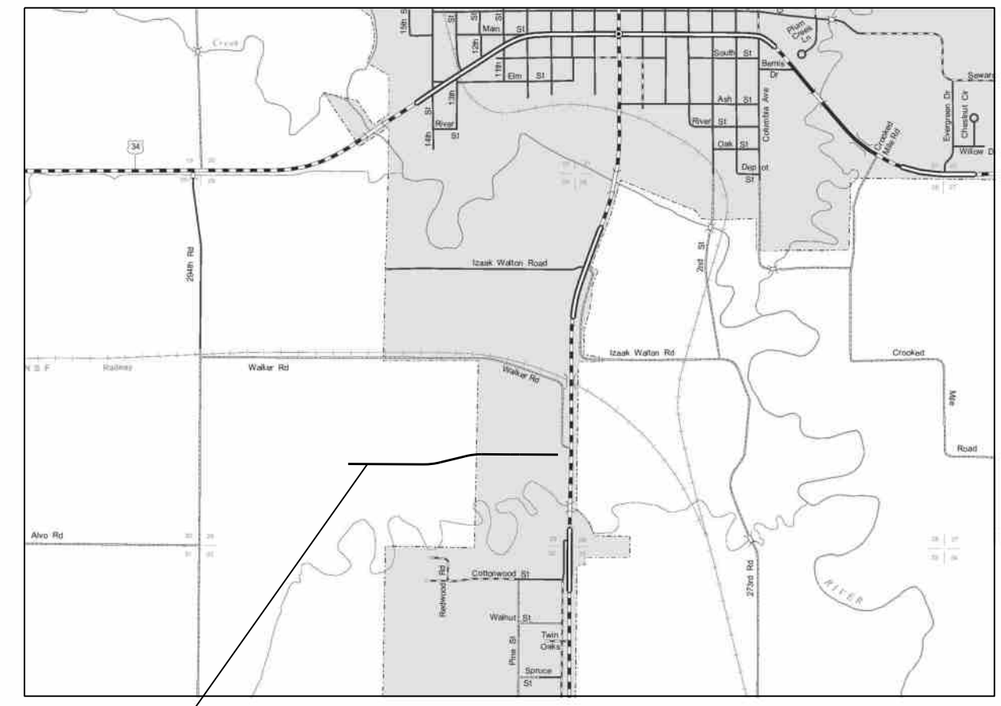
▲ GROUPS _____ ARE INCLUDED IN THE LETTING OF _____

■ GROUPS _____ ARE INCLUDED IN THE LETTING OF _____

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
A1	TITLE SHEET
B1	TYPICAL CROSS SECTIONS
C1	SUMMARY OF QUANTITIES
E1 - E4	AERIAL SHEETS
F1 - F2	HORIZONTAL ALIGNMENT AND CONTROL POINTS
G1	GENERAL INFORMATION
G2	CUL-DE-SAC GRADING PLAN
G3	DETENTION POND GRADING PLAN
G4	DETENTION POND DETAILS
J1 - J4	GEOMETRICS
J5 - J8	JOINTS AND GRADES
J9 - J15	STORM DRAINAGE
J16 - J19	CONSTRUCTION AND REMOVAL
J20 - J21	SWPPP PLAN
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K1 - K3	SANITARY SEWER
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U1	SPECIAL PLAN 1C - PRINCIPAL SPILLWAY
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U4 - U7	SPECIAL PLAN 3C - SILT CHECKS (ALL TYPES)
W1 - W4	RIGHT-OF-WAY
X1 - X11	CROSS SECTIONS

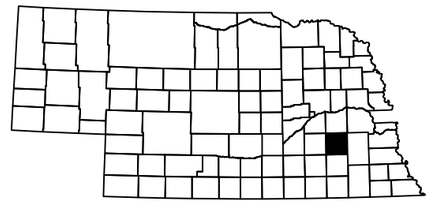
STD. PLAN NO.	DESCRIPTION
301	PAVEMENT DETAILS
303	CURB RAMPS
329	8 TO 16 INCH CONCRETE PAVEMENT
408	CONCRETE HEADWALL (FOR 36"-60" PIPES)
410	FLARED END SECTIONS FOR CULVERT PIPES
411	BEDDING AND BACKFILL REQUIREMENTS FOR CONCRETE PIPE
425	COLLARS AND ELBOWS FOR CONCRETE PIPE
435	MANHOLE
443	CURB INLETS AND JUNCTION BOX
501	EROSION CONTROL
502	SILT FENCE DETAILS
914	PULL BOX DETAIL
920	TRAFFIC CONTROL, CONSTRUCTION & MAINTENANCE
923	TRAFFIC CONTROL ROAD CLOSURE
924	URBAN TRAFFIC CONTROL PLAN
941	PAVEMENT MARKING



PROJECT LOCATION

N

PLANS PREPARED BY:
THE SCHEMMER ASSOCIATES, INC.
333 S. 21ST STREET, SUITE 102
LINCOLN, NE 68510



CONVENTIONAL SIGNS

- FENCE R.O.W. OR WIRE
- GUARDRAIL
- TRAVELED WAY
- DIKE
- CULVERT
- POWER POLE
- TELEPHONE POLE
- MAILBOX
- RAILROAD TRACKS
- MARSH
- TREE - CONIFEROUS
- TREE - DECIDUOUS

R.O.W. LEGEND

- NEW CONTROLLED ACCESS
- PREVIOUS CONTROLLED ACCESS
- LIMITS OF CONSTRUCTION
- PREVIOUS R.O.W.
- NEW R.O.W.
- EXISTING PERMANENT EASEMENT
- TEMPORARY EASEMENT
- EXCESS TAKING
- PERMANENT EASEMENT
- EXISTING RAILROAD EASEMENT
- NEW RAILROAD PERMANENT EASEMENT
- NEW RAILROAD TEMPORARY EASEMENT

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

SEWARD CITY

APPROVED:

DATE

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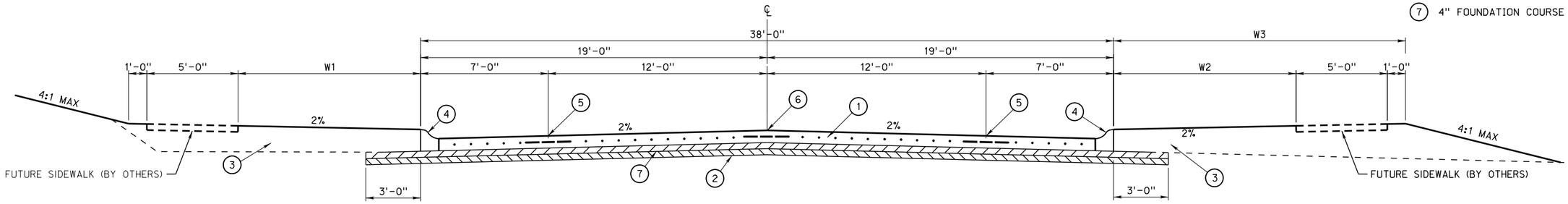
PROJECT NO.	SHEET NO.
09336.001-C	B1

ROADWAY DESIGN DIVISION.

TYPICAL CROSS SECTIONS

LEGEND

1. 8'' DOWELED CONCRETE PAVEMENT
2. SUBGRADE PREPARATION
3. EARTH SHOULDER CONSTRUCTION
4. 6'' INTEGRAL CURB
5. LONGITUDINAL JOINT
6. PROFILE GRADE
7. 4'' FOUNDATION COURSE



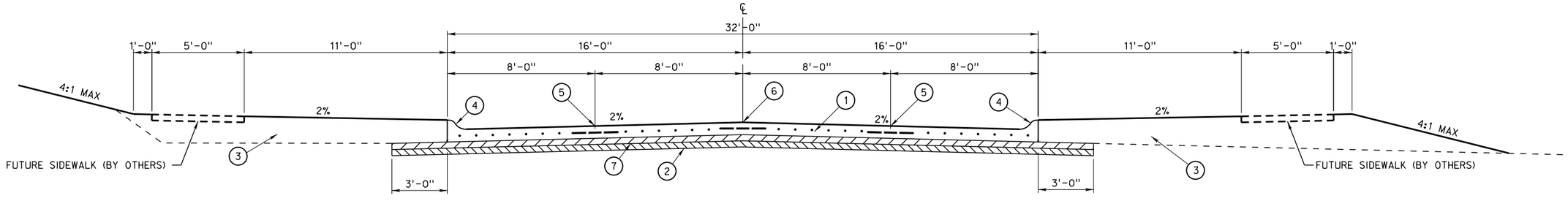
WORTHMAN BOULEVARD

STATION TO STATION

STA 105+21 - STA 106+93 (SEE SHEET J5)
STA 106+93 - STA 123+70

STATION	TO	STATION	W1
105+71	-	111+03	8'-6"
111+03	-	113+49	VARIES 8'-6" TO 15'-0"
113+49	-	114+60	15'-0"
114+60	-	123+70	12'-0"

STATION	TO	STATION	W2	W3
106+93	-	114+00	0'-0"	4'-0"
114+00	-	114+55	0' to 15'-0"	4' to 18'-0"
114+55	-	123+70	12'-0"	18'-0"



PINE STREET

STATION TO STATION

STA 501+41 - STA 502+78
STA 503+22 - STA 503+97

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

File: 09336001 Typical Sections.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:1 Date: 12-MAR-2025 10:04 Computer: LINMEGANS

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PROJECT NO.	SHEET NO.
09336.001-C	C1

SUMMARY OF QUANTITIES

ROADWAY DESIGN DIVISION.

GRADING
GROUP 1

ITEM	QUANTITY	UNITS
TRAFFIC CONTROL	1	LUMP SUM
MOBILIZATION	1	LUMP SUM
GENERAL CLEARING AND GRUBBING	1	LUMP SUM
EARTHWORK MEASURED IN EMBANKMENT	13,045	CUBIC YARDS
WATER	174	MGALLON
ROCK RIPRAP, TYPE B	149	TONS
SALVAGING AND PLACING TOPSOIL	52,525	SQUARE YARDS
RIPRAP FILTER FABRIC	189	SQUARE YARDS
REMOVE PAVEMENT	775	SQUARE YARDS
SAWING PAVEMENT	314	LINEAL FEET
REMOVE BRICK SURFACE	78	SQUARE YARDS
REMOVE MANHOLE	2	EACH
REMOVE INLET	2	EACH
ADJUST WATER VALVE BOX TO GRADE	3	EACH
ADJUST MANHOLE TO GRADE	1	EACH
STABLIZED CONSTRUCTION EXIT	1	EACH
FOUNDATION COURSE	11,103	SQUARE YARDS
EARTH SHOULDER CONSTRUCTION	42.4	STA
SUBGRADE PREPARATION	11,103	SQUARE YARDS
SWPPP SIGN	1	EACH

SURFACING
GROUP 3

ITEM	QUANTITY	UNITS
DETECTABLE WARNING PANEL	100	SQUARE FEET
4" CONCRETE CLASS 47B-3500 SIDEWALKS	160	SQUARE YARDS
8" DOWELED CONCRETE PAVEMENT CLASS 47B-3500	9,721	SQUARE YARDS

STORM SEWER
GROUP 4A

ITEM	QUANTITY	UNITS
CURB INLET	18	EACH
MANHOLE	12	EACH
REMOVE CULVERT PIPE	55	LINEAL FEET
REMOVE STORM SEWER PIPE	154	LINEAL FEET
CLASS 47B-3000 CONCRETE FOR CONCRETE COLLARS	1.30	CUBIC YARDS
REINFORCING STEEL FOR COLLARS	116	POUNDS
36" CONCRETE FLARED-END SECTION	2	EACH
48" CONCRETE FLARED-END SECTION	4	EACH
15" STORM SEWER PIPE, TYPE 1, 7 OR 8	388	LINEAL FEET
18" STORM SEWER PIPE, TYPE 1, 7 OR 8	805	LINEAL FEET
36" STORM SEWER PIPE, TYPE 1, 7 OR 8	44	LINEAL FEET
48" STORM SEWER PIPE, TYPE 1, 7 OR 8	373	LINEAL FEET
BUILD HEADWALL	1	EACH
BUILD PRINCIPAL SPILLWAY STRUCTURE	1	EACH

SANITARY SEWER
GROUP 4B

ITEM	QUANTITY	UNITS
12" P.V.C. SANITARY SEWER PIPE	934	LINEAL FEET
SANITARY MANHOLE	3	EACH

PAVEMENT MARKING & SIGNING
GROUP 7

ITEM	QUANTITY	UNITS
REMOVE SIGN	3	EACH
TYPE A SIGN	45	SQUARE FEET
4" YELLOW POLYUREA PAVEMENT MARKING, GROVED	3,685	LINEAL FEET
12" WHITE POLYUREA PAVEMENT MARKING, GROOVED	154	LINEAL FEET
24" WHITE POLYUREA PAVEMENT MARKING, GROOVED	282	LINEAL FEET
PERMANENT BARRICADE	2	EACH

ELECTRICAL
GROUP A

ITEM	QUANTITY	UNITS
PULL BOX, TYPE PB-5	4	EACH
INSTALL LIGHT POLE (POLE PROVIDED BY CITY, INSTALLED BY CONTRACTOR)	16	EACH
1½" CONDUIT, IN TRENCH	3,513	LINEAL FEET
1½" CONDUIT, UNDER ROADWAY	103	LINEAL FEET
STREET LIGHTING CABLE, NO. 6 BARE	3,616	LINEAL FEET
STREET LIGHTING CABLE, NO. 6 USE	7,232	LINEAL FEET
SPLICE CONDUIT	1	EACH
REMOVE PULL BOX	2	EACH

EROSION CONTROL
GROUP L

ITEM	QUANTITY	UNITS
SEEDING, TYPE B	5.96	ACRES
SEEDING, TYPE C (FLOODPLAIN MIX)	2.74	ACRES
EROSION CONTROL, CLASS 1D	28,902	SQUARE YARDS
EROSION CONTROL, CLASS 1E	13,265	SQUARE YARDS
CURB INLET PROTECTION	18	EACH
FABRIC SILT FENCE 'LOW POROSITY'	5,310	LINEAL FEET

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

File: 09336001 Summary of Quantities.dgn LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 13-MAR-2025 14:20 Computer: LINMEGANS

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ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:04
Computer: LINMEGANS

File: 09336001 Aerial01.dgn
Scale: 1:40

0 20' 40'
SCALE

PROPERTY LINE
EXISTING EASEMENT
EXISTING WATER MAIN
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
FUTURE SIDEWALK (BY OTHERS)
EXISTING WATER MAIN
PERMANENT BARRICADE
SEE SHEET M1
DO NOT DISTURB PULL BOX
DO NOT DISTURB POWER POLE
DO NOT DISTURB FENCE
TEMPORARY EASEMENT
PROJECT ℄
WORTHMAN BLVD
UTILITY EASEMENT
LIMITS OF CONSTRUCTION
RIGHT-OF-WAY
PERMANENT EASEMENT
PERMANENT EASEMENT
PERMANENT EASEMENT
103
104
105
106
107
108

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E-17140
3-13-2025
STATE OF NEBRASKA

AERIAL

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PROJECT NO.	SHEET NO.
09336.001-C	E2

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:04
Computer: LINMEGANS

File: 09336001 Aerial02.dgn
Scale: 1:40

0 20' 40'
SCALE

PROPERTY LINE
PROPERTY LINE
PROPOSED SIDEWALK
LIMITS OF CONSTRUCTION
EXISTING WATER MAIN
FUTURE SIDEWALK (BY OTHERS)
RIGHT-OF-WAY
PROPOSED SANITARY SEWER
WORTHMAN BLVD
PROPOSED STORM SEWER
PROJECT ℄
PROPOSED SIDEWALK
DITCH ℄
RIGHT-OF-WAY
UTILITY EASEMENT
LIMITS OF CONSTRUCTION
PERMANENT EASEMENT
PERMANENT EASEMENT
PROPERTY LINE
PROPERTY LINE
LIMITS OF CONSTRUCTION

29 28 27 26
109 110 111 112 113 114 115

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E-17140
3-13-2025
STATE OF NEBRASKA

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PROJECT NO.	SHEET NO.
09336.001-C	E3

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:05
Computer: LINMEGANS

File: 09336001 Aerial03.dgn
Scale: 1:40

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SCALE

PROPERTY LINE
EXISTING WATER MAIN
LIMITS OF CONSTRUCTION
FUTURE SIDEWALK (BY OTHERS)
RIGHT-OF-WAY
116
117
118
119
120
121
PROJECT ℄
WORTHMAN BLVD
FUTURE SIDEWALK (BY OTHERS)
RIGHT-OF-WAY
UTILITY EASEMENT
LIMITS OF CONSTRUCTION
PROPOSED STORM SEWER
PROPERTY LINE
EXISTING EASEMENT
PROPOSED SANITARY SEWER
EXISTING EASEMENT
LIMITS OF CONSTRUCTION

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PROJECT NO.	SHEET NO.
09336.001-C	E4

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:05
Computer: LINMEGANS

File: 09336001 Aerial04.dgn
Scale: 1:40

0 20' 40'
SCALE

EXISTING RIGHT-OF-WAY
EXISTING RIGHT-OF-WAY
PINE ST.
SECTION LINE
504
LIMITS OF CONSTRUCTION
FUTURE SIDEWALK (BY OTHERS)
RIGHT-OF-WAY
EXISTING WATER MAIN
LIMITS OF CONSTRUCTION
PERMANENT EASEMENT
121
122
123
124
125
126
PROJECT ℄
PROPOSED STORM SEWER
503
WORTHMAN BLVD
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
PERMANENT EASEMENT
RIGHT-OF-WAY
UTILITY EASEMENT
PROPOSED SANITARY SEWER
UTILITY EASEMENT
RIGHT-OF-WAY
502
LIMITS OF CONSTRUCTION

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

AERIAL

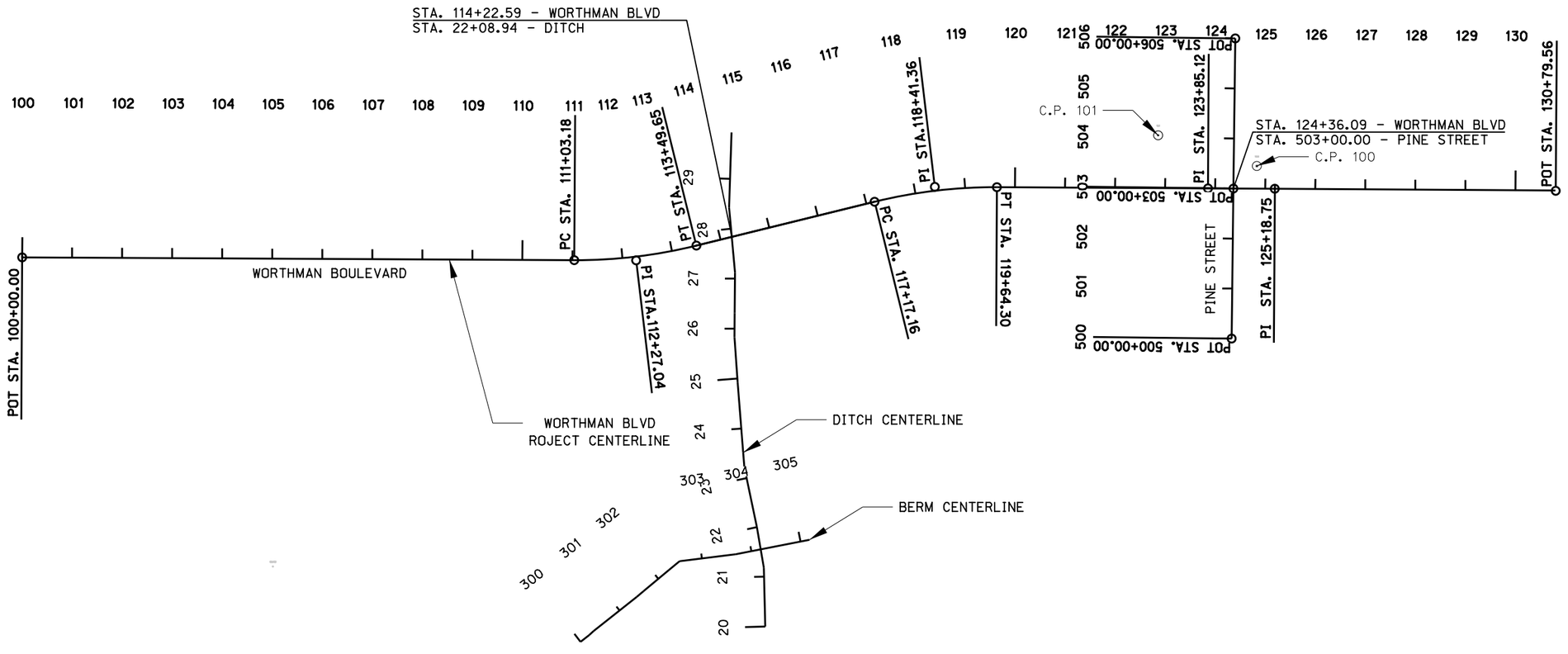
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PROJECT NO.	SHEET NO.
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ROADWAY DESIGN DIVISION.

CONTROL POINTS				
NO.	X	Y	Z	DESCRIPTION
100	90159.859	80376.769	1449.460	5/8" REBAR WITH CAP
101	89962.647	80438.198	1454.815	5/8" REBAR WITH CAP

GEOPAK ALIGNMENT INFORMATION		
ALIGNMENT	CHAIN	PROFILE
WORTHMAN BOULEVARD	WORTHMAN	WORTHMAN_PRO
PINE STREET	PINE_ST	PINE_ST_PRO
DITCH ALIGNMENT	DITCH	-
BERM ALIGNMENT	BERM_AL	-



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

HORIZONTAL ALIGNMENT & CONTROL

File: 09336001 Horz & Vert Control.dgn
Scale: 1:250
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Date: 12-MAR-2025 10:06
Computer: LINMEGANS

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PROJECT NO.	SHEET NO.
09336.001-C	F2

ROADWAY DESIGN DIVISION.

File: 09336001 Horz & Vert Control.dgn
Scale: 1:250

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Computer: LINNEGANS
Date: 12-MAR-2025 10:06

Beginning chain WORTHMAN description
==========

Point 28 N 80,194.376 E 87,692.471 Sta 100+00.00

Course from 28 to PC WORTHMAN1 S 89° 42' 37" E Dist 1,103.184

Curve Data

Curve WORTHMAN1
P.I. Station 112+27.04 N 80,188.172 E 88,919.498
Delta = 14° 07' 16" (LT)
Degree = 5° 43' 46"
Tangent = 123.858
Length = 246.461
Radius = 1,000.000
External = 7.641
Long Chord = 245.838
Mid. Ord. = 7.583
P.C. Station 111+03.18 N 80,188.798 E 88,795.641
P.T. Station 113+49.65 N 80,217.782 E 89,039.765
C.C. N 81,188.785 E 88,800.698
Back = S 89° 42' 37" E
Ahead = N 76° 10' 07" E
Chord Bear = N 83° 13' 45" E

Course from PT WORTHMAN1 to PC WORTHMAN2 N 76° 10' 07" E Dist 367.510

Curve Data

Curve WORTHMAN2
P.I. Station 118+41.36 N 80,335.336 E 89,517.223
Delta = 14° 09' 38" (RT)
Degree = 5° 43' 46"
Tangent = 124.207
Length = 247.148
Radius = 1,000.000
External = 7.684
Long Chord = 246.520
Mid. Ord. = 7.626
P.C. Station 117+17.16 N 80,305.642 E 89,396.618
P.T. Station 119+64.30 N 80,334.622 E 89,641.428
C.C. N 79,334.639 E 89,635.685
Back = N 76° 10' 07" E
Ahead = S 89° 40' 15" E
Chord Bear = N 83° 14' 56" E

Course from PT WORTHMAN2 to 29 S 89° 40' 15" E Dist 420.818

Point 29 N 80,332.205 E 90,062.239 Sta 123+85.12

Course from 29 to 30 S 89° 38' 56" E Dist 133.629

Point 30 N 80,331.386 E 90,195.865 Sta 125+18.75

Course from 30 to 31 S 89° 39' 24" E Dist 560.813

Point 31 N 80,328.026 E 90,756.668 Sta 130+79.56

==========
Ending chain WORTHMAN description

Beginning chain PINE_ST description
==========

Point 14 N 80,031.915 E 90,109.581 Sta 500+00.00

Course from 14 to 15 N 0° 41' 33" E Dist 300.000

Point 15 N 80,331.893 E 90,113.207 Sta 503+00.00

Course from 15 to 16 N 0° 41' 33" E Dist 300.000

Point 16 N 80,631.871 E 90,116.834 Sta 506+00.00

==========
Ending chain PINE_ST description

Beginning chain DITCH description
==========

Point 101 N 79,456.399 E 89,177.276 Sta 20+00.00

Course from 101 to 102 N 1° 11' 49" W Dist 117.660

Point 102 N 79,574.033 E 89,174.818 Sta 21+17.66

Course from 102 to 103 N 9° 44' 28" W Dist 82.239

Point 103 N 79,655.087 E 89,160.904 Sta 21+99.90

Course from 103 to 104 N 11° 57' 00" W Dist 121.869

Point 104 N 79,774.315 E 89,135.669 Sta 23+21.77

Course from 104 to 105 N 4° 28' 53" W Dist 29.928

Point 105 N 79,804.151 E 89,133.331 Sta 23+51.70

Course from 105 to 106 N 4° 29' 26" W Dist 141.379

Point 106 N 79,945.097 E 89,122.262 Sta 24+93.08

Course from 106 to 107 N 4° 00' 44" W Dist 90.091

Point 107 N 80,034.967 E 89,115.959 Sta 25+83.17

Course from 107 to 108 N 0° 31' 19" E Dist 48.290

Point 108 N 80,083.255 E 89,116.398 Sta 26+31.46

Course from 108 to 109 N 0° 31' 19" E Dist 80.712

Point 109 N 80,163.964 E 89,117.134 Sta 27+12.17

Course from 109 to 110 N 5° 14' 36" W Dist 130.497

Point 110 N 80,293.915 E 89,105.208 Sta 28+42.67

Course from 110 to 111 N 1° 50' 20" E Dist 150.000

Point 111 N 80,443.837 E 89,110.022 Sta 29+92.67

==========
Ending chain DITCH description

Beginning chain BERM_AL description
==========

Point 124 N 79,426.161 E 88,808.356 Sta 300+00.00

Course from 124 to 125 N 52° 11' 38" E Dist 21.704

Point 125 N 79,439.465 E 88,825.504 Sta 300+21.70

Course from 125 to 126 N 47° 59' 10" E Dist 12.023

Point 126 N 79,447.512 E 88,834.437 Sta 300+33.73

Course from 126 to 127 N 51° 35' 39" E Dist 110.023

Point 127 N 79,515.862 E 88,920.655 Sta 301+43.75

Course from 127 to 128 N 49° 54' 22" E Dist 18.000

Point 128 N 79,527.455 E 88,934.425 Sta 301+61.75

Course from 128 to 129 N 50° 16' 33" E Dist 65.000

Point 129 N 79,568.996 E 88,984.418 Sta 302+26.75

Course from 129 to 130 N 50° 17' 42" E Dist 28.319

Point 130 N 79,587.087 E 89,006.205 Sta 302+55.07

Course from 130 to 131 N 82° 51' 41" E Dist 113.013

Point 131 N 79,601.131 E 89,118.343 Sta 303+68.08

Course from 131 to 132 N 78° 59' 25" E Dist 150.096

Point 132 N 79,629.796 E 89,265.676 Sta 305+18.18

==========
Ending chain BERM_AL description

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

HORIZONTAL ALIGNMENT & CONTROL

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	G1

GENERAL INFORMATION

LEGEND

- GAS LINE
- ELECTRICAL SERVICE
- POWER LINE
- OVERHEAD POWER LINE
- SANITARY SEWER
- STORM SEWER
- TELEPHONE LINE
- FIBER OPTIC TELE. LINE
- OVERHEAD TELEPHONE LINE
- CABLE TV LINE
- OVERHEAD CABLE TV LINE
- WATER LINE
- FENCE - CHAIN LINK
- FENCE - R.O.W. OR WIRE
- FENCE - WOOD
- FLOWLINE
- CENTER LINE DRIVE
- BENCH MARK
- CENTER PIVOT
- CONTROL POINT
- DIKE
- GAS METER
- GAS VALVE
- GRID TICK
- GUARDRAIL
- GUARD POST
- GUY POLE
- GUY WIRE
- LIGHT POLE
- MAILBOX
- MANHOLE
- MARSH
- OIL WELL
- PHOTO CODE POINT
- POWER BOX
- POWER POLE
- POWER PULL BOX
- PROPANE TANK
- R.O.W. MARKER
- ADVANCED R.R. WARNING SIGN
- RAILROAD WARNING
- RAILROAD TRACKS
- RETAINING WALL
- SATELLITE DISH
- SIGN
- TRAFFIC SIGNAL
- TRAFFIC SIGNAL/ST. LIGHT
- TELEPHONE BOX
- TELE. FIBER OPTICS BOX
- TELEPHONE PULL BOX
- TELEPHONE POLE
- TELEVISION BOX
- TREE - CONIFEROUS
- TREE - DECIDUOUS
- TREE STUMP
- WATER (FIRE) HYDRANT
- WATER VALVE
- WATER METER
- WELL
- WINDMILL

CULVERT PIPE LEGEND		
TYPE		DESCRIPTION
1	RCSP	Reinforced Concrete Sewer Pipe
2	RCP	Reinforced Concrete Pipe
3	GCCMP	Galvanized (zinc) Coated Corrugated Metal Pipe
4	ACCMP	Aluminum Coated Corrugated Metal Pipe
5	PCCMP	Polymer Coated Corrugated Metal Pipe
6	HDPE-CI	High Density Polyethylene (corrugated Interior)
7	HDPE-SI	High Density Polyethylene (smooth Interior)
8	PVC	Polyvinyl Chloride Pipe

EARTHWORK QUANTITIES		
STATION TO STATION	EXCAVATION AVAILABLE (CU. YDS.)	EARTHWORK MEASURED IN EMBANKMENT (CU. YDS.)
WORTHMAN BOULEVARD	882	6,476
PINE STREET	403	59
DETENTION POND	11,060	6,510
TOTAL	12,345	13,045

VOLUMES COMPUTED FROM GRADING TERRAIN MODEL
EARTHWORK MEASURED IN EMBANKEMENT IS AN ESTABLISHED QUANTITY
NO BALANCE FACTOR APPLIED

COMPACTION REQUIREMENTS

The following compaction requirements are recommended for the plans.

COMPACTION REQUIREMENTS
Class III (See Specifications)

	SOIL TYPE	DEPTH BELOW FINISH SUBGRADE	PERCENT DENSITY	MOISTURE REQUIREMENTS MINIMUM	MAXIMUM
Embankment / Roadway Grading, including driveways, to receive concrete pavement	Silt-Clay	Upper 3 feet	98 Min.	Opt. -3%	Opt. +2%
	Silt-Clay	At depths greater than 3 feet	95 Min.	Opt. -3%	Opt. +2%
	Granular	All depths	100 Min.	**	**
Embankment / Roadway Grading, including driveways, to receive flexible pavement	Silt-Clay	Upper 3 feet	100 Min.	Opt. -2%	Opt. +1%
	Silt-Clay	At depths greater than 3 feet	95 Min.	Opt. -3%	Opt. +2%
	Granular	All depths	100 Min.	**	**
Embankment / Roadway Grading to receive gravel surfacing / crushed rock embedment	All	All depths	95 Min.	**	**
Embankment / Roadway Grading not to be surfaced	All	All depths	95 Min.	Opt. -3%	Opt. +2%
Subgrade Preparation, Shoulder Subgrade Preparation (Concrete Pavement)	Silt-Clay	The upper 6 inches of subgrade soil	98 Min.	Opt. -3%	Opt. +2%
	Granular	The upper 6 inches of subgrade soil	100 Min.	**	**
Subgrade Preparation, Shoulder Subgrade Preparation (Flexible Pavement)	Silt-Clay	The upper 6 inches of subgrade soil	100 Min.	Opt. -2%	Opt. +1%
	Granular	The upper 6 inches of subgrade soil	100 Min.	**	**
Embankment of driveways which are not to be surfaced	All	All depths	Class I	(See Specifications)	
Bituminous Pavement Patching	All	Underlying Material	100 Min.	(See Specifications)	
Foundation Course / Subgrade Stabilization	--	--	100 Min.	(See Specifications)	
Granular Structural Fill (MSE Walls, Granular Fill for bridges, Culverts, etc)	Granular	All depths	100 Min.	Opt. -3%	Opt. +3%

** Moisture as necessary to obtain density.
(A moisture target value at maximum density shall be established in the field by the Contractor during the compaction process. The acceptable moisture content shall be ± 2% of the target value.)

NOTES

The location of all aerial and underground utility facilities may not be indicated in these plans. Underground utilities, whether indicated or not will be located and flagged by the utilities at the request of the contractor. Utilities are located within the project area. Any utility relocation will be at the contractors expense. Nebraska One Call will be utilized.

No excavation will be permitted in the area of underground utility facilities until all such facilities have been located and identified to the satisfaction of all parties. The excavation must be accomplished with extreme care in order to avoid any possibility of damage to the utility facility.

The Contractor will be required to furnish Borrow on this Project.

The Contractor shall furnish and maintain all necessary barricades, warning signs, lights and flaggers per the MUTCD and NDOT Standard Specifications. The Contractor shall inspect and verify all appropriate barricades and signs are placed accordingly and upright at the end of each construction day, or as directed by the Engineer.

Prior to construction, Contractor shall submit to the City Engineer for approval a traffic control plan and construction schedule for road closure. Contractor must give 48 hours notice prior to pavement or tree removals to the City Engineer.

Contractor to remove, salvage and reset any necessary traffic signs in their original location, unless noted otherwise.

Concrete washout stations shall be constructed as needed during the paving operations. This shall be considered subsidiary to other items receiving direct payment.

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

File: 09336001 General Information.dgn
Scale: 1:200
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Computer: LINMEGANS
Date: 12-MAR-2025 10:06

ROADWAY DESIGN DIVISION.

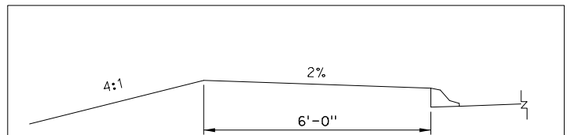
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	G2

0 20' 40'
SCALE

PROPERTY LINE
EXISTING EASEMENT
RIGHT-OF-WAY
FUTURE SIDEWALK (BY OTHERS)
DO NOT DISTURB PULL BOX
DO NOT DISTURB POWER POLE
PROJECT ℄
WORTHMAN BLVD
30'-0" 3.5:1 FORESLOPE
DO NOT DISTURB FENCE
TEMPORARY EASEMENT
UTILITY EASEMENT
RIGHT-OF-WAY
PERMANENT EASEMENT
PERMANENT EASEMENT
PERMANENT EASEMENT
1455.00

LEGEND
- - - - LIMITS OF CUL-DE-SAC GRADING
—1450— MAJOR PROPOSED CONTOURS
——— MINOR PROPOSED CONTOURS
——— EXISTING CONTOURS



CUL-DE-SAC GRADING TYPICAL
NOT TO SCALE

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

CUL-DE-SAC GRADING PLAN

File: 09336001 Cul-de-Sac Grading.dgn
Scale: 1:40
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Computer: LINMEGANS
Date: 12-MAR-2025 10:06

ROADWAY DESIGN DIVISION.

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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	G3

LOT 17

LOT 15

RIGHT-OF-WAY

WORTHMAN BLVD

RIGHT-OF-WAY

RIGHT-OF-WAY

EXISTING EASEMENT

0 50' 100'
SCALE

LIMITS OF CONSTRUCTION

LIMITS OF CONSTRUCTION

LIMITS OF CONSTRUCTION

LOT 14

4:1 SLOPE

PROPERTY LINE

PROPERTY LINE

LOT 13

LOT 16

LIMITS OF CONSTRUCTION

PROPERTY LINE

DITCH SECTION A-B

LIMITS OF CONSTRUCTION

LOT 11

PROPERTY LINE

4:1 SLOPE

BUILD PRINCIPLE SPILLWAY STRUCTURE

POND BERM SECTION
SECTION A-A

4:1 SLOPE

OUTLOT H

20-0"

REMOVE EXISTING 24" CMP

BUILD TWIN 48" RCP

EMERGENCY SPILLWAY
SECTION A-C

6:1

6:1

BUILD HEADWALL

PROPERTY LINE

60'-0"

65'-0"

LIMITS OF CONSTRUCTION

60' DRAINAGE EASEMENT

REMOVE EXISTING 3'x4' CMPA

PROPERTY LINE

60' DRAINAGE EASEMENT

BUILD HEADWALL, PLAN 408		
LOCATION	SIDE	EACH
21+17.66	℄	1

AT SPILLWAY STRUCTURE

BUILD PRINCIPAL SPILLWAY STRUCTURE		
LOCATION	SIDE	EACH
21+93.57	℄	1

INTO DETENTION. SEE SPECIAL PLAN 1C

BUILD STORM SEWER PIPE			
NO.	STATION TO STATION	SIDE	DESCRIPTION
33	22+29.65 - 22+55.00	RT.	36" x 44", Type 2, CLASS III w/FES
34	21+17.66 - 21+94.23	℄	TWIN 48" x 80", Type 2, CLASS III

REMOVE CULVERT PIPE			
STATION TO STATION	SIDE	DESCRIPTION	LENGTH (FT)
20+93.76 - 21+18.55	℄	3' x 4' x 25' PIPE	25
21+32.32 - 21+61.71	2' LT.	24" x 30' PIPE	30

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

DETENTION POND GRADING PLAN

File: 09336001 Detention Grading.dgn
Scale: 1:100

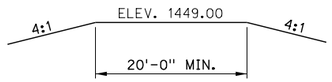
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 13-MAR-2025 09:24
Computer: LINMEGANS

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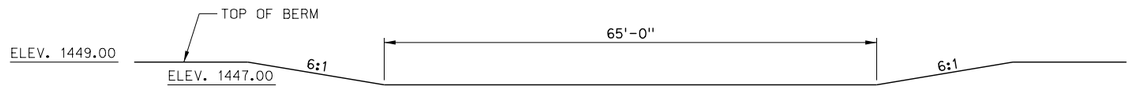
PROJECT NO.	SHEET NO.
09336.001-C	G4

Hyrdologic Information	Drainage Area (acres)	Time of Concentration (minutes)	Curve Number	2-year Discharge (cfs)	10-year Discharge (cfs)	50-year Discharge (cfs)	100-year Discharge (cfs)
Existing Conditions	69.46	20	86	120	215	346	411
Full Build Out Conditions	74.47	21	87	135	236	376	445

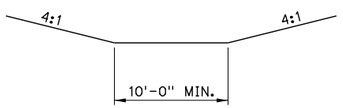
Detention Pond Information	2-year Event	10-year Event	50-year Event	100-year Event
Inflow (cfs)	135	236	376	445
Outflow (cfs)	65	129	197	229
Water Surface Elevation (ft)	1,444.27	1,445.13	1,446.34	1,446.85



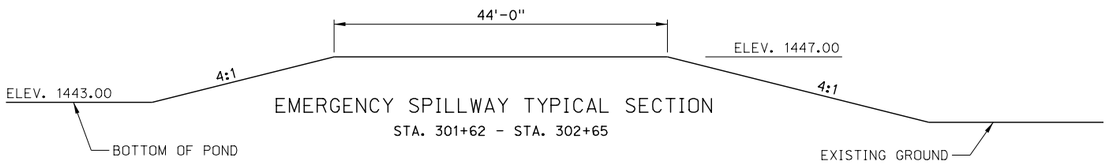
POND BERM TYPICAL SECTION VIEW A-A (SEE SHEET G3)
STA. 300+00 - STA. 301+44
STA. 302+40 - STA. 305+18



EMERGENCY SPILLWAY PROFILE VIEW A-C (SEE SHEET G3)



DITCH SECTION VIEW A-B (SEE SHEET G3)
STA. 23+25 - STA. 27+00



EMERGENCY SPILLWAY TYPICAL SECTION
STA. 301+62 - STA. 302+65



DETENTION POND DETAILS

File: 09336001 Detention Pond Details.dgn
Scale: 1:40
LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07
Computer: LINMEGANS

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07 Computer: LINNEGANS

File: 09336001 GE01.dgn
Scale: 1:40

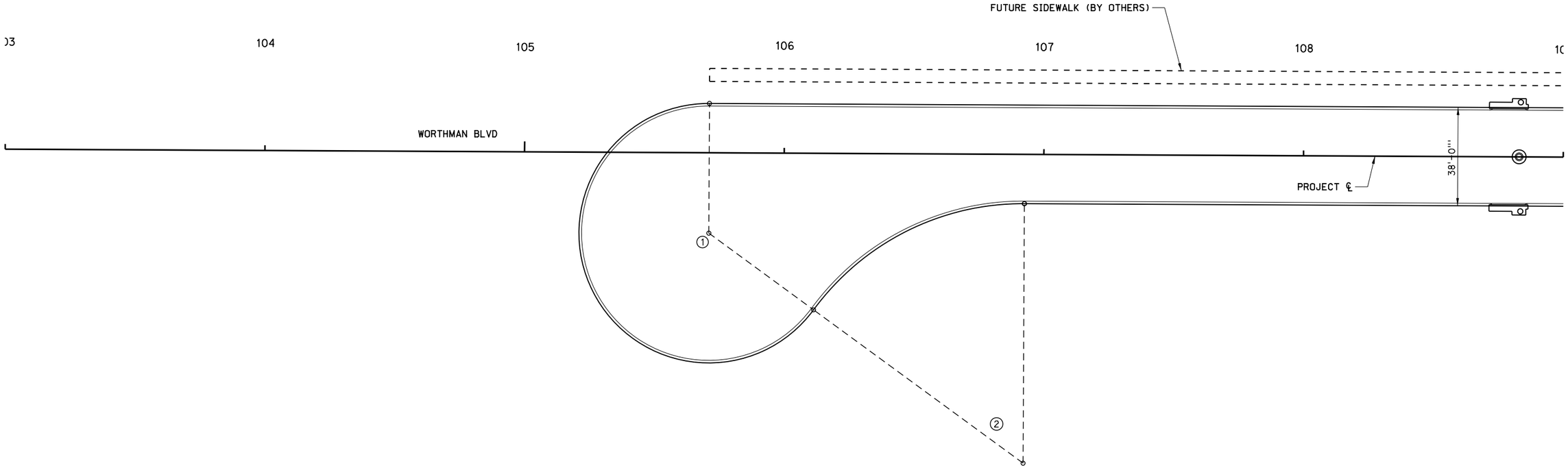
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J1

0 20' 40'
SCALE

① 50.00' R.P. 31.00' RT. STA. 105+71.11
X=88263.41 Y=80160.49
P.C. 19.00' LT. STA. 105+71.11
X=88263.67 Y=80210.49
P.T. 60.33' RT. STA. 106+11.60
X=88303.76 Y=80130.95

② 100.00' R.P. 119.00' RT. STA. 106+92.58
X=88384.44 Y=80071.88
P.R.C. 60.33' RT. STA. 106+11.60
X=88303.76 Y=80130.95
P.T. 19.00' RT. STA. 106+92.58
X=88384.95 Y=80171.87





GEOMETRICS

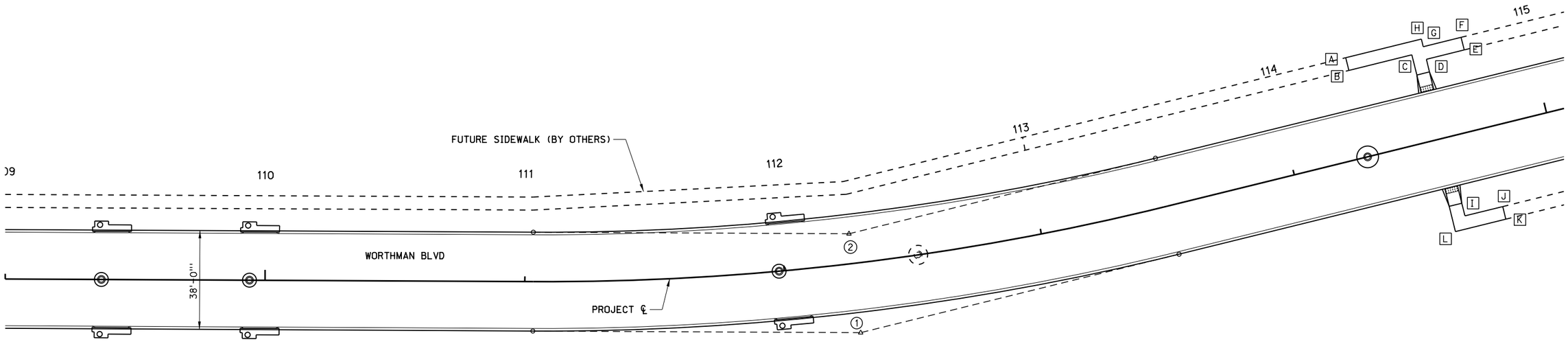
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J2

0 20' 40'
SCALE

① POINT 26.79' RT. STA. 112+26.42
X=88921.76 Y=80169.16
Δ = 14° 7' 16"
D = 5° 50' 26"
T = 121.51'
L = 241.78'
R = 981.00'
P.C. 19.00' RT. STA. 111+03.18
X=88795.55 Y=80169.80
P.T. 19.00' RT. STA. 113+49.65
X=89044.31 Y=80199.33

② POINT 11.50' LT. STA. 112+26.42
X=88917.24 Y=80207.18
Δ = 14° 7' 16"
D = 5° 37' 22"
T = 126.21'
L = 251.14'
R = 1019.00'
P.C. 19.00' LT. STA. 111+03.18
X=88795.74 Y=80207.80
P.T. 19.00' LT. STA. 113+49.65
X=89035.22 Y=80236.23



Ⓐ SIDEWALK POINT 39.00 LT. STA. 114+30.00
X=89108.47 Y=80274.86

Ⓑ SIDEWALK POINT 34.00 LT. STA. 114+30.00
X=89109.66 Y=80270.01

Ⓒ SIDEWALK POINT 34.00 LT. STA. 114+55.00
X=89133.94 Y=80275.98

Ⓓ SIDEWALK POINT 31.00 LT. STA. 114+60.00
X=89139.51 Y=80274.27

Ⓔ SIDEWALK POINT 31.00 LT. STA. 114+75.00
X=89154.07 Y=80272.85

Ⓕ SIDEWALK POINT 36.00 LT. STA. 114+75.00
X=89152.88 Y=80282.71

Ⓖ SIDEWALK POINT 39.00 LT. STA. 114+60.00
X=89138.31 Y=80279.12

Ⓗ SIDEWALK POINT 39.00 LT. STA. 114+60.00
X=89137.60 Y=80282.03

Ⓘ SIDEWALK POINT 31.00 RT. STA. 114+60.00
X=89154.33 Y=80214.06

Ⓙ SIDEWALK POINT 31.00 RT. STA. 114+75.00
X=89168.90 Y=80217.65

Ⓚ SIDEWALK POINT 36.00 RT. STA. 114+75.00
X=89170.09 Y=80212.79

Ⓛ SIDEWALK POINT 36.00 RT. STA. 114+55.00
X=89150.67 Y=80208.01



GEOMETRICS

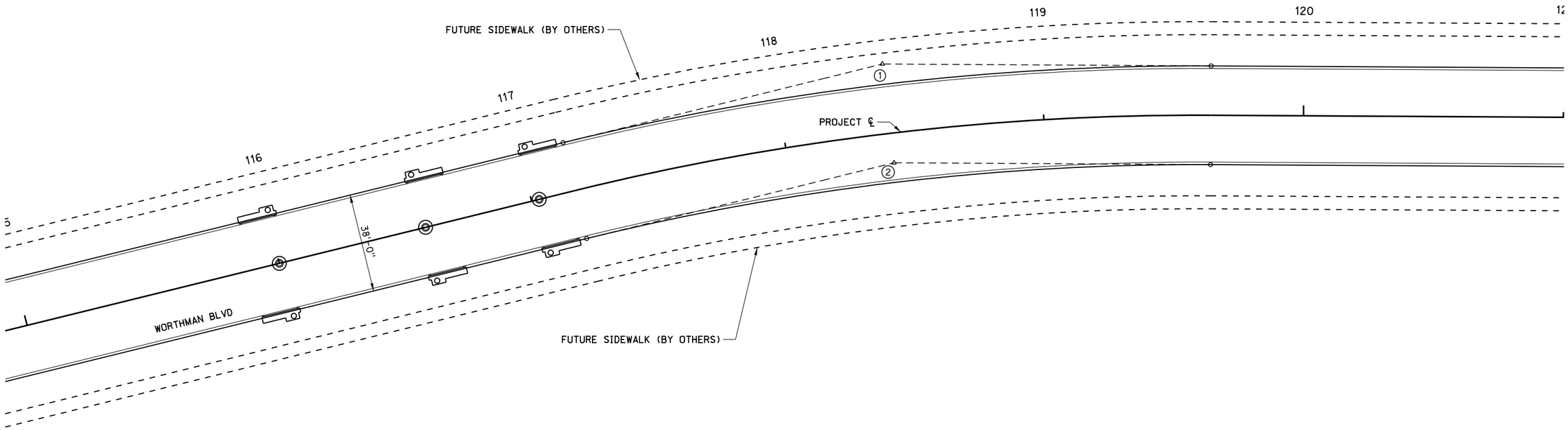
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07
Computer: LINMEGANS
File: 09336001 GE02.dgn
Scale: 1:40

ROADWAY DESIGN DIVISION.

① POINT 26.83' LT. STA. 118+40.73
X=89514.97 Y=80354.35
Δ = 14° 9' 38"
D = 5° 37' 22"
T = 126.57'
L = 251.84'
R = 1019.00'
P.C. 19.00' LT. STA. 117+17.16
X=89392.08 Y=80324.09
P.T. 19.00' LT. STA. 119+64.30
X=89641.54 Y=80353.62

② POINT 11.46' RT. STA. 118+40.73
X=89519.47 Y=80316.32
Δ = 14° 9' 38"
D = 5° 50' 26"
T = 121.85'
L = 242.45'
R = 981.00'
P.C. 19.00' RT. STA. 117+17.16
X=89401.16 Y=80287.19
P.T. 19.00' RT. STA. 119+64.30
X=89641.32 Y=80315.62

0 20' 40'
SCALE



PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07
Computer: LINMEGANS

File: 09336001 GE03.dgn
Scale: 1:40

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

GEOMETRICS

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J4

0 20' 40'
SCALE

① 50.00' R.P. 69.00' LT. STA. 123+70.53
X=90048.04 Y=80401.29
P.C. 19.00' LT. STA. 123+70.53
X=90047.76 Y=80351.29
P.T. 68.70' LT. STA. 124+20.50
X=90098.04 Y=80400.69

② 50.00' R.P. 69.00' RT. STA. 123+69.65
X=90046.37 Y=80263.30
P.C. 19.00' RT. STA. 123+69.65
X=90046.66 Y=80313.29
P.T. 69.30' RT. STA. 124+19.68
X=90096.37 Y=80262.69

③ POINT 16.00' LT. STA. 503+96.50
X=90098.37 Y=80428.58

④ POINT 16.00' RT. STA. 503+96.50
X=90130.37 Y=80428.20

⑤ 50.00' R.P. 74.04' LT. STA. 125+02.53
X=90180.10 Y=80405.52
P.C. 74.34' LT. STA. 124+52.53
X=90130.11 Y=80406.13
P.T. 24.04' LT. STA. 125+02.53
X=90179.80 Y=80355.53

⑥ POINT 22.52' LT. STA. 124+22.23
X=90099.49 Y=80354.50

⑦ POINT 22.04' LT. STA. 125+02.53
X=90179.78 Y=80353.53

⑧ POINT 22.24' LT. STA. 124+69.16
X=90146.41 Y=80353.93

⑨ POINT 22.06' RT. STA. 124+69.05
X=90146.03 Y=80309.63

⑩ POINT 22.19' LT. STA. 124+77.07
X=90154.32 Y=80353.83

⑪ POINT 22.06' RT. STA. 124+76.98
X=90153.96 Y=80309.59

⑫ POINT 22.06' RT. STA. 124+21.97
X=90098.95 Y=80309.92

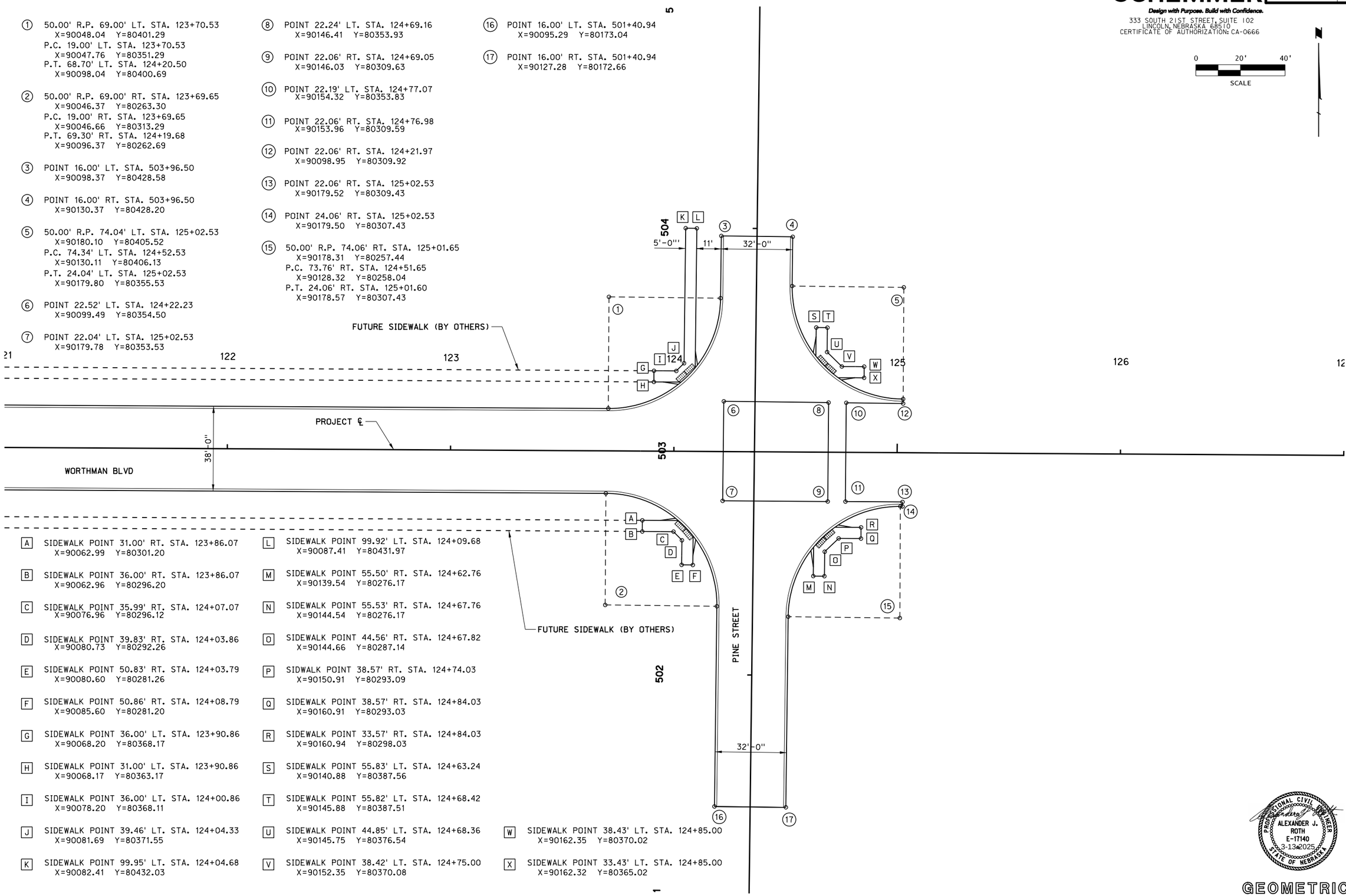
⑬ POINT 22.06' RT. STA. 125+02.53
X=90179.52 Y=80309.43

⑭ POINT 24.06' RT. STA. 125+02.53
X=90179.50 Y=80307.43

⑮ 50.00' R.P. 74.06' RT. STA. 125+01.65
X=90178.31 Y=80257.44
P.C. 73.76' RT. STA. 124+51.65
X=90128.32 Y=80258.04
P.T. 24.06' RT. STA. 125+01.60
X=90178.57 Y=80307.43

⑯ POINT 16.00' LT. STA. 501+40.94
X=90095.29 Y=80173.04

⑰ POINT 16.00' RT. STA. 501+40.94
X=90127.28 Y=80172.66



[A] SIDEWALK POINT 31.00' RT. STA. 123+86.07
X=90062.99 Y=80301.20

[B] SIDEWALK POINT 36.00' RT. STA. 123+86.07
X=90062.96 Y=80296.20

[C] SIDEWALK POINT 35.99' RT. STA. 124+07.07
X=90076.96 Y=80296.12

[D] SIDEWALK POINT 39.83' RT. STA. 124+03.86
X=90080.73 Y=80292.26

[E] SIDEWALK POINT 50.83' RT. STA. 124+03.79
X=90080.60 Y=80281.26

[F] SIDEWALK POINT 50.86' RT. STA. 124+08.79
X=90085.60 Y=80281.20

[G] SIDEWALK POINT 36.00' LT. STA. 123+90.86
X=90068.20 Y=80368.17

[H] SIDEWALK POINT 31.00' LT. STA. 123+90.86
X=90068.17 Y=80363.17

[I] SIDEWALK POINT 36.00' LT. STA. 124+00.86
X=90078.20 Y=80368.11

[J] SIDEWALK POINT 39.46' LT. STA. 124+04.33
X=90081.69 Y=80371.55

[K] SIDEWALK POINT 99.95' LT. STA. 124+04.68
X=90082.41 Y=80432.03

[L] SIDEWALK POINT 99.92' LT. STA. 124+09.68
X=90087.41 Y=80431.97

[M] SIDEWALK POINT 55.50' RT. STA. 124+62.76
X=90139.54 Y=80276.17

[N] SIDEWALK POINT 55.53' RT. STA. 124+67.76
X=90144.54 Y=80276.17

[O] SIDEWALK POINT 44.56' RT. STA. 124+67.82
X=90144.66 Y=80287.14

[P] SIDWALK POINT 38.57' RT. STA. 124+74.03
X=90150.91 Y=80293.09

[Q] SIDEWALK POINT 38.57' RT. STA. 124+84.03
X=90160.91 Y=80293.03

[R] SIDEWALK POINT 33.57' RT. STA. 124+84.03
X=90160.94 Y=80298.03

[S] SIDEWALK POINT 55.83' LT. STA. 124+63.24
X=90140.88 Y=80387.56

[T] SIDEWALK POINT 55.82' LT. STA. 124+68.42
X=90145.88 Y=80387.51

[U] SIDEWALK POINT 44.85' LT. STA. 124+68.36
X=90145.75 Y=80376.54

[V] SIDEWALK POINT 38.42' LT. STA. 124+75.00
X=90152.35 Y=80370.08

[W] SIDEWALK POINT 38.43' LT. STA. 124+85.00
X=90162.35 Y=80370.02

[X] SIDEWALK POINT 33.43' LT. STA. 124+85.00
X=90162.32 Y=80365.02

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

GEOMETRICS

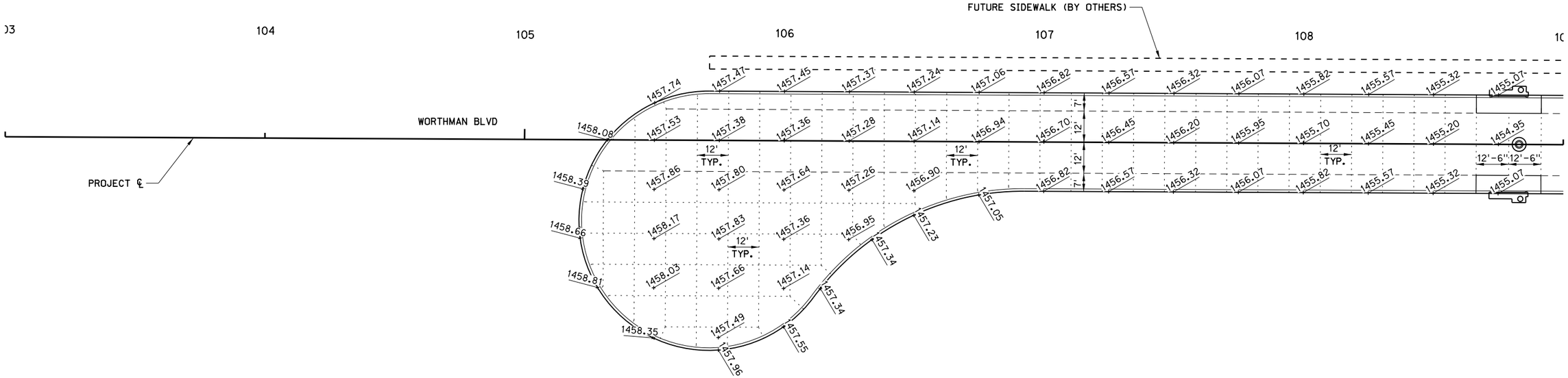
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Date: 12-MAR-2025 10:07
Computer: LINMEGANS
File: 09336001 GE04.dgn
Scale: 1:40

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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J5

ROADWAY DESIGN DIVISION.

0 20' 40'
SCALE



LEGEND

- LONGITUDINAL JOINT (TIED)
- CONTRACTION JOINT
- CONSTRUCTION JOINT

ELEVATION AT CURB LOCATIONS ARE TOP OF CURB, UNLESS SHOWN OTHERWISE.

FOR DETAILS NOT SHOWN SEE PLAN 329

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

JOINTS AND GRADES

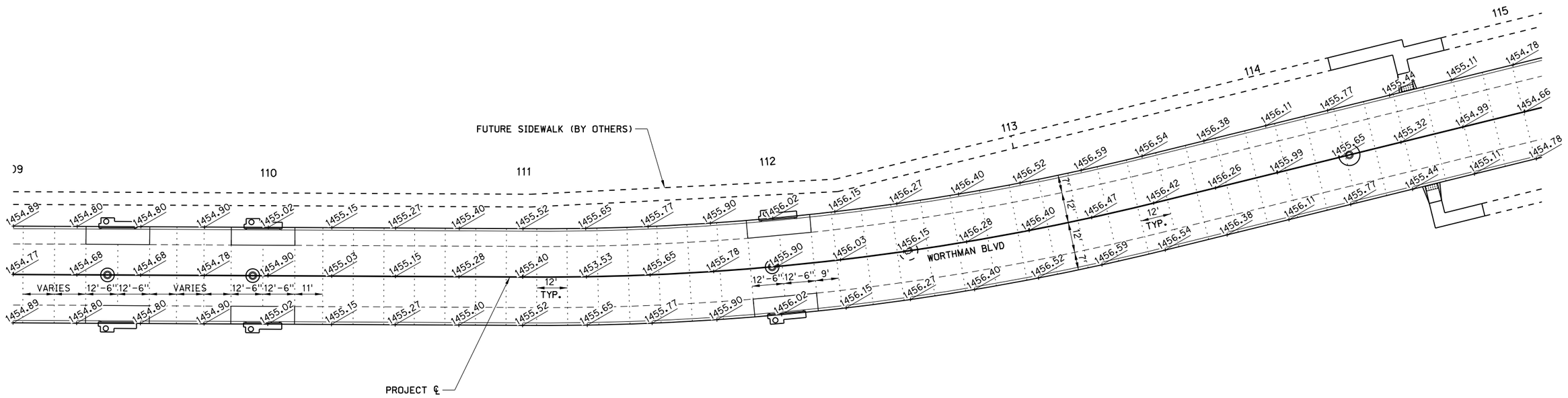
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Scale: 1:40
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07
Computer: LINMEGANS

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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J6

ROADWAY DESIGN DIVISION.

0 20' 40'
SCALE



LEGEND

- – – – – LONGITUDINAL JOINT (TIED)
- . . . . . CONTRACTION JOINT
- ——— CONSTRUCTION JOINT

ELEVATION AT CURB LOCATIONS ARE TOP OF CURB, UNLESS SHOWN OTHERWISE.

FOR DETAILS NOT SHOWN SEE PLAN 329

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

JOINTS AND GRADES

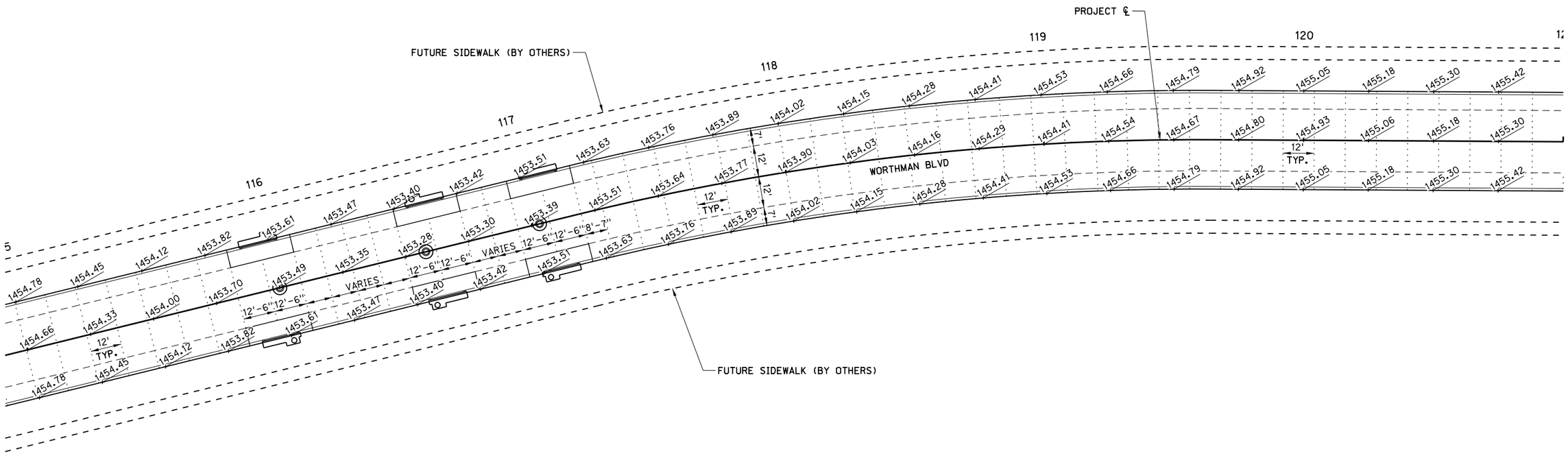
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07 Computer: LINMEGANS

File: 09336001 JG02.dgn
Scale: 1:40

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333 SOUTH 21ST STREET, SUITE 102
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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J7

0 20' 40'
SCALE



FUTURE SIDEWALK (BY OTHERS)

LEGEND

- LONGITUDINAL JOINT (TIED)
- CONTRACTION JOINT
- CONSTRUCTION JOINT

ELEVATION AT CURB LOCATIONS ARE TOP OF CURB, UNLESS SHOWN OTHERWISE.

FOR DETAILS NOT SHOWN SEE PLAN 329

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

JOINTS AND GRADES

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07
Computer: LINMEGANS

File: 09336001 J603.dgn
Scale: 1:40

ROADWAY DESIGN DIVISION.

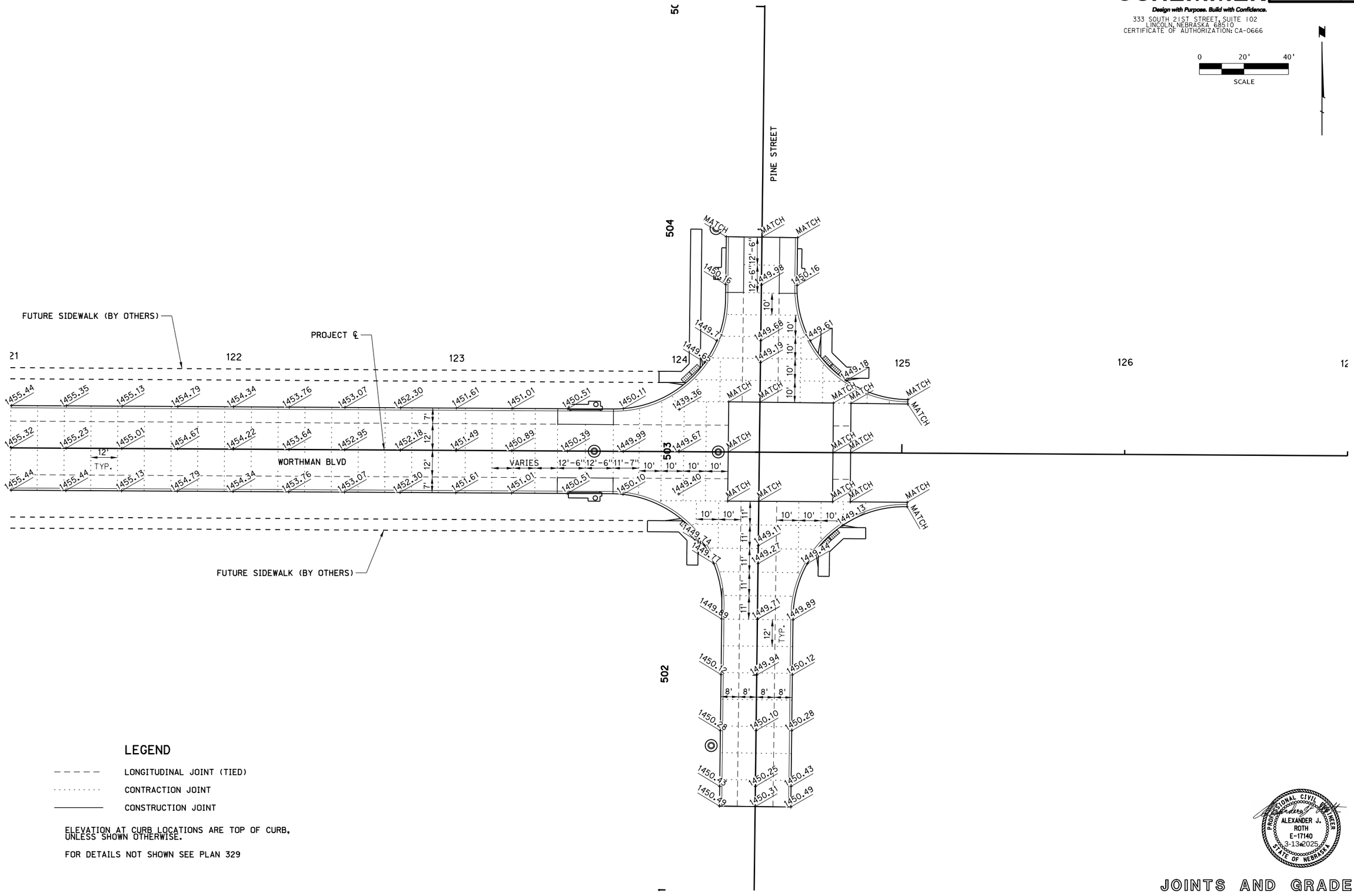
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07
Computer: LINMEGANS

File: 09336001 JG04.dgn
Scale: 1:40

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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J8

0 20' 40'
SCALE



LEGEND

- LONGITUDINAL JOINT (TIED)
- CONTRACTION JOINT
- CONSTRUCTION JOINT

ELEVATION AT CURB LOCATIONS ARE TOP OF CURB, UNLESS SHOWN OTHERWISE.

FOR DETAILS NOT SHOWN SEE PLAN 329

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

JOINTS AND GRADES

ROADWAY DESIGN DIVISION.

SCHEMMER

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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J9

0 20' 40'
SCALE

N

○ BUILD STORM SEWER PIPE

NO.	STATION TO STATION	SIDE	DESCRIPTION
1	108+83	LT.	15" × 22', Type 2, CLASS III, FIll = 2.2'
2	108+83	RT.	15" × 22', Type 2, CLASS III, FIll = 2.2'
3	108+37 - 109+37	℄	18" × 54', Type 2, CLASS III, FIll = 2.4'
4	109+37	LT.	15" × 22', Type 2, CLASS III, FIll = 2.2'
5	109+37	RT.	15" × 22', Type 2, CLASS III, FIll = 2.2'
6	109+37 - 109+94	℄	18" × 57', Type 2, CLASS III, FIll = 2.6'
7	109+94	LT.	15" × 22', Type 2, CLASS III, FIll = 2.2'
8	109+94	RT.	15" × 22', Type 2, CLASS III, FIll = 2.2'
9	109+94 - 111+98	LT./RT.	18" × 204, Type 2, CLASS III, FIll = 3.2'
10	111+98	LT.	15" × 22', Type 2, CLASS III, FIll = 2.2'
11	111+98	RT.	15" × 22', Type 2, CLASS III, FIll = 2.2'

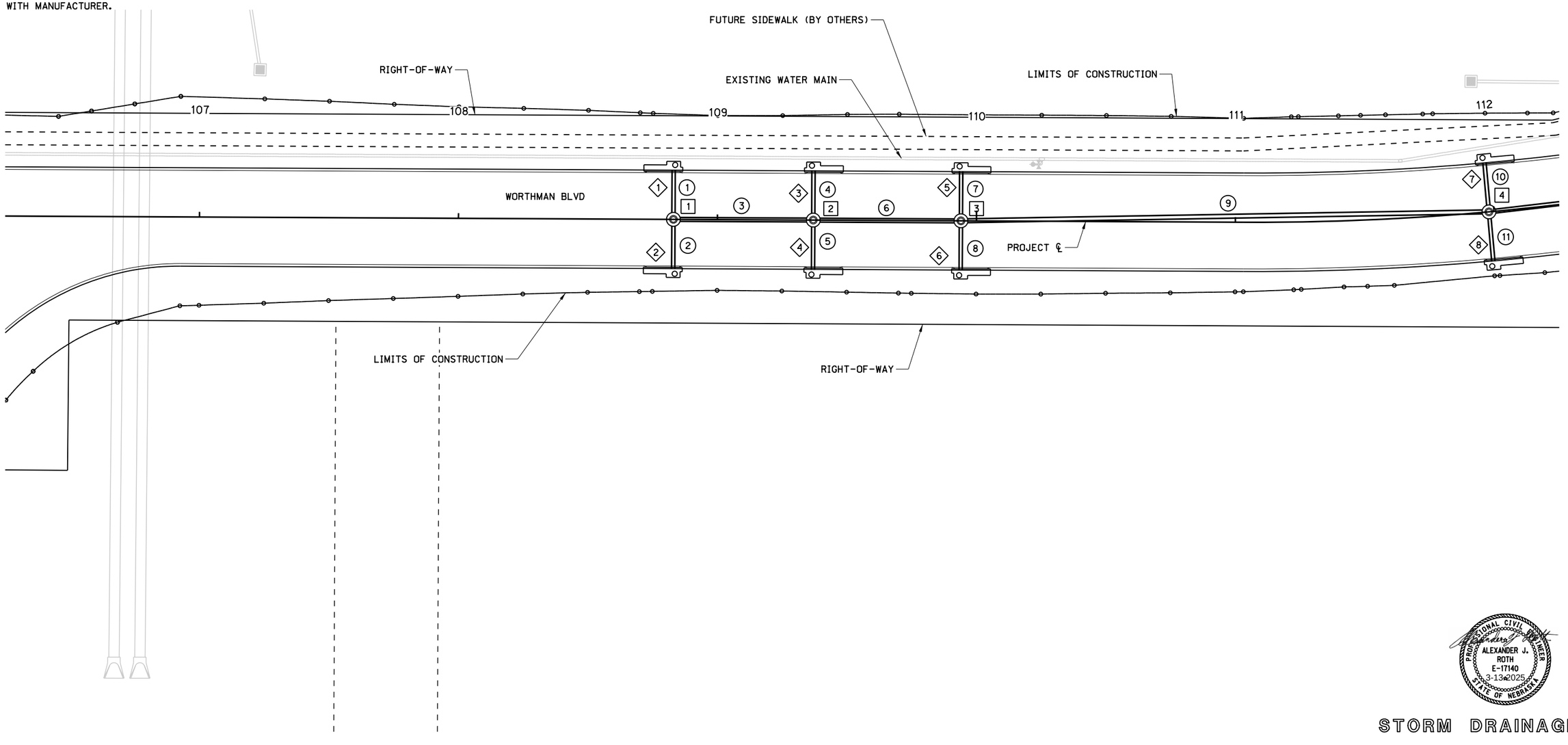
◇ BUILD CURB INLET, PLAN 443

NO.	STATION	SIDE	"X"	"A"	"Y"
1	108+83	21.00' LT.	3'-11"	2'-8"	12'-0"
2	108+83	21.00' RT.	3'-11"	2'-8"	12'-0"
3	109+37	21.00' LT.	3'-11"	2'-8"	12'-0"
4	109+37	21.00' RT.	3'-11"	2'-8"	12'-0"
5	109+94	21.00' LT.	3'-11"	2'-8"	12'-0"
6	109+94	21.00' RT.	3'-11"	2'-8"	12'-0"
7	111+98	21.00' LT.	3'-11"	2'-8"	12'-0"
8	111+98	21.00' RT.	3'-11"	2'-8"	12'-0"

□ BUILD MANHOLE, PLAN 435

NO.	STATION	SIDE	FRAME	FLANGE	RING	DIAMETER*	COVER TYPE
1	108+83	℄	II	-	-	48"	A
2	109+37	℄	II	-	-	48"	A
3	109+94	℄	II	-	-	48"	A
4	111+98	℄	II	-	-	48"	A

* FOR INFORMATION ONLY - CONTRACTOR TO CONFIRM MANHOLE DIAMETER WITH MANUFACTURER.



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

STORM DRAINAGE

File: 09336001 Storm Drain 01.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 13-MAR-2025 09:25 Computer: LINMEGANS

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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J10

○ BUILD STORM SEWER PIPE

NO.	STATION TO STATION	SIDE	DESCRIPTION
12	111+98 - 112+41.88	LT.	18" × 44', Type 2, CLASS III, FIII = 5.4'
13	114+09.23 - 114+25.04	LT./RT.	48" × 106', Type 2, CLASS III w/FES, FIII = 4.4'
14	114+29.07 - 114+37.87	LT.	48" × 59', Type 2, CLASS III w/FES, FIII = 4.2'
15	114+21.86 - 114+19.15	RT.	48" × 48', Type 2, CLASS III w/FES, FIII = 4.6'
16	114+29.07 - 116+00	℄	18" × 171', Type 2, CLASS III, FIII = 3.3'
17	116+00	LT.	15" × 22', Type 2, CLASS III, FIII = 2.2'
18	116+00	RT.	15" × 22', Type 2, CLASS III, FIII = 2.2'
19	116+00 - 116+58	℄	18" × 58', Type 2, CLASS III, FIII = 2.7'
20	116+58	LT.	15" × 22', Type 2, CLASS III, FIII = 2.2'
21	116+58	RT.	15" × 22', Type 2, CLASS III, FIII = 2.2'
22	116+58 - 117+03	℄	18" × 45', Type 2, CLASS III, FIII = 2.5'
23	117+03	LT.	15" × 22', Type 2, CLASS III, FIII = 2.2'
24	117+03	RT.	15" × 22', Type 2, CLASS III, FIII = 2.2'

◇ BUILD CURB INLET, PLAN 443

NO.	STATION	SIDE	"X"	"A"	"Y"
9	116+00	21.00' LT.	3'-11"	2'-8"	12'-0"
10	116+00	21.00' RT.	3'-11"	2'-8"	12'-0"
11	116+58	21.00' LT.	3'-11"	2'-8"	12'-0"
12	116+58	21.00' RT.	3'-11"	2'-8"	12'-0"
13	117+03	21.00' LT.	3'-11"	2'-8"	12'-0"
14	117+03	21.00' RT.	3'-11"	2'-8"	12'-0"

□ BUILD MANHOLE, PLAN 435

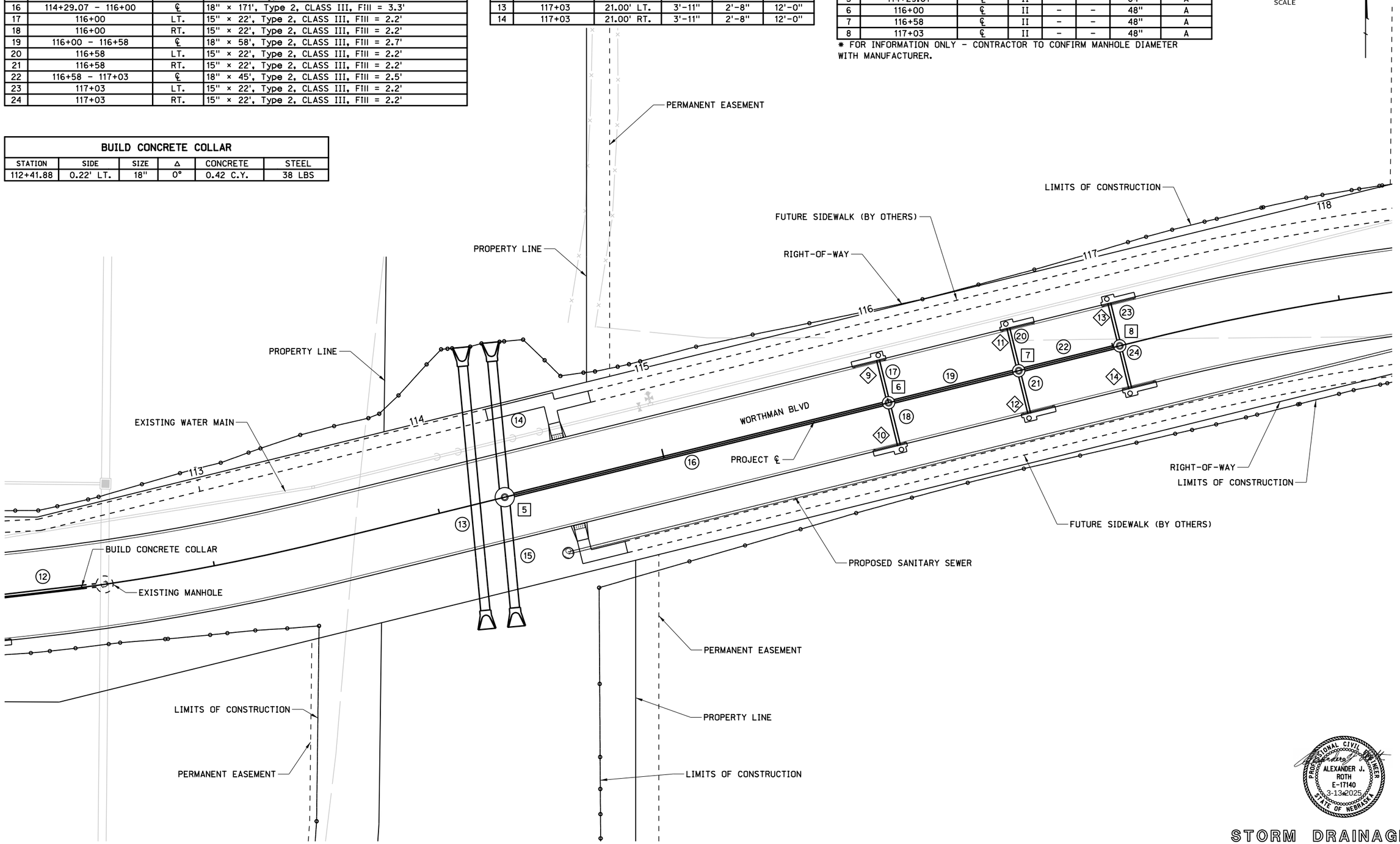
NO.	STATION	SIDE	FRAME	FLANGE	RING	DIAMETER*	COVER TYPE
5	114+29.07	℄	II	-	-	84"	A
6	116+00	℄	II	-	-	48"	A
7	116+58	℄	II	-	-	48"	A
8	117+03	℄	II	-	-	48"	A

* FOR INFORMATION ONLY - CONTRACTOR TO CONFIRM MANHOLE DIAMETER WITH MANUFACTURER.

BUILD CONCRETE COLLAR

STATION	SIDE	SIZE	Δ	CONCRETE	STEEL
112+41.88	0.22' LT.	18"	0°	0.42 C.Y.	38 LBS

0 20' 40'
SCALE



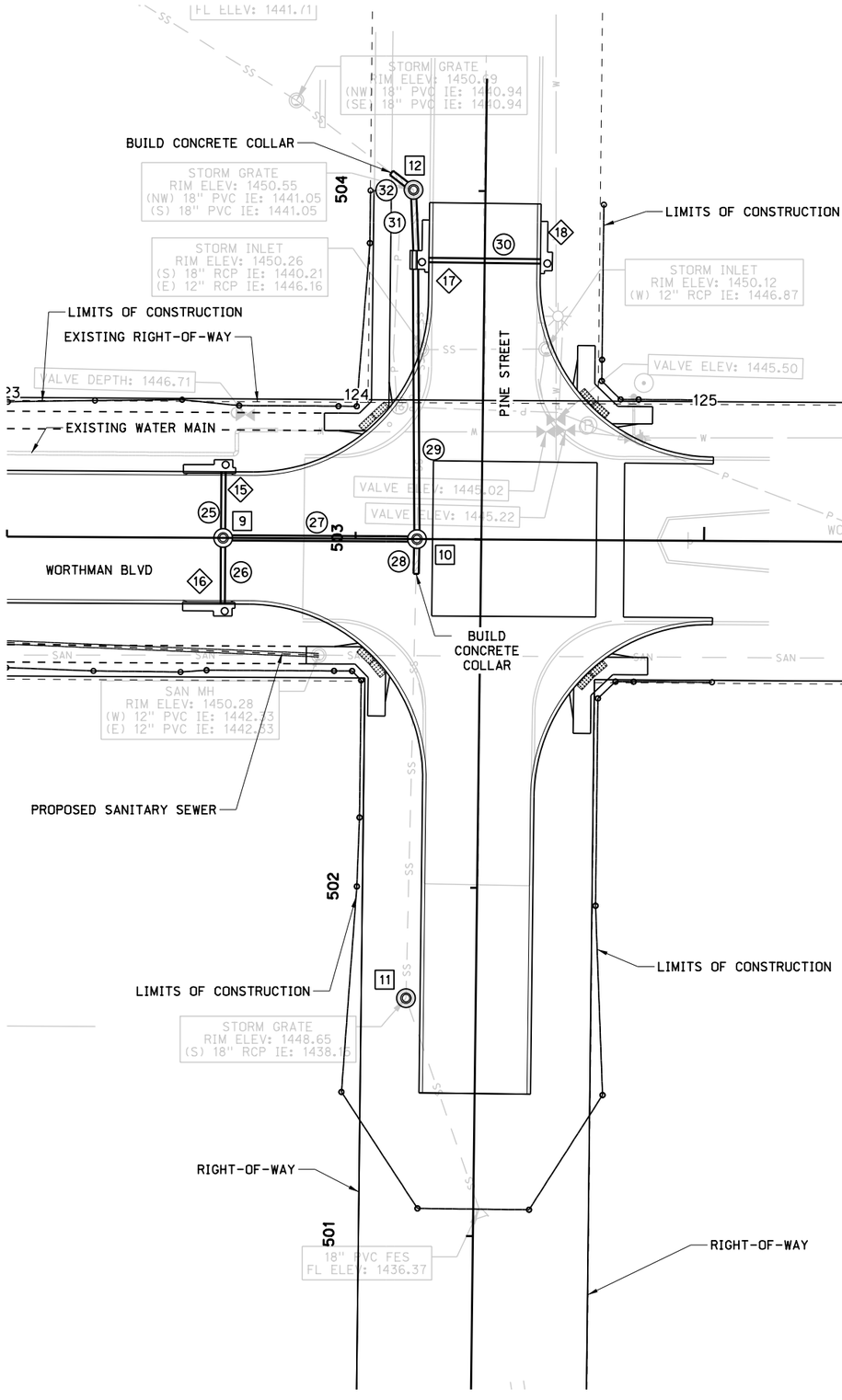
PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

STORM DRAINAGE

File: 09336001 Storm Drain 02.dgnPROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40
Date: 13-MAR-2025 09:25
Computer: LINMEGANS

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J11



REMOVE INLET		
STATION	SIDE	EACH
124+18.56	54.36' LT.	1
124+54.43	54.75' LT.	1

REMOVE MANHOLE		
STATION	SIDE	EACH
501+68.10	20.02' LT.	1
504+00.12	20.66' LT.	1

REMOVE STORM SEWER PIPE	
STATION TO STATION	SIZE
124+18.56, 54' LT - 124+54.43, 55' LT.	12" X 36'
503+54.26, 18' LT - 504+00.12, 21' LT	18" X 46'
502+89.89, 19' LT - 503+54.26, 18' LT	18" X 64'
504+00.12, 21' LT - 504+04.89, 27' LT	18" X 8'

BUILD CONCRETE COLLAR					
STATION	SIDE	SIZE	Δ	CONCRETE	STEEL
502+89.89	18.60' LT.	18"	0°	0.42 C.Y.	38 LBS
504+04.89	27.08' LT.	18"	9.3°	0.46 C.Y.	40 LBS

□ BUILD MANHOLE, PLAN 435							
NO.	STATION	SIDE	FRAME	FLANGE	RING	DIAMETER*	COVER TYPE
9	123+62.00	℄	II	-	-	48"	A
10	124+17.61	℄	II	-	-	48"	A
11	501+68.10	20.02' LT.	II	-	-	48"	A
12	504+00.12	20.66' LT.	II	-	-	48"	A

* FOR INFORMATION ONLY - CONTRACTOR TO CONFIRM MANHOLE DIAMETER WITH MANUFACTURER.

○ BUILD STORM SEWER PIPE			
NO.	STATION TO STATION	SIDE	DESCRIPTION
25	123+62	LT.	15" × 22', Type 2, CLASS III, Fill = 2.2'
26	123+62	RT.	15" × 22', Type 2, CLASS III, Fill = 2.2'
27	123+62.00 - 124+17.61	℄	18" × 56', Type 2, CLASS III, Fill = 2.2'
28	502+91.89 - 502+99.89	LT.	18" × 8', Type 2, CLASS III, Fill = 8.3'
29	502+99.89 - 503+80.00	LT.	18" × 80', Type 2, CLASS III, Fill = 7.5'
30	503+80	LT./RT.	15" × 36', Type 2, CLASS III, Fill = 2.4'
31	503+80.00 - 504+00.12	LT.	18" × 20', Type 2, CLASS III, Fill = 8.1'
32	504+00.12 - 504+04.89	LT.	18" × 8', Type 2, CLASS III, Fill = 8.2'

◇ BUILD CURB INLET, PLAN 443					
NO.	STATION	SIDE	"X"	"A"	"Y"
15	123+62	21.00' LT.	3'-11"	2'-8"	12'-0"
16	123+62	21.00' RT.	3'-11"	2'-8"	12'-0"
17	503+80	18.00' LT.	9'-7"	4'-7"	12'-0"
18	503+80	18.00' RT.	3'-11"	2'-8"	12'-0"

0 20' 40'
SCALE

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

STORM DRAINAGE

File: 09336001 Storm Drain 03.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40
Date: 13-MAR-2025 09:25
Computer: LINMEGANS

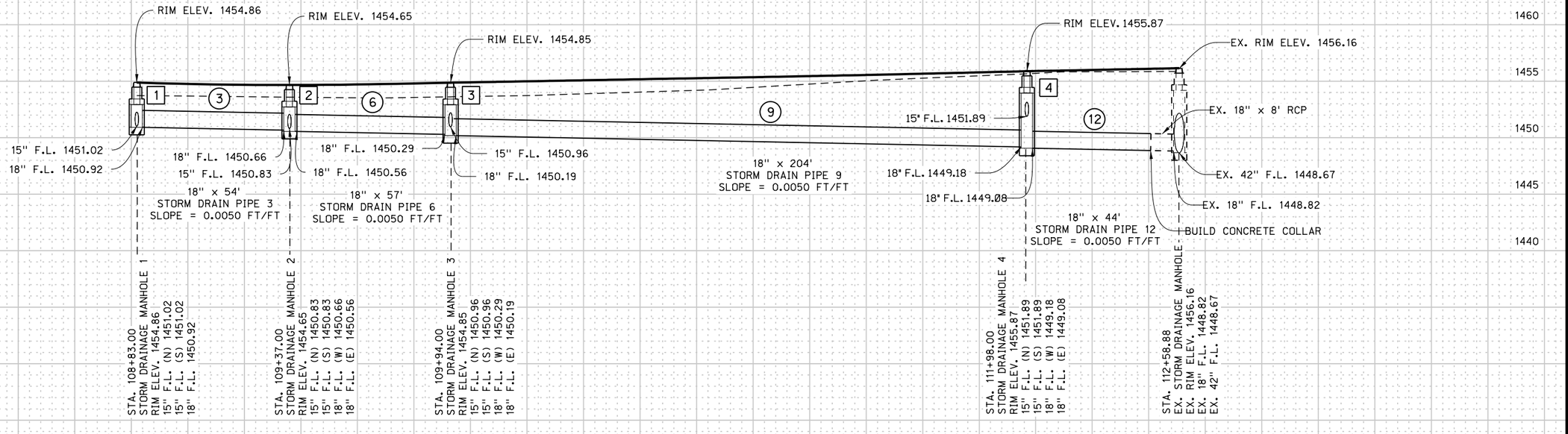
WEST WORTHMAN BOULEVARD STORM DRAINAGE NETWORK PROFILES

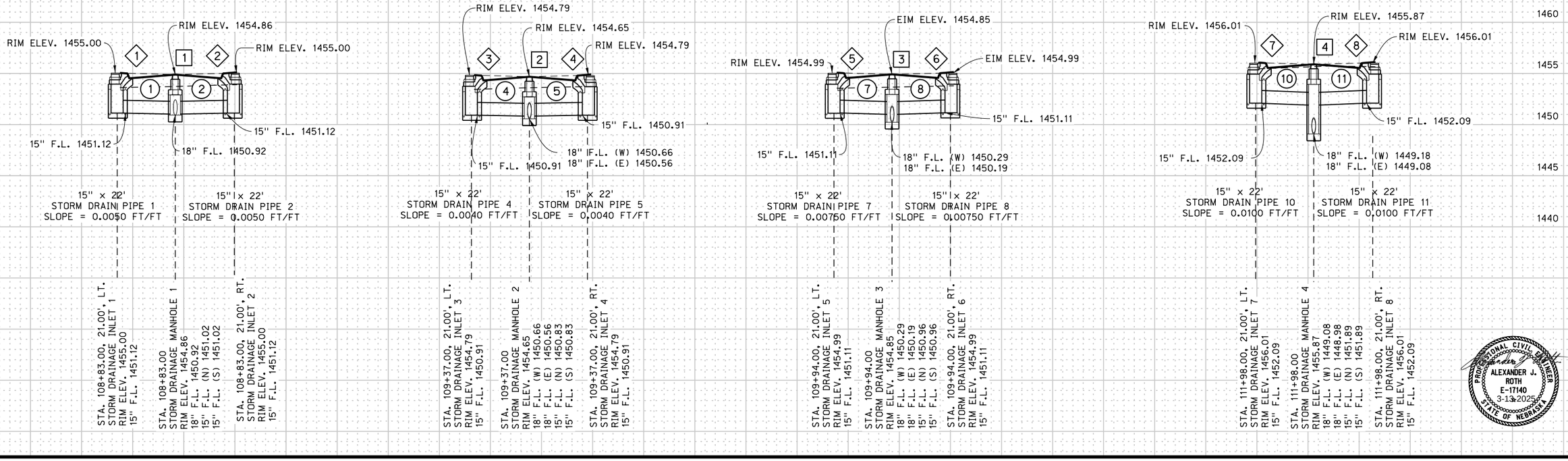
SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale 1 : 10
Vertical Scale 1 : 10

PROJECT NO.	SHEET NO.
09336.001-C	J12
C.N.	

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE ROADWAY DESIGN DIVISION.





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3-13-2025
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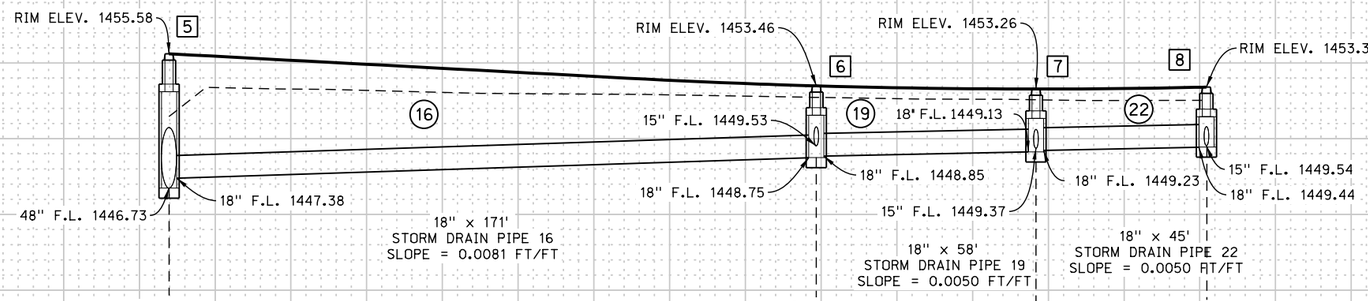
File: 09336001 Storm Drain 04.dgn Date: 12-MAR-2025 10:07 Computer: LINNEGANS

EAST WORTHMAN BOULEVARD STORM DRAINAGE NETWORK PROFILES

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Vertical Scale 1 : 10

PROJECT NO.	SHEET NO.
09336.001-C	J13
C.N.	

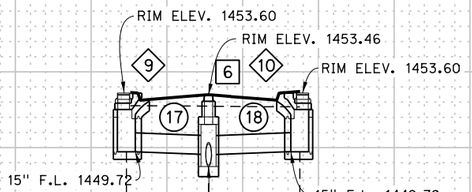


STA. 114+29.07
STORM DRAINAGE MANHOLE 5
RIM ELEV. 1455.58
18" F.L. 1447.38
48" F.L. 1446.73

STA. 116+00.00
STORM DRAINAGE MANHOLE 6
RIM ELEV. 1453.46
15" F.L. (N) 1449.53
15" F.L. (S) 1449.53
18" F.L. (E) 1448.85
18" F.L. (W) 1448.75

STA. 116+58.00
STORM DRAINAGE MANHOLE 7
RIM ELEV. 1453.26
15" F.L. (N) 1449.37
15" F.L. (S) 1449.37
18" F.L. (E) 1449.23
18" F.L. (W) 1449.13

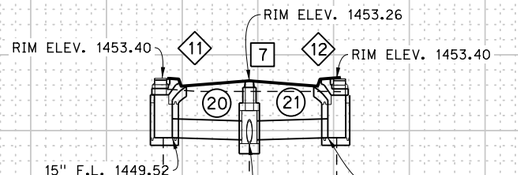
STA. 117+03.00
STORM DRAINAGE MANHOLE 8
RIM ELEV. 1453.38
15" F.L. (N) 1449.54
15" F.L. (S) 1449.54
18" F.L. 1449.44



STA. 116+00.00, 21.00' LT.
STORM DRAINAGE INLET 9
RIM ELEV. 1453.60
15" F.L. 1449.72

STA. 116+00.00
STORM DRAINAGE MANHOLE 6
RIM ELEV. 1453.46
15" F.L. (N) 1449.53
15" F.L. (S) 1449.53
18" F.L. (E) 1448.85
18" F.L. (W) 1448.75

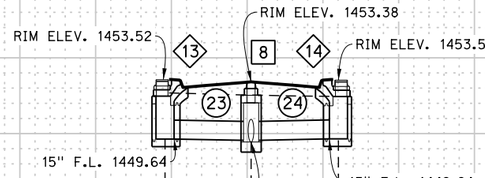
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STORM DRAINAGE INLET 10
RIM ELEV. 1453.60
15" F.L. 1449.72



STA. 116+58.00, 21.00' LT.
STORM DRAINAGE INLET 11
RIM ELEV. 1453.40
15" F.L. 1449.52

STA. 116+58.00
STORM DRAINAGE MANHOLE 7
RIM ELEV. 1453.26
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15" F.L. (S) 1449.37
18" F.L. (E) 1449.23
18" F.L. (W) 1449.13

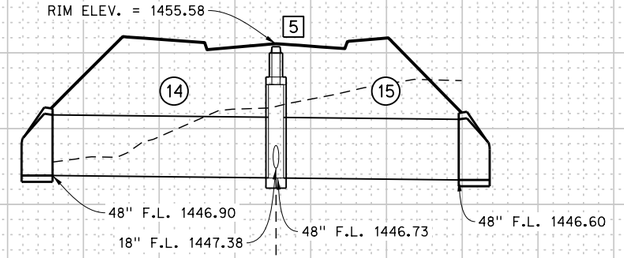
STA. 116+58.00, 21.00' RT.
STORM DRAINAGE INLET 12
RIM ELEV. 1453.40
15" F.L. 1449.52



STA. 117+03.00, 21.00' LT.
STORM DRAINAGE INLET 13
RIM ELEV. 1453.52
15" F.L. 1449.64

STA. 117+00.00
STORM DRAINAGE MANHOLE 8
RIM ELEV. 1453.38
15" F.L. (N) 1449.54
15" F.L. (S) 1449.54
18" F.L. (W) 1449.44

STA. 117+03.00, 21.00' RT.
STORM DRAINAGE INLET 14
RIM ELEV. 1453.52
15" F.L. 1449.64



STA. 114+29.07
STORM DRAINAGE MAHOLE 5
RIM ELEV. 1455.58
18" F.L. 1447.38
48" F.L. 1446.73

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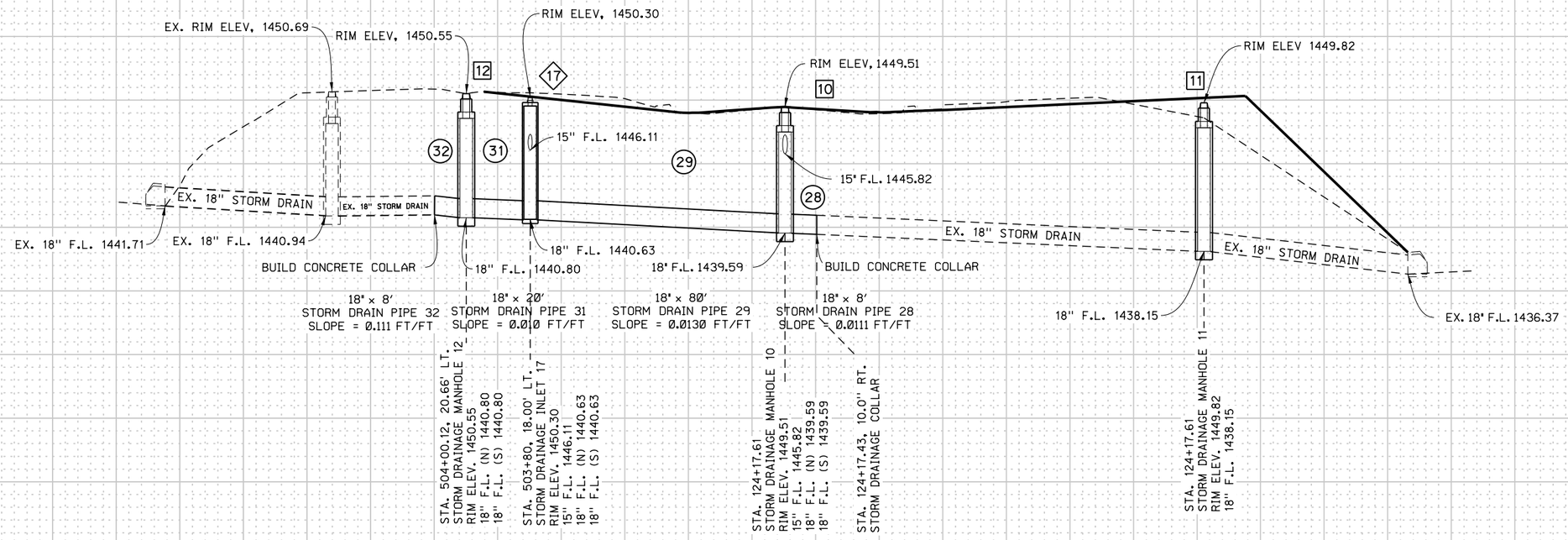
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Computer: LINMEGANS
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File: 09336001 Storm Drain 04.dgn

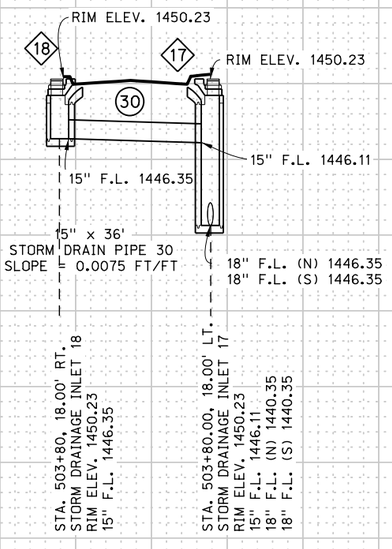
PINE STREET STORM DRAINAGE NETWORK PROFILES

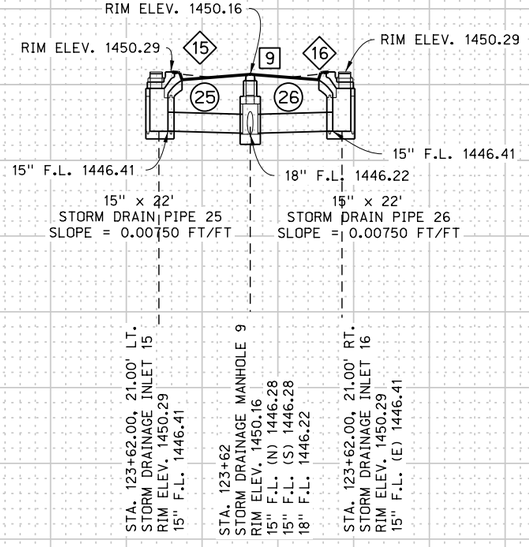
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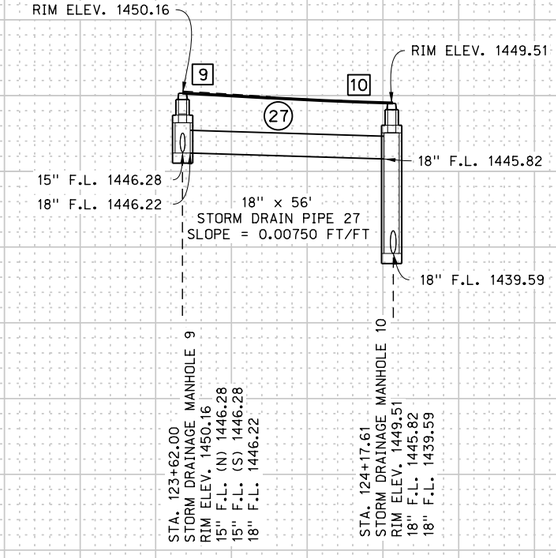
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Vertical Scale 1 : 10

PROJECT NO.	SHEET NO.
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Computer: LINNEGANS
Date: 12-MAR-2025 10:08
File: 09336001 Storm Drain 04.dgn

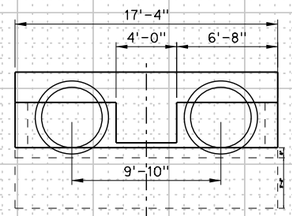
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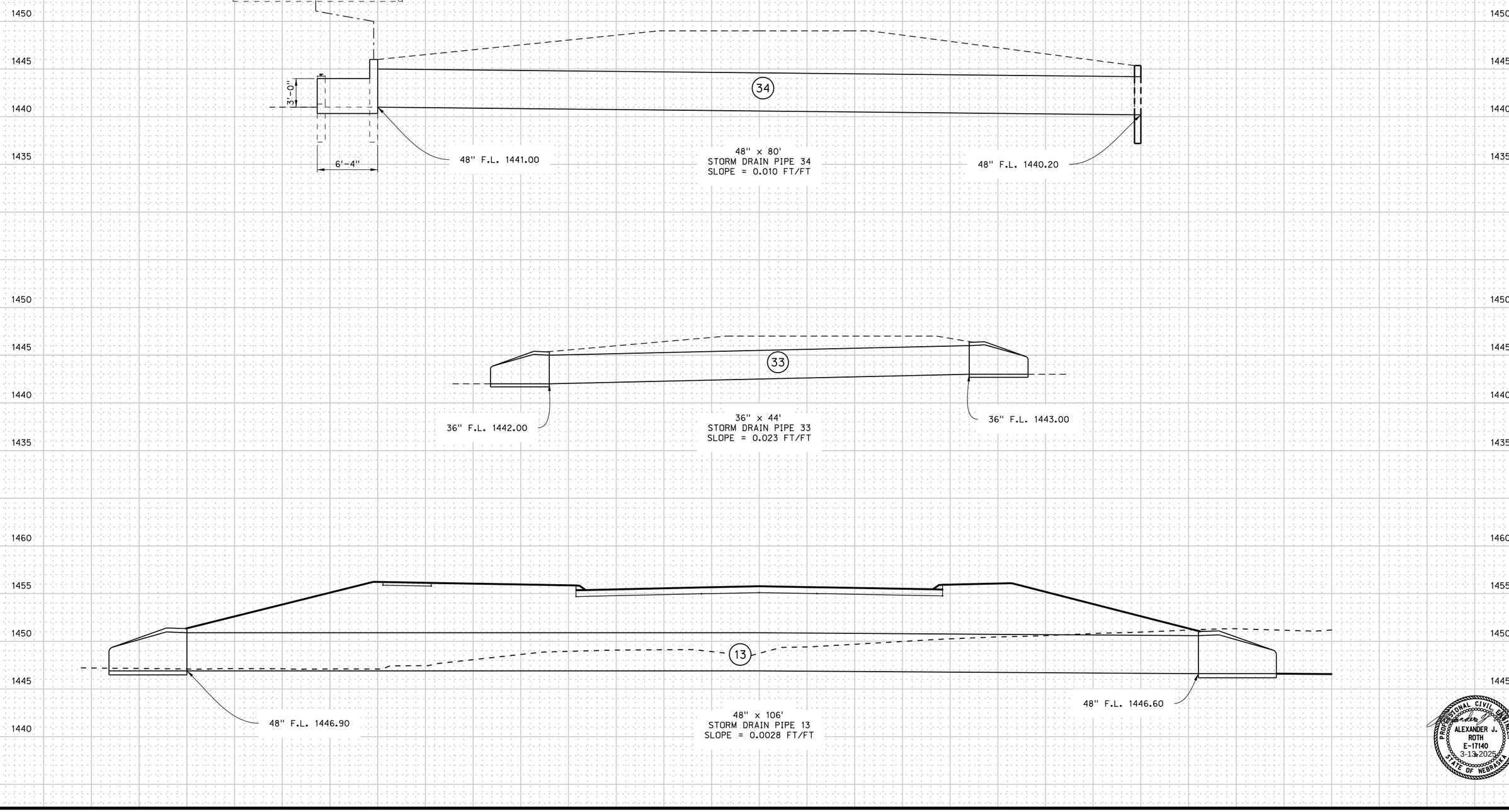
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Horizontal Scale	1 : 10
Vertical Scale	1 : 10

PROJECT NO.	SHEET NO.
09336.001-C	J15

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3-13-2025
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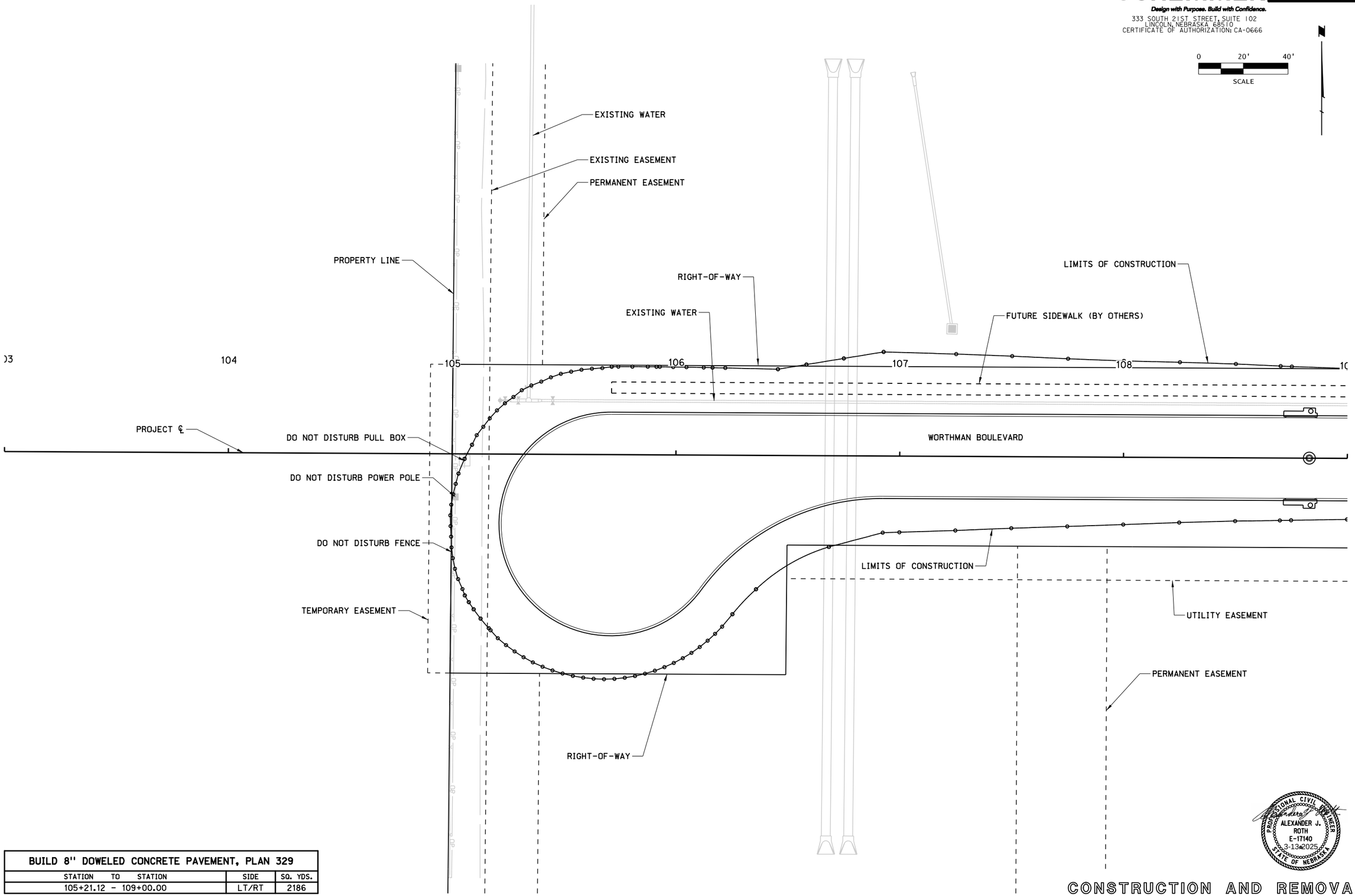
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
ROADWAY DESIGN DIVISION.
Computer: LINMEGANS
Date: 12-MAR-2025 10:08
File: 09336001 Storm Drain 04.dgn

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PROJECT NO.	SHEET NO.
09336.001-C	J16

ROADWAY DESIGN DIVISION.

0 20' 40'
SCALE



BUILD 8" DOWELED CONCRETE PAVEMENT, PLAN 329		
STATION TO STATION	SIDE	SQ. YDS.
105+21.12 - 109+00.00	LT/RT	2186

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CONSTRUCTION AND REMOVAL

File: 09336001 Const & Rem01.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS
Scale: 1:40

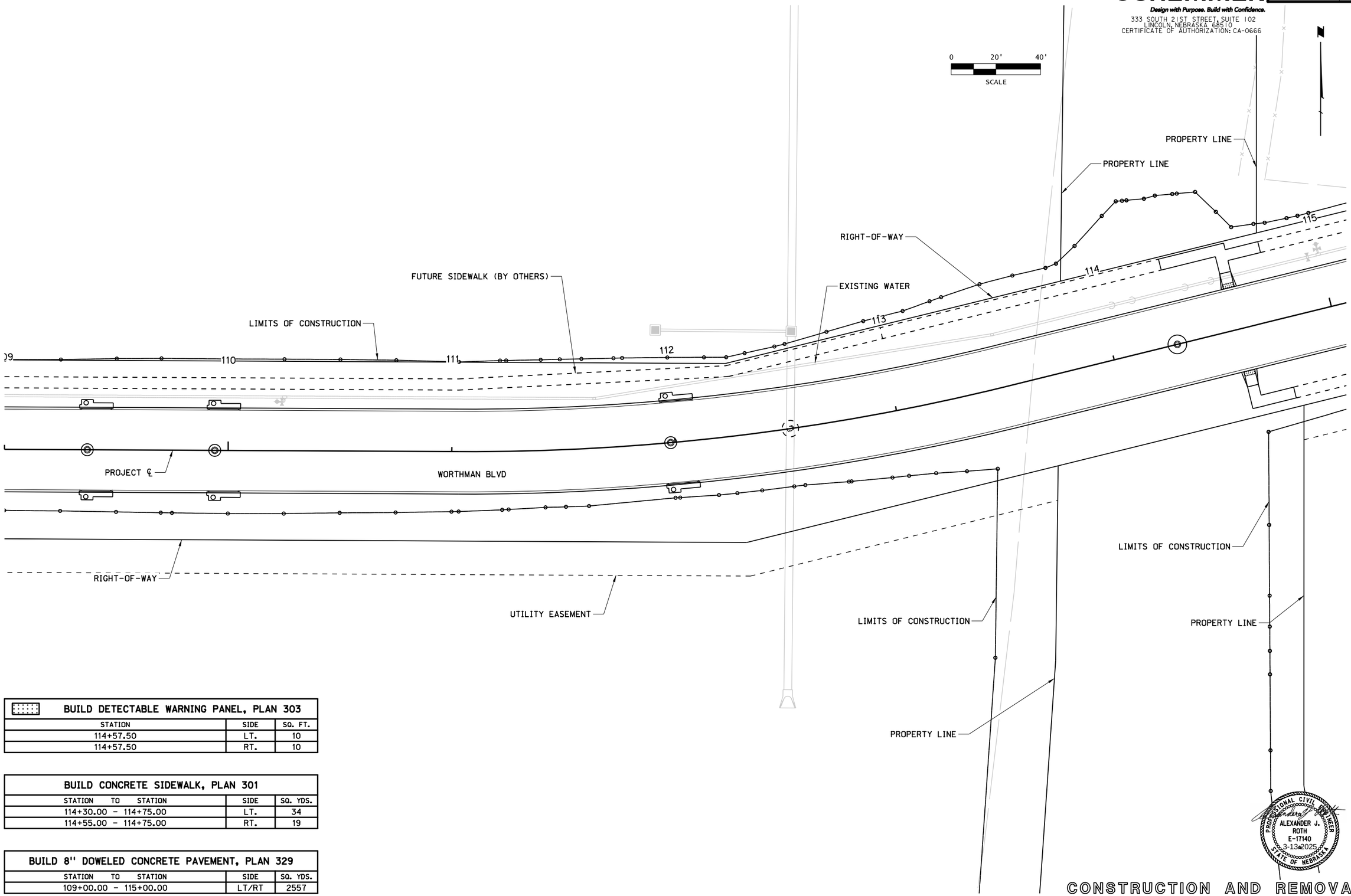
SCHEMMER
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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J17

ROADWAY DESIGN DIVISION.

File: 09336001 Const & Rem02.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 12-MAR-2025 10:08 Computer: LINMEGANS

0 20' 40'
SCALE



BUILD DETECTABLE WARNING PANEL, PLAN 303		
STATION	SIDE	SQ. FT.
114+57.50	LT.	10
114+57.50	RT.	10

BUILD CONCRETE SIDEWALK, PLAN 301		
STATION TO STATION	SIDE	SQ. YDS.
114+30.00 - 114+75.00	LT.	34
114+55.00 - 114+75.00	RT.	19

BUILD 8" DOWELED CONCRETE PAVEMENT, PLAN 329		
STATION TO STATION	SIDE	SQ. YDS.
109+00.00 - 115+00.00	LT/RT	2557

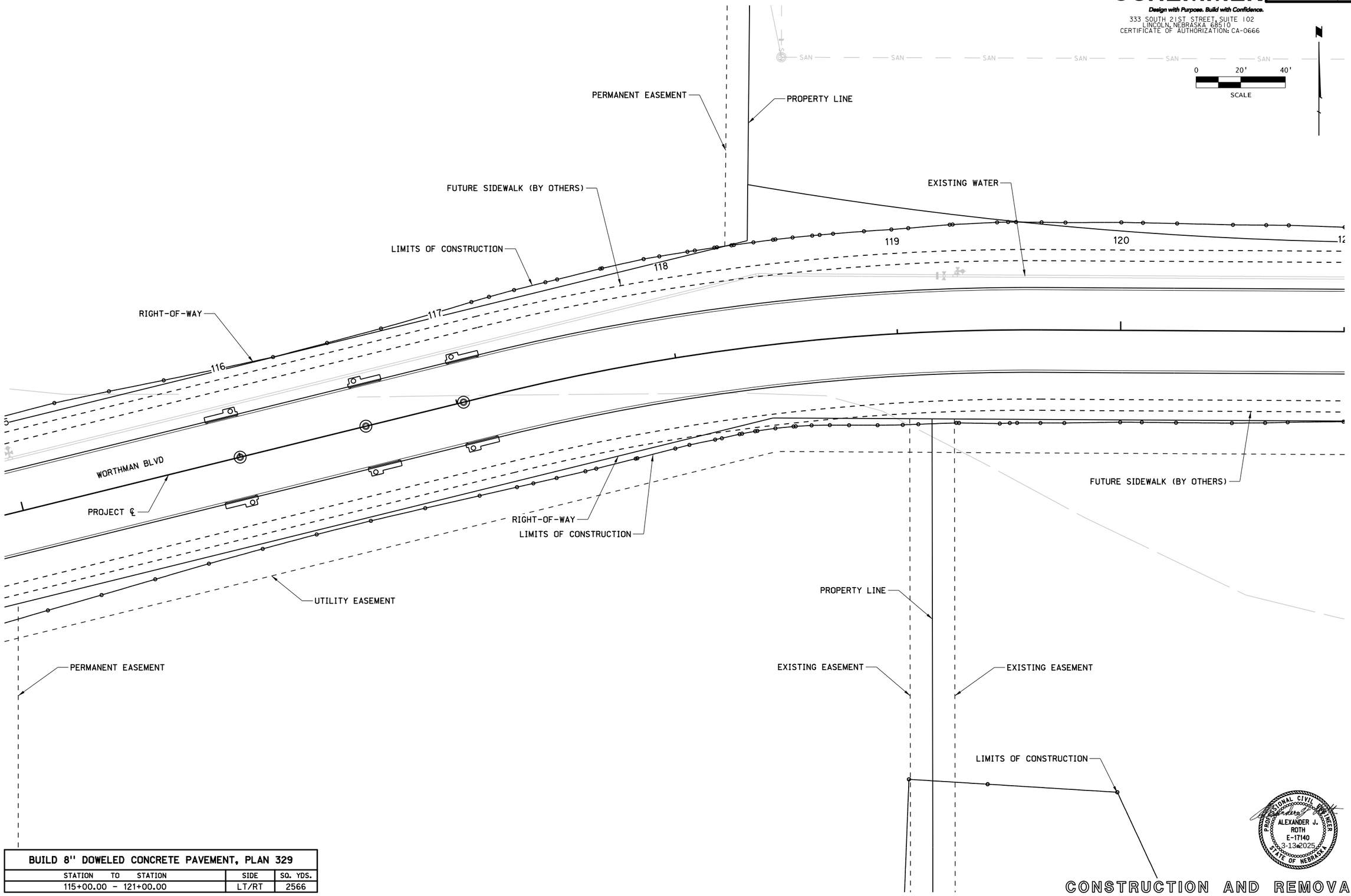
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3-13-2025
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CONSTRUCTION AND REMOVAL

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PROJECT NO.	SHEET NO.
09336.001-C	J18

ROADWAY DESIGN DIVISION.



BUILD 8" DOWELED CONCRETE PAVEMENT, PLAN 329		
STATION TO STATION	SIDE	SQ. YDS.
115+00.00 - 121+00.00	LT/RT	2566

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3-13-2025
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CONSTRUCTION AND REMOVAL

File: 09336001 Const & Rem03.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

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PROJECT NO.	SHEET NO.
09336.001-C	J19

ROADWAY DESIGN DIVISION.

ADJUST WATER VALVE BOX TO GRADE		
STATION	SIDE	EACH
124+54.44	31.04' LT.	1
124+57.33	34.48' LT.	1
124+60.14	31.49' LT.	1

SAWING PAVEMENT		
STATION TO STATION	SIDE	LIN. FT.
124+22.10 - 125+02.53	LT/RT	145
503+96.50	LT/RT	32
502+78.14 - 502+22.44	RT	137

REMOVE PAVEMENT		
STATION TO STATION	SIDE	SQ. YDS.
123+85.17 - 125+02.53	LT/RT	775

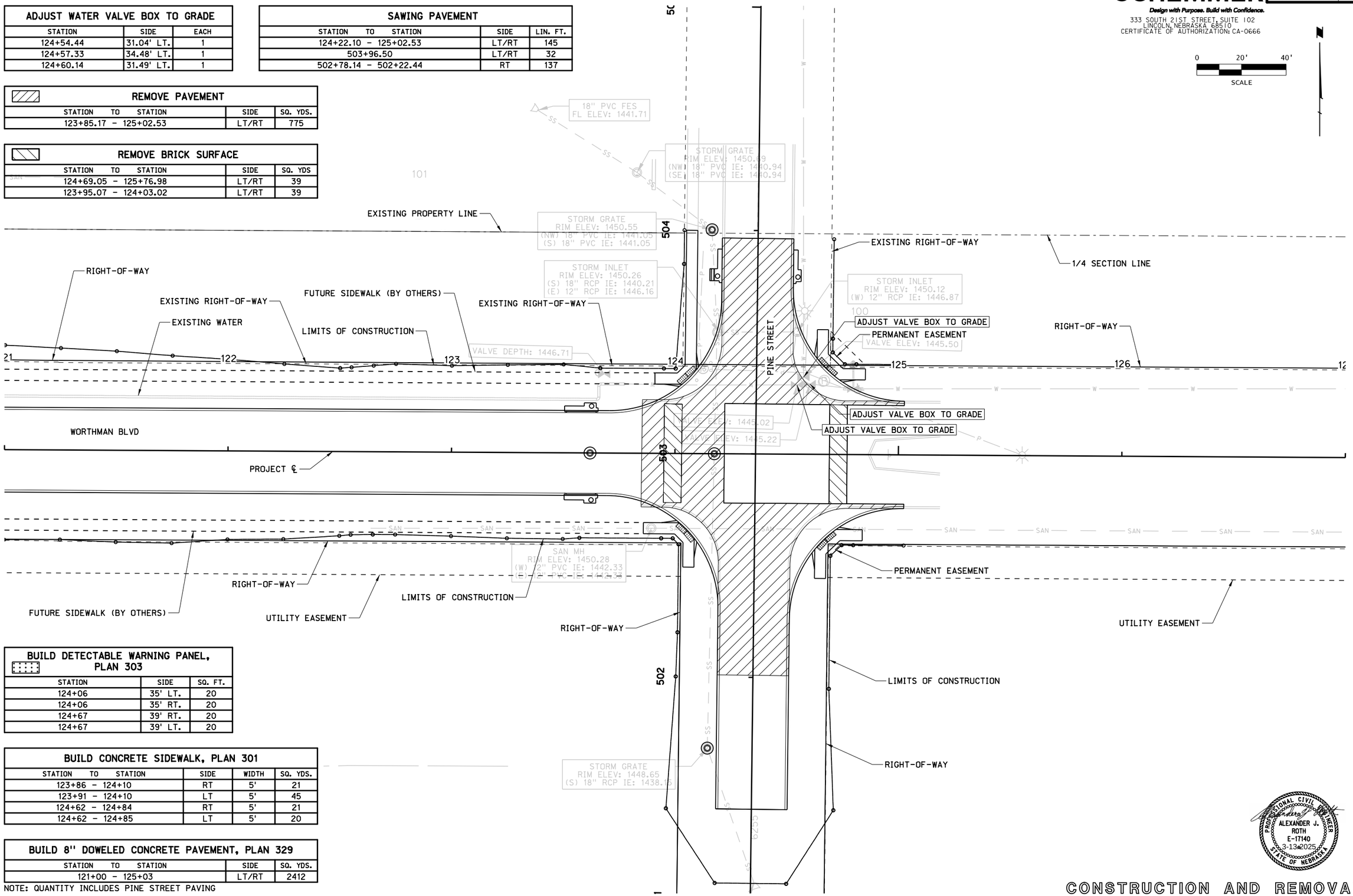
REMOVE BRICK SURFACE		
STATION TO STATION	SIDE	SQ. YDS
124+69.05 - 125+76.98	LT/RT	39
123+95.07 - 124+03.02	LT/RT	39

BUILD DETECTABLE WARNING PANEL, PLAN 303		
STATION	SIDE	SQ. FT.
124+06	35' LT.	20
124+06	35' RT.	20
124+67	39' RT.	20
124+67	39' LT.	20

BUILD CONCRETE SIDEWALK, PLAN 301			
STATION TO STATION	SIDE	WIDTH	SQ. YDS.
123+86 - 124+10	RT	5'	21
123+91 - 124+10	LT	5'	45
124+62 - 124+84	RT	5'	21
124+62 - 124+85	LT	5'	20

BUILD 8" DOWELED CONCRETE PAVEMENT, PLAN 329		
STATION TO STATION	SIDE	SQ. YDS.
121+00 - 125+03	LT/RT	2412

NOTE: QUANTITY INCLUDES PINE STREET PAVING



CONSTRUCTION AND REMOVAL

File: 09336001 Const & Rem04.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 12-MAR-2025 10:08 Computer: LINMEGANS

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PROJECT NO.	SHEET NO.
09336.001-C	J20

ROADWAY DESIGN DIVISION.

SITE INFORMATION

SPRING 2025		CSW-202509446:Seward-Worthman Boulevard Extension	
Estimated Start Date		NDEQ NOI Number	
WORTHMAN BOULEVARD EXTENSION			
Project Name		Address	
N/A	N/A	Seward	Seward
Subdivision Name	S&ID #	City	County
40.890372°	-97.107679°	Nebraska	68434
Latitude	Longitude	State	Zip Code
Total Site Area (Acres)	4.61	Estimated Permit Duration (Months)	12
Disturbed Area (Acres)	4.61		
Undisturbed Area (Acres)	0		

GENERAL NOTES

1. All OPERATORS/CONTRACTORS must confirm with the APPLICANT that any and all applicable governmental approvals have been received prior to the start of work.
2. BMP's may not be removed without INSPECTOR and applicable governmental approval.
3. The INSPECTOR will evaluate compliance with the applicable construction stormwater general permit commitments during Storm Event Inspections.
4. The INSPECTOR will perform inspections on projects regulated under the applicable construction stormwater general permit once every 14 days and within 24 hours or the next business day following a rain event of 0.25 inches of precipitation or greater; or every seven days.
5. The CONTRACTOR'S Environmental Representative is not required to accompany the Engineer on Storm Event Inspections.
6. Subject to storm events, inspections may begin on the first day of construction activities cause land disturbance and end on the date of project completion as evidenced by the completion date in the Construction Agreement.
7. The permitee is prohibited from discharging the following:

   Wastewater from the washout of concrete; except in approved concrete washout basin.

   Wastewater from the washout and cleanout of stucco, paint, form release oils, curing compounds, and other constructions materials;

   Fuels, oils, and other pullutants used in vehicle and equipment operation and maintenance; and

   Soaps or solvents used in vehicle equipments washing.

8. The permitee is authorized for the following non-stormwater discharges:
   a. Discharges from firefighting activities
   b. Fire hydrant flushings
   c. Water used to wash vehicles where detergents are not used
   d. Water used to control dust
   e. Potable water including uncontaminated water line flushings
   f. Routine external building wash down that does not use detergents
   g. Pavement wash water where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been recovered) and where detergents are not used
   h. Uncontaminated air conditioning or compressor condensate
   i. Uncontaminated groundwater or spring water
   j. Foundation or footing drains where flows are not contaminated with process materials such as solvent
   k. Landscape irrigation

MAINTENANCE SCHEDULE

The following Maintenance Schedule has been provided. The INSPECTOR must perform the inspections. The OPERATOR/CONTRACTOR must perform all needed maintenance. Furthermore, all erosion control feature requiring maintenance may not be listed below. The OPERATOR/CONTRACTOR and INSPECTOR must perform their respective duties on all BMP's that are not listed below as well.

1. Construction Entrance – The entrance shall be maintained in a condition which will prevent tracking or flow of sediment onto public rights-of-way. This may require periodic top dressing with additional stone or the washing and reworking of existing stone as conditions demand and repair and/or cleanout of any structures used to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately. The use of water trucks to remove materials dropped, washed, or tracked onto roadways will not be permitted under any circumstances.

2. Silt Fence – The maintenance measures are as follows: (2.1) silt fences shall be inspected immediately after each rainfall and at least daily during prolonged rainfall, any required repairs shall be made immediately; (2.2) close attention shall be paid to the repair of damaged silt fence resulting from end runs and undercutting; (2.3) should the fabric on a silt fence decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly; (2.4) sediment deposits must be removed when the level of deposition reaches approximately one-half the height of the barrier; and (2.5) any sediment deposits remaining in place after the silt fence is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

3. Storm Drain Inlet Protection – The maintenance measures are as follows: (3.1) structures shall be inspected after each rain and repairs made as necessary and (3.2) structures shall be removed and the area stabilized when the remaining drainage area has been properly stabilized.

4. Temporary Diversion Dike – The measure shall be inspected after every storm and repairs made to the dike, flow channel, outlet or sediment trapping facility, as necessary. Once every two weeks, whether a storm event has occurred or not, the measure shall be inspected and repairs made if needed. Damages caused by construction traffic or other activity must be repaired before the end of each working day.

5. Temporary Fill Diversion – Since the practice is temporary and under most situations will be covered the next working day. The maintenance required should be low. If the practice is to remain in use for more than one day, an inspection shall be made at the end of each work day and repairs made to the measure if needed. The OPERATOR/CONTRACTOR should avoid the placement of any material over the structure while it is in use. Construction traffic should not be permitted to cross the diversion.

6. Temporary Sediment Trap – The maintenance measures are as follows: (6.1) sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half the design volume of the wet storage, sediment removal from the basin shall be deposited in a suitable area and in such a manner that it will not erode and cause sedimentation problems; (6.2) filter stone shall be regularly checked to ensure that filtration performance is maintained, stone choked with sediment shall be removed and cleaned or replaced; and (6.3) the structure should be checked regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment, the height of the stone outlet should be checked to ensure that its center is at least 1 foot below the top of the embankment.

7. Temporary Sediment Basin – The basin embankment should be checked regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment. The emergency spillway should be checked regularly to ensure that its lining is well established and erosion-resistant. The basin should be checked after each runoff producing rainfall for sediment cleanout and trash removal. When the sediment reaches the cleanout level, it shall be removed and properly disposed of.

8. Temporary Seeding – Areas which fail to establish vegetative cover adequate to prevent rill erosion will be re-seeded as soon as such areas are identified. Control weeds by mowing.

9. Permanent Seeding – The maintenance measures are as follows: (9.1) in general, a stand of vegetation cannot be determined to be fully established until it has been maintained for one full year after planning; (9.2) new seedlings shall be supplied with adequate moisture, supply water as needed, especially late in the season, in abnormally hot or dry conditions, or on adverse sites, water applications shall be controlled to prevent excessive runoff; (9.3) inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings within the planting season, if possible; [9.3.a] if stand is inadequate for erosion control, over seed and fertilize using half of the rates originally specified; [9.3.b] if stand is 60% damaged, re-establish following seedbed and seeding recommendations; [9.3.c] if stand has less than 40% cover, re-evaluate choice of plant materials and quantities of lime and fertilizer, the soil must be tested to determine if acidity or nutrient imbalances are responsible, re-establish the stand following seedbed and seeding recommendations.

10. Mulching – All mulches and soil coverings should be inspected periodically (particularly after rainstorms) to check for erosion. Where erosion is observed in mulched areas, additional mulch should be applied. Nets and mats should be inspected after rainstorms for dislocation or failure. If washouts or breakage occur, reinstall netting or matting as necessary after repairing damage to the slope or ditch. Inspections should take place until grasses are firmly established. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface; repair as needed.

11. Soil Stabilization Blankets & Matting – All soil stabilization blankets and matting should be inspected periodically following installation, particularly after rainstorms to check for erosion and undermining. Any dislocation or failure should be repaired immediately. If washouts or breakage occurs, reinstall the material after repairing damage to the slope or ditch. Continue to monitor these areas until which time they become permanently stabilized; at that time an annual inspections should be adequate.

12. Street Cleaning / Sweeping – The maintenance measures are as follows: (12.1) evaluate access points daily for sediment tracking; (12.2) when tracked or spilled sediment is found on paved surfaces, it will be removed daily, during times of heavy track-out, such as during rains, cleaning may be done several times throughout the day; (12.3) unknown spills or objects will not be mixed with the sediment; and (12.4) if sediment is mixed with other pollutants, it will be disposed of properly at an authorized landfill.

CONSTRUCTION ACTIVITIES & SCHEDULING

ACTIVITY	SCHEDULE
Install all BMP's needed and associated with the Grading Phase such as stabilized construction entrances, silt basins, riser pipes, outlet pipes, silt traps, silt fence, diversions, terraces, and etcetera.	Prior to any stripping of existing vegetation or grading.
Proceed with stripping of existing vegetation and grading in accordance with the grading plan, while disturbing no more than necessary.	After Installing all BMP's needed and associated with the Grading Phase. Furthermore, INSPECTOR approval must be obtained before the start of any stripping of existing vegetation or grading.
Proceed with infrastructure installation.	Infrastructure installation must occur prior to any lot development.
Implement the installation of Temporary Seeding, Permanent Seeding, and/or Mulching.	Stabilization measures must be initiated as soon as possible in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased
Implement the installation all BMP's needed and associated with the Building Phase.Building	Building Phase BMP's must be installed concurrently with lot development.
Proceed with removal of BMP's.	BMP's may not be removed until each impacted drainage basin has been fully developed. Full development shall mean installation of pavement, buildings, and utilities, landscaping, and fully established permanent seeding. Furthermore, INSPECTOR approval must be obtained before the removal of any BMP's.

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3-13-2025
STATE OF NEBRASKA

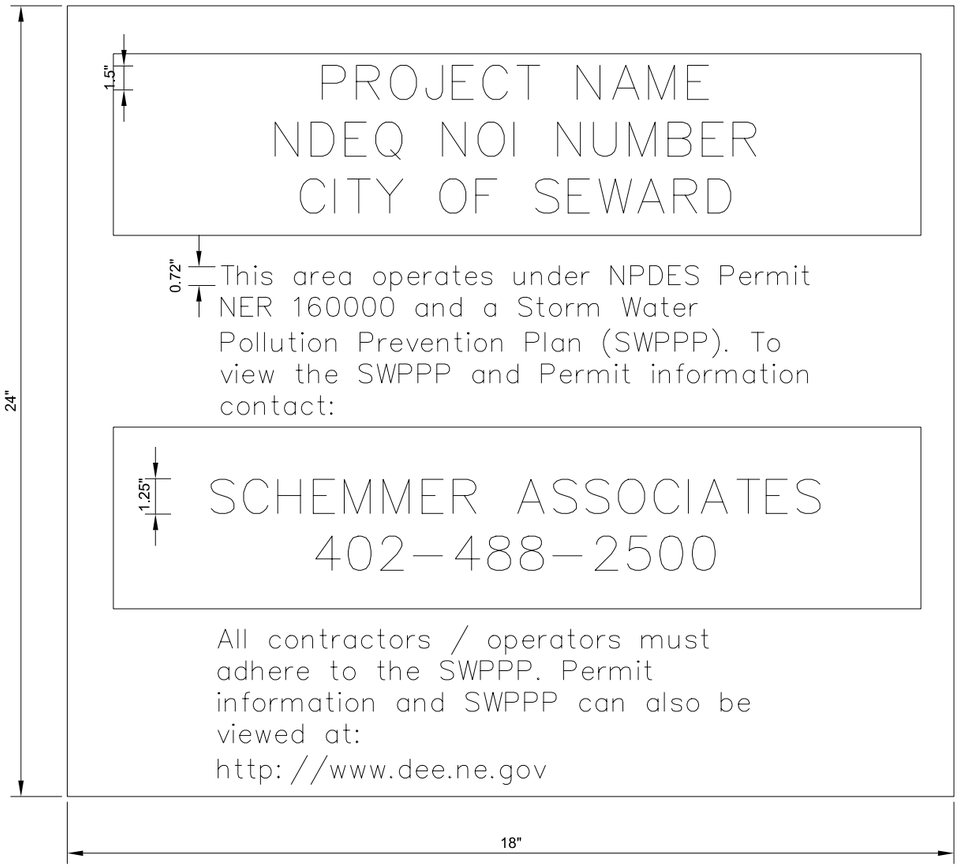
STORM WATER POLLUTION PREVENTION PLAN

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:28
Computer: LINMEGANS

File: 09336001_SWPP.dgn
Scale: 1:200

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J21



SWPPP NOTIFICATION SIGN

1. *POST AT ENTRANCES TO CONSTRUCTION PROJECTS.*
2. *PROVIDE STURDY BACKING & POST FOR SIGNS.*



STORM WATER POLLUTION PREVENTION PLAN

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
Date: 12-MAR-2025 10:08 Computer: LINMEGANS

File: 09336001_SWPP.dgn
Scale: 1:200

PROJECT NO.	SHEET NO.
09336.001-C	J22

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

0 20' 40'
SCALE

1D — BUILD EROSION CONTROL-CLASS 1D, PLAN 501

STATION	TO	STATION	SIDE	DESCRIPTION	WIDTH	SQ. YDS.
104+99	-	109+00	LT./RT.	IN ALL DISTURBED AREAS	VARIES	1,841

—x— BUILD FABRIC SILT FENCE-LOW POROSITY, PLAN 502

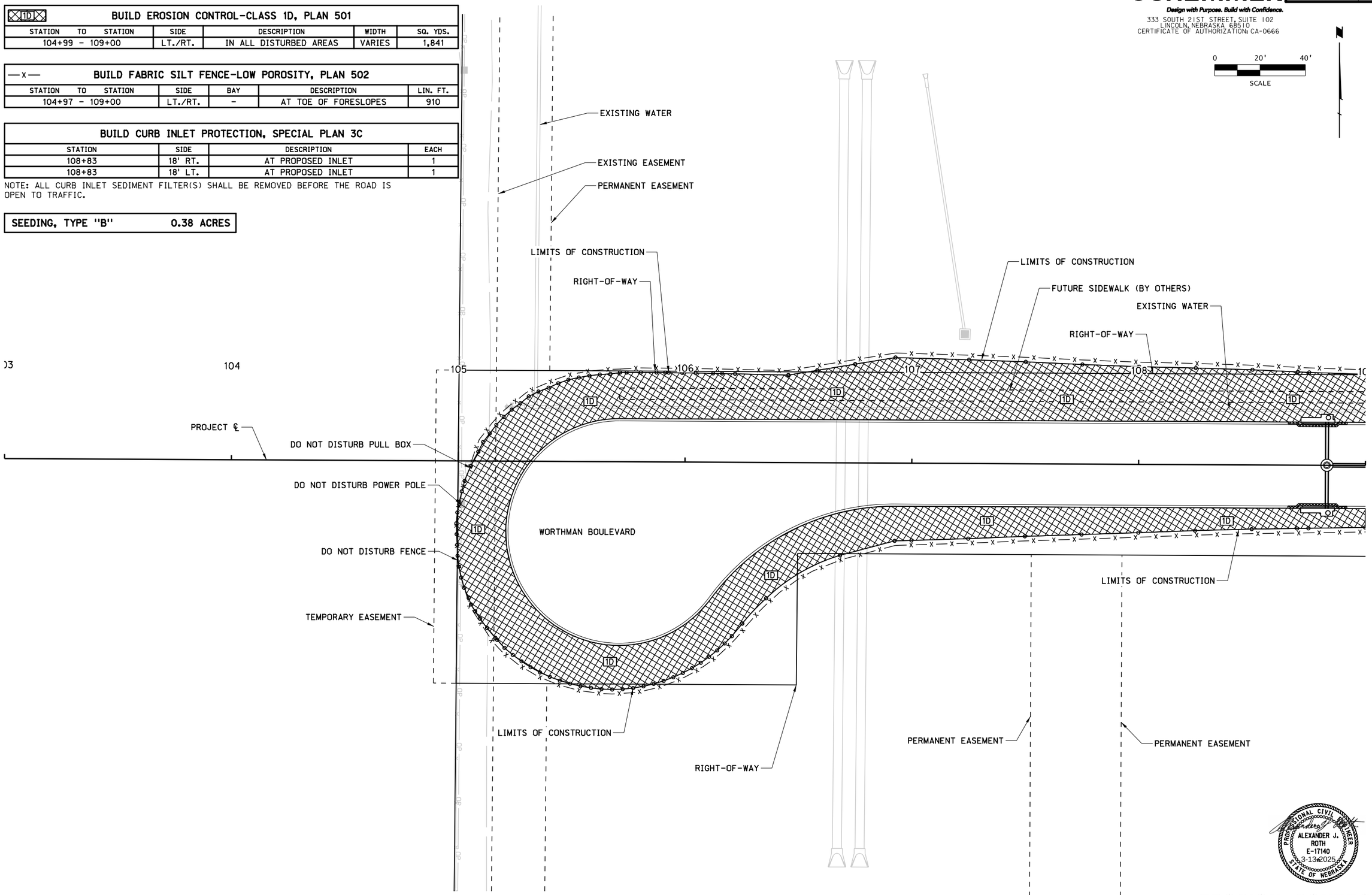
STATION	TO	STATION	SIDE	BAY	DESCRIPTION	LIN. FT.
104+97	-	109+00	LT./RT.	-	AT TOE OF FORESLOPES	910

BUILD CURB INLET PROTECTION, SPECIAL PLAN 3C

STATION	SIDE	DESCRIPTION	EACH
108+83	18' RT.	AT PROPOSED INLET	1
108+83	18' LT.	AT PROPOSED INLET	1

NOTE: ALL CURB INLET SEDIMENT FILTER(S) SHALL BE REMOVED BEFORE THE ROAD IS OPEN TO TRAFFIC.

SEEDING, TYPE "B" 0.38 ACRES



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

EROSION CONTROL

File: 09336001 Erosion Ctrl01.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 12-MAR-2025 10:08 Computer: LINMEGANS

1D	BUILD EROSION CONTROL-CLASS 1D, PLAN 501				
STATION TO STATION		SIDE	DESCRIPTION	WIDTH	SQ. YDS.
109+00 - 115+00		LT./RT.	IN ALL DISTURBED AREAS	VARIES	2,582

BUILD ROCK RIPRAP			
STATION	SIDE	TYPE	TONS
114+14	RT.	B	56

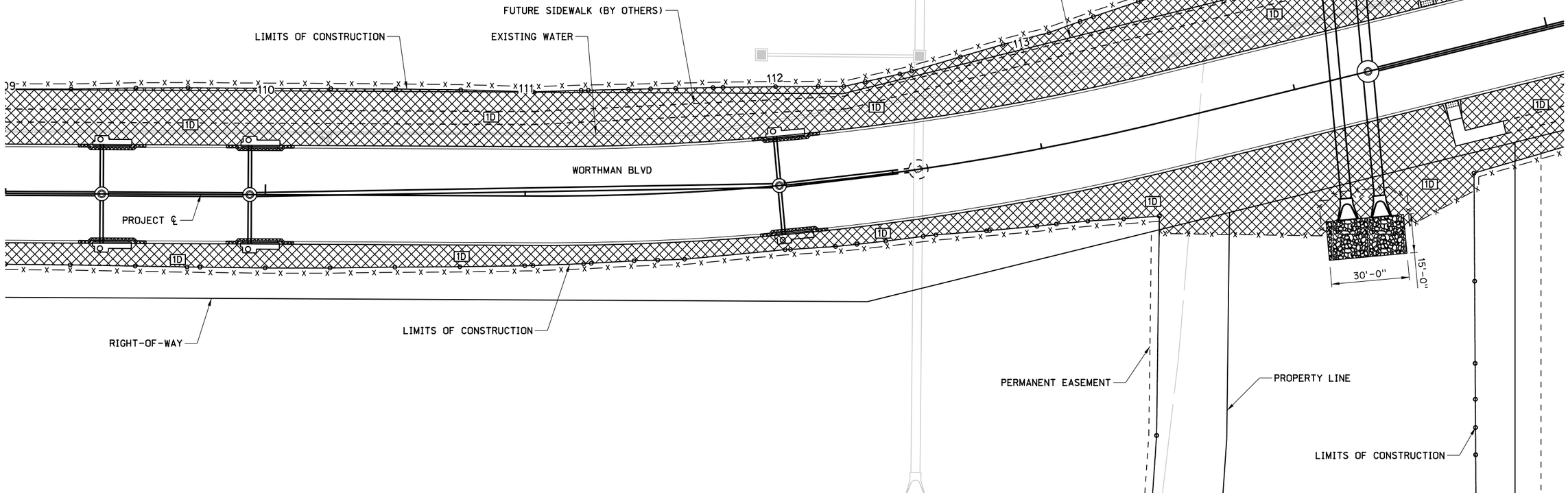
—x— BUILD FABRIC SILT FENCE-LOW POROSITY, PLAN 502				
STATION TO STATION	SIDE	BAY	DESCRIPTION	LIN. FT.
106+00 - 112+00	LT./RT.	-	AT TOE OF FORESLOPES	1,272

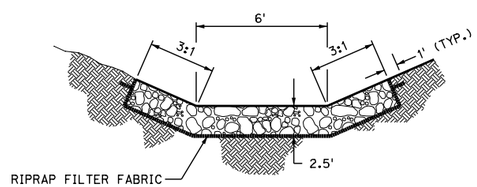
BUILD RIPRAP FILTER FABRIC			
STATION TO STATION	SIDE	WIDTH	SQ. YDS.
114+00 - 114+29	RT.	15'	93

BUILD CURB INLET PROTECTION, SPECIAL PLAN 3C			
STATION	SIDE	DESCRIPTION	EACH
109+37	18' LT.	AT PROPOSED INLET	1
109+37	18' RT.	AT PROPOSED INLET	1
109+94	18' LT.	AT PROPOSED INLET	1
109+94	18' RT.	AT PROPOSED INLET	1
111+98	18' RT.	AT PROPOSED INLET	1
111+98	18' LT.	AT PROPOSED INLET	1

NOTE: ALL CURB INLET SEDIMENT FILTER(S) SHALL BE REMOVED BEFORE THE ROAD IS OPEN TO TRAFFIC.

SEEDING, TYPE "B" 0.53 ACRES





ROCK RIPRAP, TYPE B INSTALLATION DETAIL

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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J23

0 20' 40'
SCALE

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

EROSION CONTROL

File: 09336001 Erosion Ctr102.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 12-MAR-2025 10:08 Computer: LINMEGANS

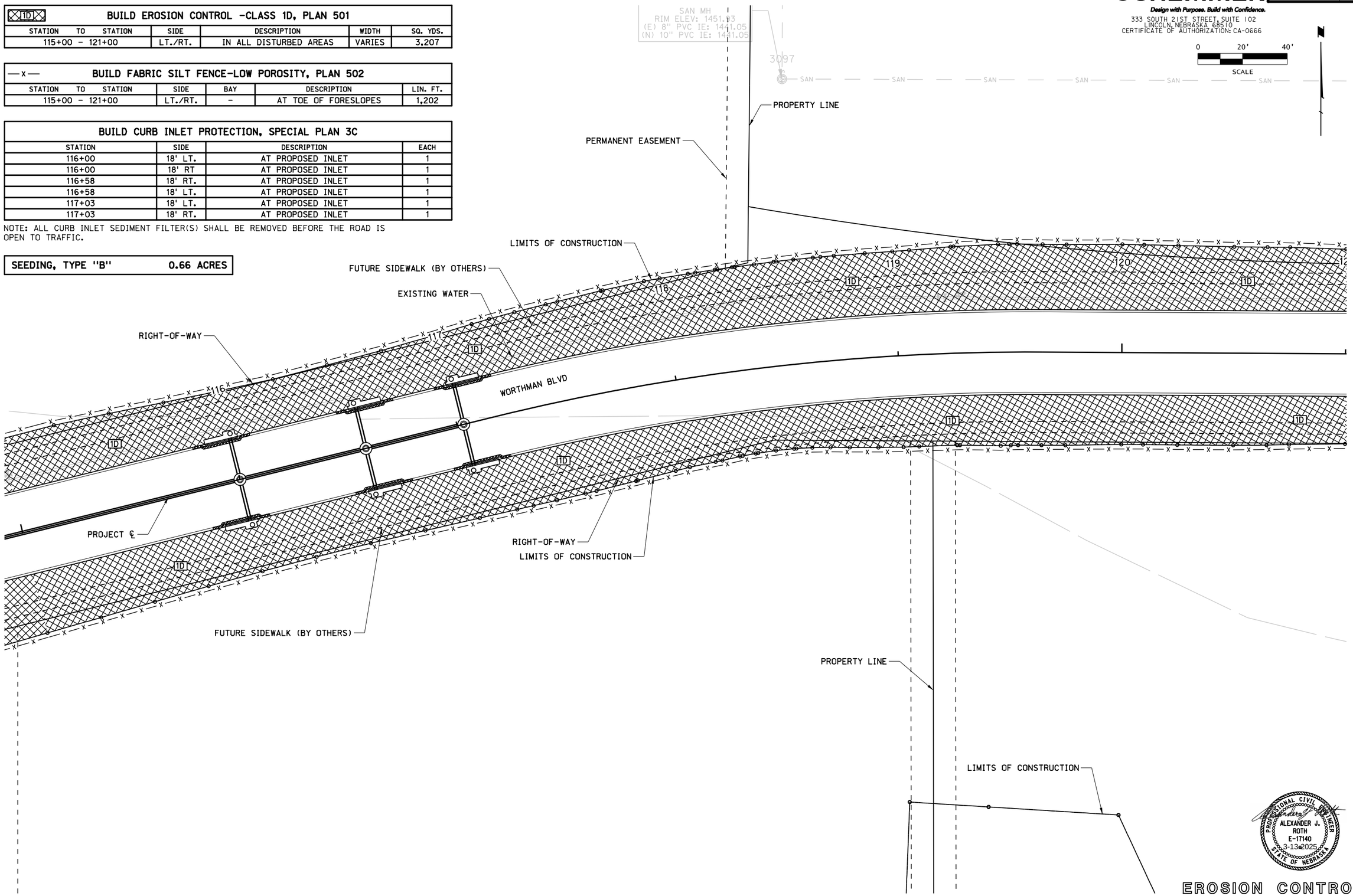
1D	BUILD EROSION CONTROL -CLASS 1D, PLAN 501				
STATION	TO STATION	SIDE	DESCRIPTION	WIDTH	SQ. YDS.
115+00	– 121+00	LT./RT.	IN ALL DISTURBED AREAS	VARIES	3,207

—x—	BUILD FABRIC SILT FENCE-LOW POROSITY, PLAN 502				
STATION	TO STATION	SIDE	BAY	DESCRIPTION	LIN. FT.
115+00	– 121+00	LT./RT.	–	AT TOE OF FORESLOPES	1,202

BUILD CURB INLET PROTECTION, SPECIAL PLAN 3C			
STATION	SIDE	DESCRIPTION	EACH
116+00	18' LT.	AT PROPOSED INLET	1
116+00	18' RT	AT PROPOSED INLET	1
116+58	18' RT.	AT PROPOSED INLET	1
116+58	18' LT.	AT PROPOSED INLET	1
117+03	18' LT.	AT PROPOSED INLET	1
117+03	18' RT.	AT PROPOSED INLET	1

NOTE: ALL CURB INLET SEDIMENT FILTER(S) SHALL BE REMOVED BEFORE THE ROAD IS OPEN TO TRAFFIC.

SEEDING, TYPE "B"	0.66 ACRES



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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J24

0 20' 40'
SCALE

ALEXANDER J. ROTH
E-17140
3-13-2025
PROFESSIONAL CIVIL ENGINEER
STATE OF NEBRASKA

EROSION CONTROL

File: 09336001 Erosion Ctrl03.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

PROJECT NO.	SHEET NO.
09336.001-C	J25

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

0 20' 40'
SCALE

ROADWAY DESIGN DIVISION.

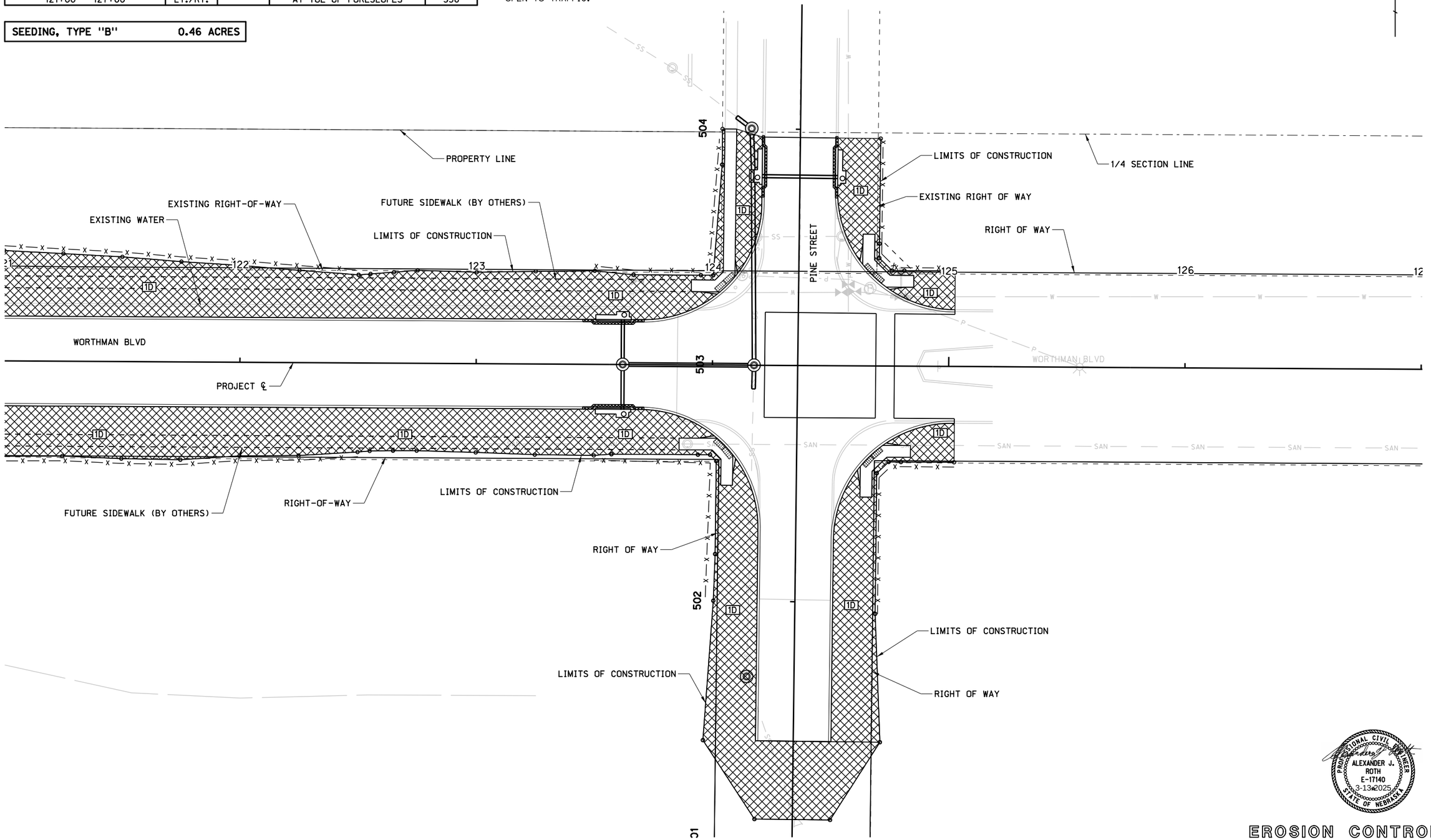
1D	BUILD EROSION CONTROL-CLASS 1D, PLAN 501				
STATION TO STATION	SIDE	DESCRIPTION	WIDTH	SQ. YDS.
121+00 - 127+00	LT./RT.	IN ALL DISTURBED AREAS	VARIES	2,232

—x—	BUILD FABRIC SILT FENCE-LOW POROSITY, PLAN 502				
STATION TO STATION	SIDE	BAY	DESCRIPTION	LIN. FT.
121+00 - 127+00	LT./RT.	-	AT TOE OF FORESLOPES	536

SEEDING, TYPE "B"	0.46 ACRES

BUILD CURB INLET PROTECTION, SPECIAL PLAN 3C			
STATION	SIDE	DESCRIPTION	EACH
123+62	18' LT.	AT PROPOSED INLET	1
123+62	18' RT.	AT PROPOSED INLET	1
503+80	15' LT.	AT PROPOSED INLET	1
503+80	15' LT.	AT PROPOSED INLET	1

NOTE: ALL CURB INLET SEDIMENT FILTER(S) SHALL BE REMOVED BEFORE THE ROAD IS OPEN TO TRAFFIC.



ALEXANDER J. ROTH
E-17140
3-13-2025
PROFESSIONAL CIVIL ENGINEER
STATE OF NEBRASKA

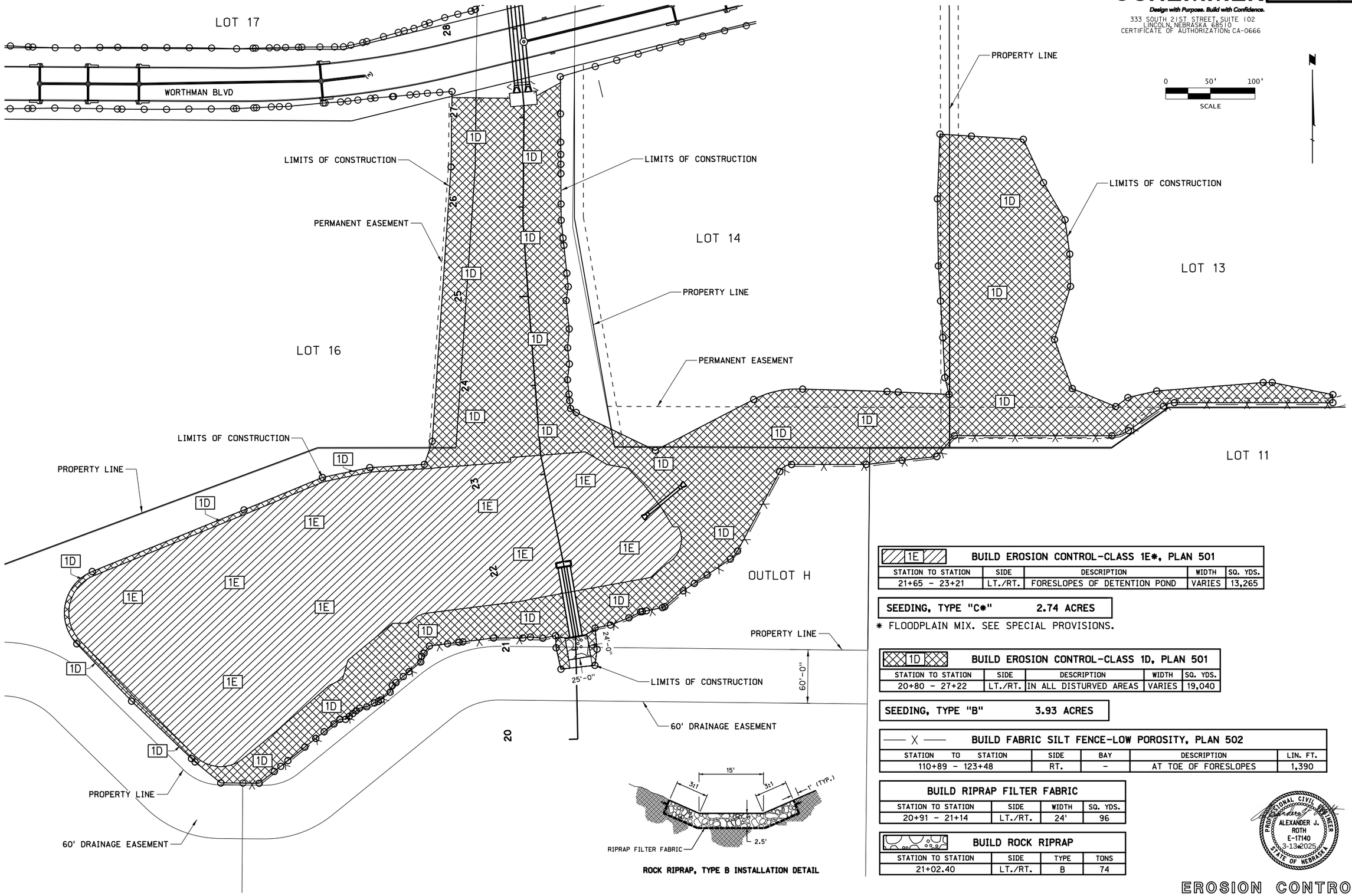
EROSION CONTROL

File: 09336001 Erosion Ctrl04.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

SCHEMMER
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J26

ROADWAY DESIGN DIVISION.



1E	BUILD EROSION CONTROL-CLASS 1E*, PLAN 501			
STATION TO STATION	SIDE	DESCRIPTION	WIDTH	SQ. YDS.
21+65 - 23+21	LT./RT.	FORESLOPES OF DETENTION POND	VARIES	13,265

SEEDING, TYPE "C*" 2.74 ACRES

* FLOODPLAIN MIX. SEE SPECIAL PROVISIONS.

1D	BUILD EROSION CONTROL-CLASS 1D, PLAN 501			
STATION TO STATION	SIDE	DESCRIPTION	WIDTH	SQ. YDS.
20+80 - 27+22	LT./RT.	IN ALL DISTURVED AREAS	VARIES	19,040

SEEDING, TYPE "B" 3.93 ACRES

X	BUILD FABRIC SILT FENCE-LOW POROSITY, PLAN 502				
STATION TO STATION		SIDE	BAY	DESCRIPTION	LIN. FT.
110+89 - 123+48		RT.	-	AT TOE OF FORESLOPES	1,390

BUILD RIPRAP FILTER FABRIC			
STATION TO STATION	SIDE	WIDTH	SQ. YDS.
20+91 - 21+14	LT./RT.	24'	96

BUILD ROCK RIPRAP			
STATION TO STATION	SIDE	TYPE	TONS
21+02.40	LT./RT.	B	74

ROCK RIPRAP, TYPE B INSTALLATION DETAIL

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

EROSION CONTROL

File: 09336001 Erosion Ctrl05.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
Scale: 1:100
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

ROADWAY DESIGN DIVISION.

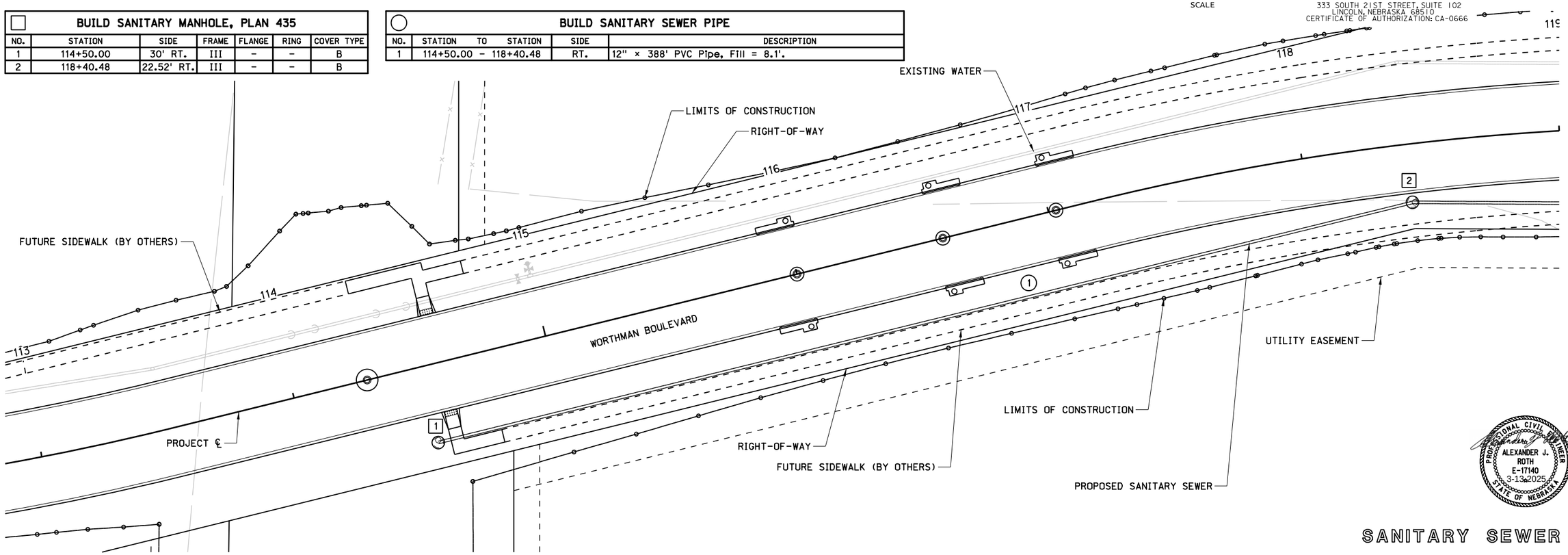
BUILD SANITARY MANHOLE, PLAN 435						
NO.	STATION	SIDE	FRAME	FLANGE	RING	COVER TYPE
1	114+50.00	30' RT.	III	-	-	B
2	118+40.48	22.52' RT.	III	-	-	B

BUILD SANITARY SEWER PIPE				
NO.	STATION TO STATION	SIDE	DESCRIPTION
1	114+50.00 - 118+40.48	RT.	12" x 388' PVC Pipe, Fill = 8.1'.

0 20' 40'
SCALE

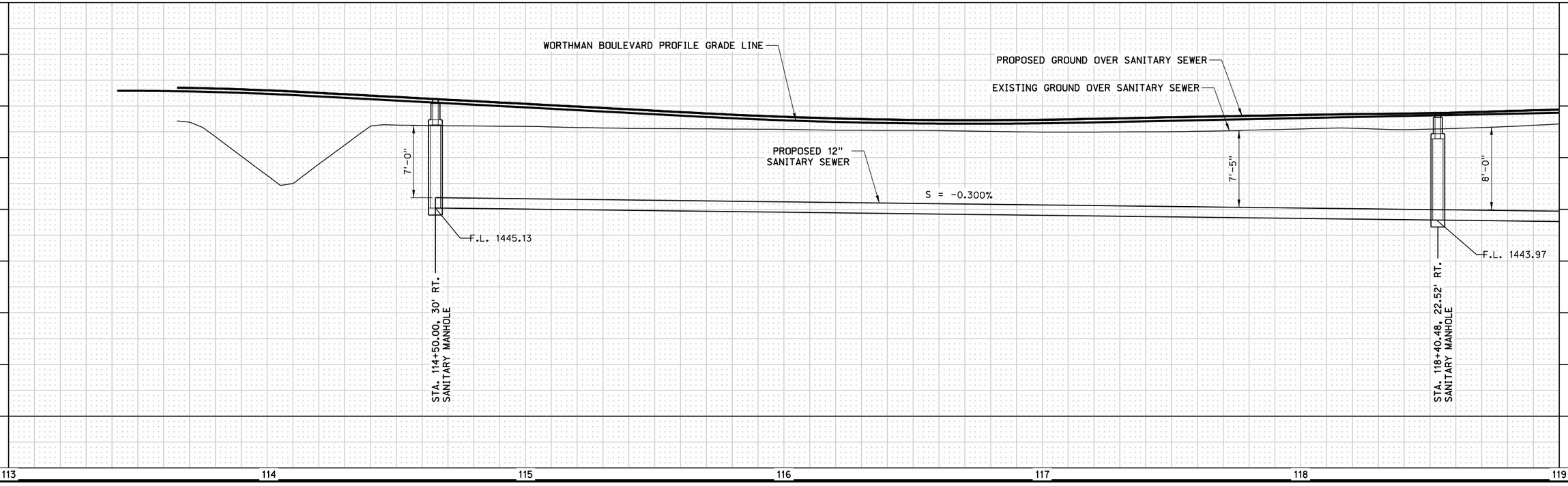
SCHEMMER
Design with Purpose. Build with Confidence.
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	K1
C.N.	



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

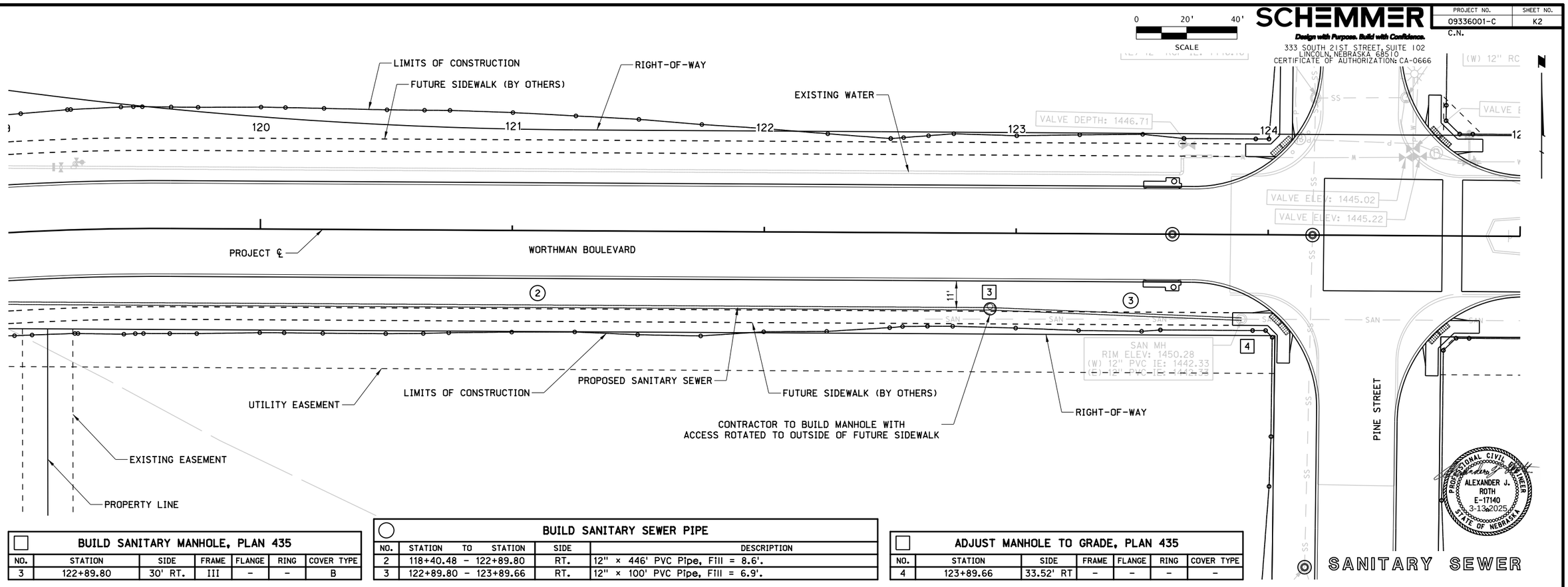
SANITARY SEWER



PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINNEGANS

File: 09336001 PSan01.dgn
Scale: 1:40

ROADWAY DESIGN DIVISION.



0 20' 40'
SCALE

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	K2
C.N.	

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

BUILD SANITARY MANHOLE, PLAN 435

NO.	STATION	SIDE	FRAME	FLANGE	RING	COVER TYPE
3	122+89.80	30' RT.	III	–	–	B

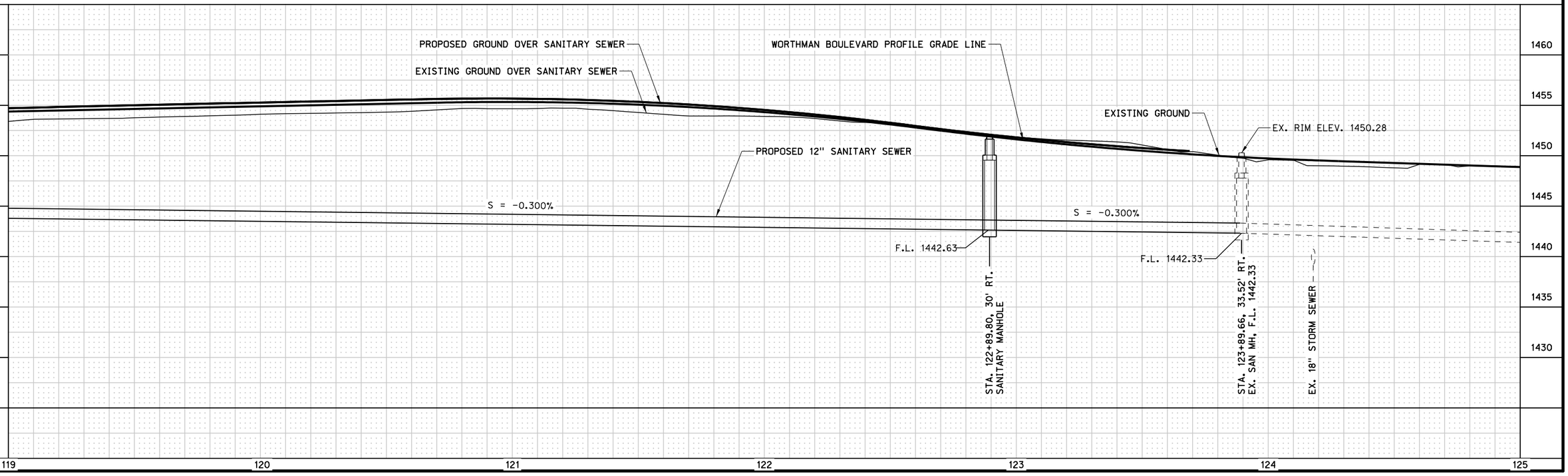
BUILD SANITARY SEWER PIPE

NO.	STATION TO STATION	SIDE	DESCRIPTION
2	118+40.48 – 122+89.80	RT.	12" x 446' PVC Pipe, Fill = 8.6'.
3	122+89.80 – 123+89.66	RT.	12" x 100' PVC Pipe, Fill = 6.9'.

ADJUST MANHOLE TO GRADE, PLAN 435

NO.	STATION	SIDE	FRAME	FLANGE	RING	COVER TYPE
4	123+89.66	33.52' RT	–	–	–	–

SANITARY SEWER



PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PSan02.dgn
Scale: 1:40

ROADWAY DESIGN DIVISION.

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	K3

C.N.

0 20' 40'
SCALE

P IE: 1446.87

ELEV: 1445.50

125 126 127 128 129 130

RIGHT-OF-WAY

PROJECT ℄

WORTHMAN BOULEVARD

SAN MH
RIM ELEV: 1447.56
(W) 12" PVC IE: 1439.36
(E) 12" PVC IE: 1439.36

RIGHT-OF-WAY

EXISTING 12" SANITARY SEWER

SANITARY SEWER

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

1460
1455
1450
1445
1440
1435
1430

WORTHMAN BOULEVARD PROFILE GRADE LINE

EXISTING GROUND OVER SANITARY SEWER

-0.8269% (EX SLOPE)

F.L. 1439.36

EXISTING 12" SANITARY SEWER

STA. 127+48.82
EX. SAN MH
F.L. 1439.36

125 126 127 128 129 130

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 Psan03.dgn
Scale: 1:40

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	L1

C.N.

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Computer: LINMEGANS
Date: 12-MAR-2025 10:08

File: 09336001 PP01.dgn
Scale: 1:40

0 20' 40'
SCALE

PERMANENT EASEMENT
EXISTING EASEMENT
PROPERTY LINE
FUTURE SIDEWALK (BY OTHERS)
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
EXISTING WATER
WORTHMAN BLVD
PROJECT ℄
TEMPORARY EASEMENT
SECTION LINE
LIMITS OF CONSTRUCTION
UTILITY EASEMENT
PERMANENT EASEMENT
RIGHT-OF-WAY

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PLAN AND PROFILE

PROPOSED GRADE
1,458.43
-1.0000 %
-1.0000 %
End of Culdesac
STA 109+20.00
EL = 1,454.50
K = 67
L = 100'
EXISTING GROUND
15" STORM DRAIN
F.L. 1451.02
EX. 48" STORM DRAIN
F.L. 1445.63
EX. 48" STORM DRAIN
F.L. 1445.63

1470 1465 1460 1455 1450 1445 1440

1,454.26 1,454.12 1,458.30 1,453.99 1,458.10 1,453.91 1,457.90 1,453.90 1,457.70 1,453.90 1,457.50 1,453.91 1,457.30 1,453.92 1,457.10 1,453.94 1,456.90 1,453.93 1,456.70 1,453.92 1,456.50 1,453.92 1,456.30 1,453.89 1,456.10 1,453.85 1,455.90 1,453.82 1,455.70 1,453.81 1,455.50 1,453.81 1,455.30 1,453.77 1,455.10 1,453.73 1,454.91 1,453.69

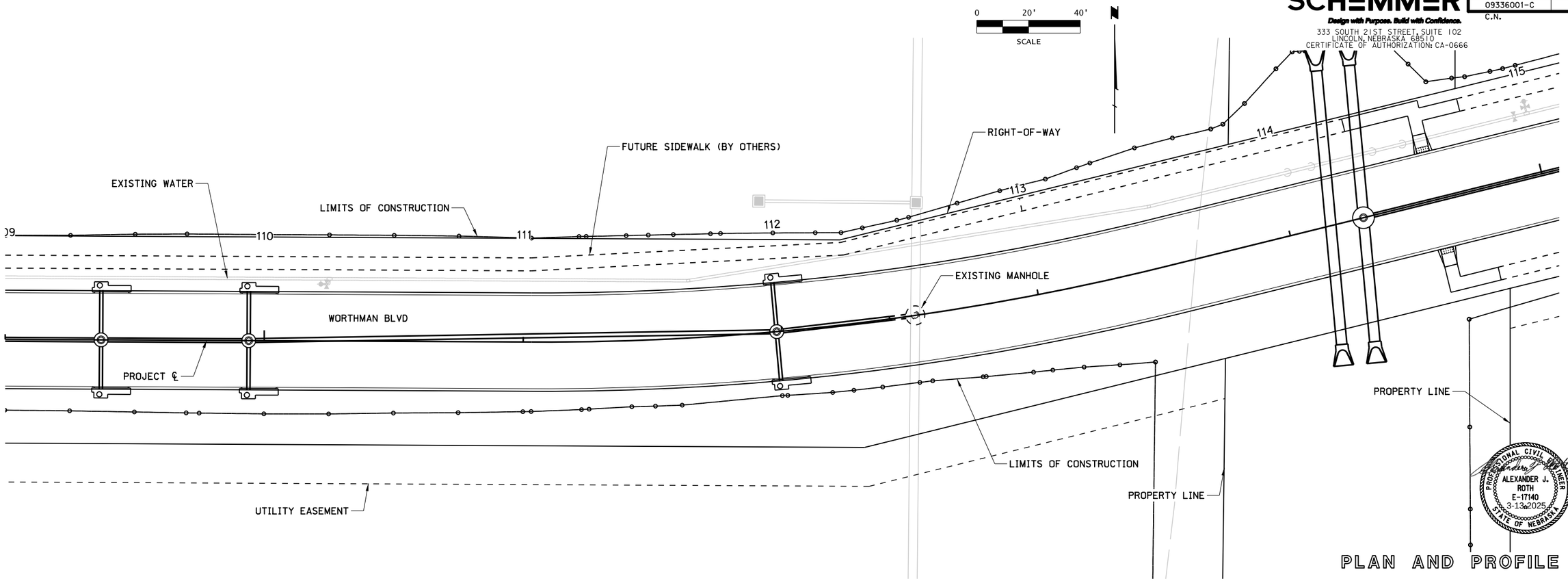
103 104 105 106 107 108 109

ROADWAY DESIGN DIVISION.

SCHEMMER
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	L2
C.N.	

0 20' 40'
SCALE

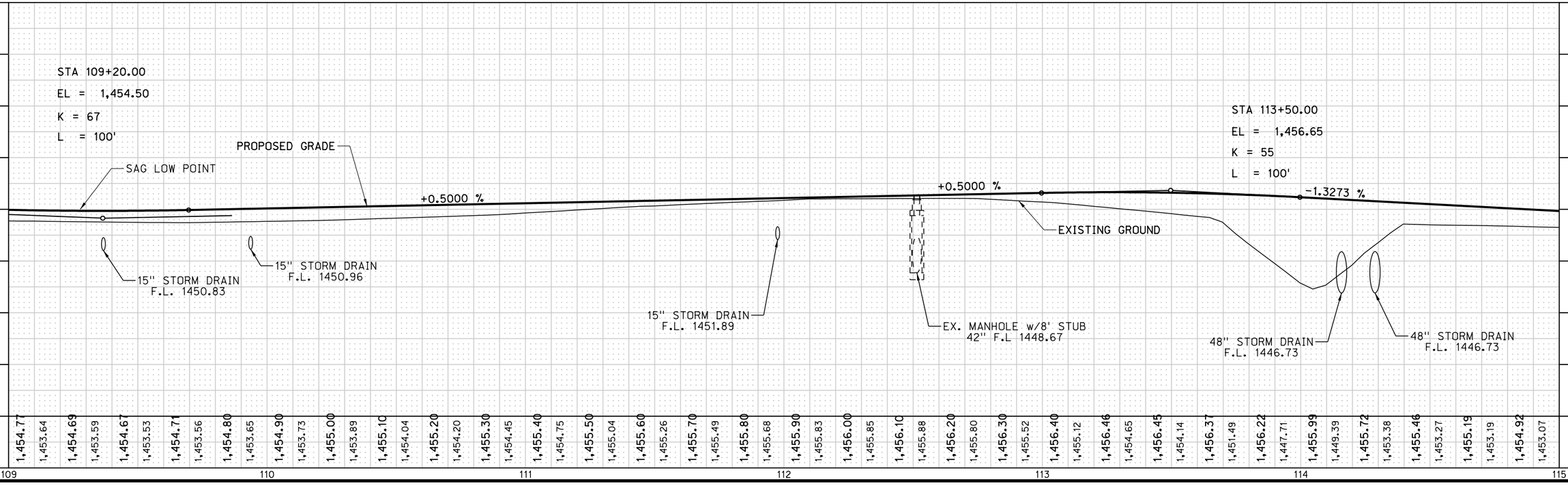


PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PLAN AND PROFILE

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PP02.dgn
Scale: 1:40



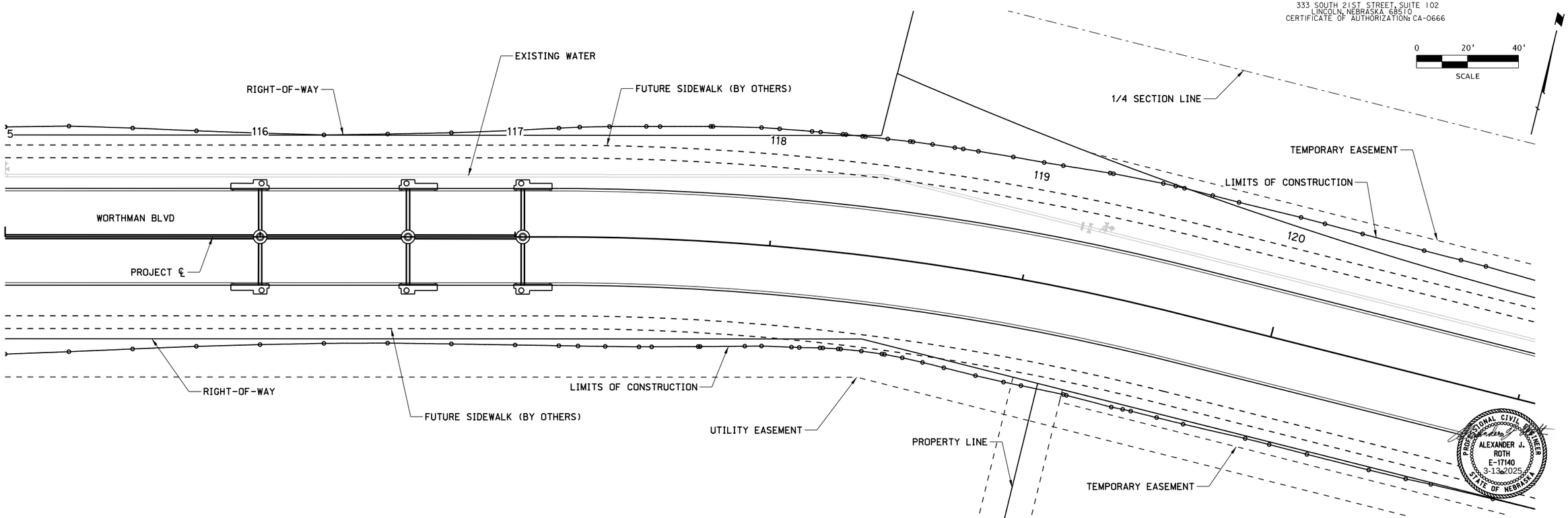
ROADWAY DESIGN DIVISION.

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	L3

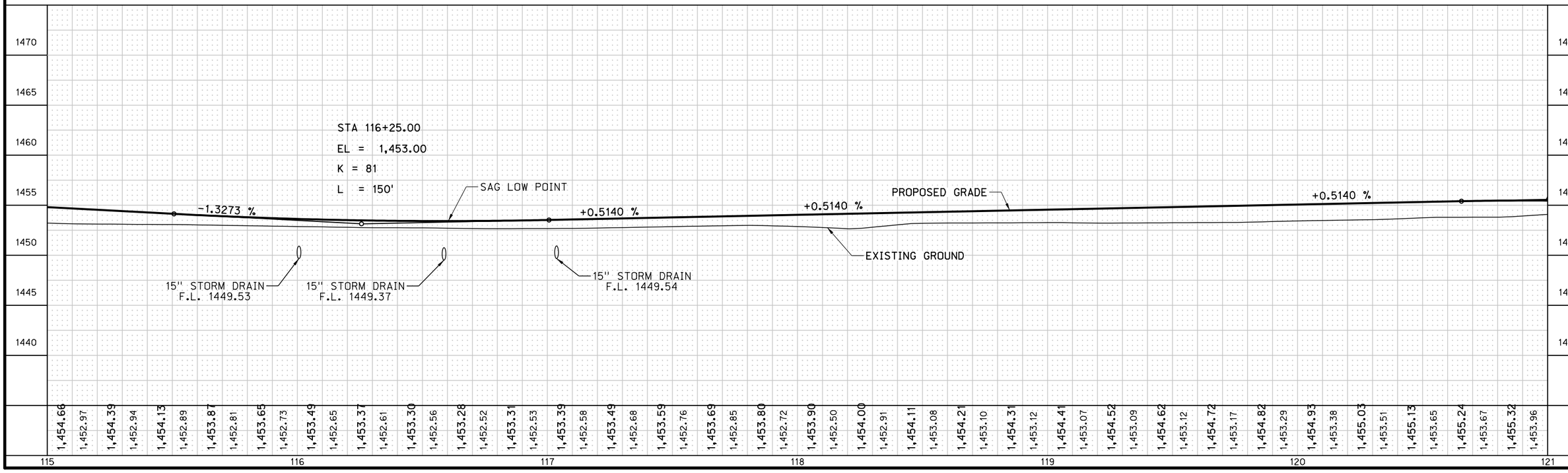
C.N.

0 20' 40'
SCALE



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PLAN AND PROFILE



PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PP03.dgn
Scale: 1:40

ROADWAY DESIGN DIVISION.

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	L4

C.N.

0 20' 40'
SCALE

LIMITS OF CONSTRUCTION
FUTURE SIDEWALK (BY OTHERS)
EXISTING WATER
EXISTING RIGHT-OF-WAY
TEMPORARY EASEMENT
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
STORM INLET
RIM ELEV: 1450.12
(W) 12" RCP IE: 1446.87
PERMANENT EASEMENT
VALVE ELEV: 1445.50
RIGHT-OF-WAY
VALVE DEPTH: 4.71'
21 122 123 124 125 126 12
WORTHMAN BLVD
VALVE ELEV: 1445.02
VALVE ELEV: 1445.22
PROJECT ℄
SAN MH
RIM ELEV: 1450.28
(W) 12" PVC IE: 1442.33
(E) 12" PVC IE: 1442.33
LIMITS OF CONSTRUCTION
EXISTING RIGHT-OF-WAY
RIGHT-OF-WAY
UTILITY EASEMENT
FUTURE SIDEWALK (BY OTHERS)
TEMPORARY EASEMENT
PINE STREET
PERMANENT EASEMENT
RIGHT-OF-WAY
UTILITY EASEMENT
LIMITS OF CONSTRUCTION

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PLAN AND PROFILE

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PP04.dgn
Scale: 1:40

1470 1465 1460 1455 1450 1445 1440

STA 121+60.00
EL = 1,455.75
K = 52
L = 190'
HIGH POINT
PROPOSED GRADE
EXISTING GROUND
-3.1112 %

STA 123+40.00
EL = 1,450.15
K = 66
L = 150'
-3.1112 %
-0.8236 %
PROJECT TIE-IN
STA 124+22.55
EL = 1,449.47
15" STORM DRAIN
F.L. 1446.19

STA 124+22.55
EL = 1,449.47
℄
PINE STREET
-0.8236 %
-0.7300 %
STA 124+86.90
EL = 1,448.94
1,448.70
18" STORM DRAIN
F.L. 1439.62

1,455.32 1,454.04 1,455.26 1,453.99 1,455.11 1,453.81 1,454.89 1,453.72 1,454.59 1,453.63 1,454.22 1,453.59 1,453.77 1,453.27 1,453.24 1,452.82 1,452.64 1,452.18 1,452.03 1,451.56 1,451.49 1,451.12 1,451.00 1,450.68 1,450.58 1,450.34 1,450.22 1,450.02 1,449.91 1,449.70 1,449.67 1,449.49 1,449.49 1,449.29 1,449.33 1,449.16 1,449.16 1,448.96 1,449.00 1,449.21 1,448.84 1,448.70

121 122 123 124 125 126 127

ROADWAY DESIGN DIVISION.

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	L5

C.N.

0 20' 40'
SCALE

PROPOSED SANITARY SEWER
UTILITY EASEMENT
TEMPORARY EASEMENT
LIMITS OF CONSTRUCTION
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
FUTURE SIDEWALK (BY OTHERS)
EXISTING WATER
1/4 SECTION LINE & PROPOSED PROPERTY LINE
TEMPORARY EASEMENT
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
EXISTING RIGHT-OF-WAY
PROPOSED STORM SEWER
PINE STREET
PROJECT ℄
RIGHT-OF-WAY
EXISTING RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
LIMITS OF CONSTRUCTION
EXISTING RIGHT-OF-WAY
WORTHMAN BLVD
UTILITY EASEMENT
RIGHT-OF-WAY

00 501 502 503 504 505 5(

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PLAN AND PROFILE

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PP05.dgn
Scale: 1:40

PROPOSED GRADE
1,450.31
-0.6253 %
STA 502+77.94
EL = 1,448.82
STA 503+22.44
EL = 1,448.78
PROPOSED GRADE
1,450.50
+2.3214 %
EXISTING GROUND
15" STORM DRAIN
F.L. 1446.31
12" SANITARY SEWER
F.L. 1441.94

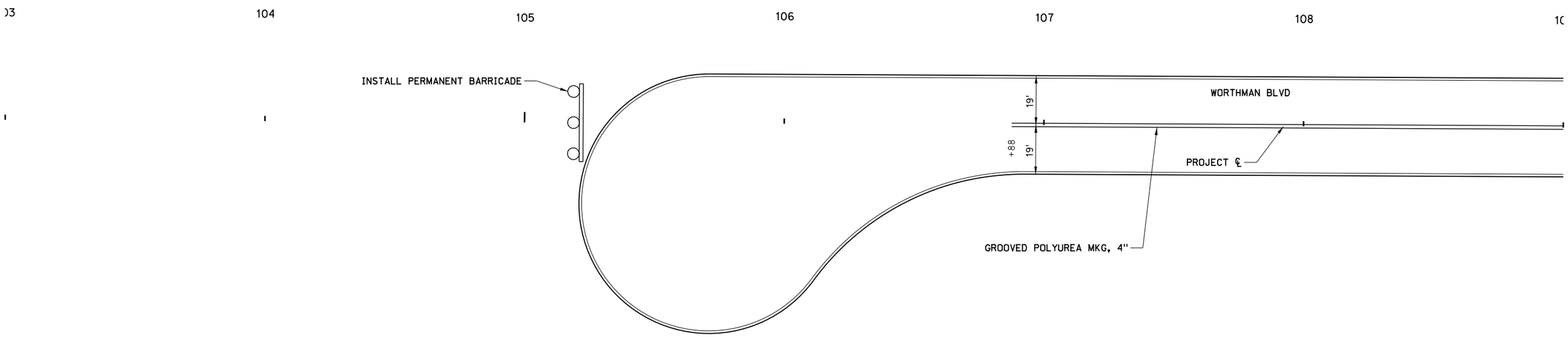
1470 1465 1460 1455 1450 1445 1440

1,450.19 1,449.29 1,450.07 1,449.94 1,449.94 1,449.73 1,449.58 1,449.46 1,449.30 1,449.07 1,449.01 1,448.86 1,449.33 1,448.83 1,448.80 1,449.21 1,449.19 1,449.86 1,449.65 1,450.20 1,450.12 1,450.47 1,450.59 1,450.69

500 501 502 503 504 505 506

4" YELLOW POLYUREA PAVEMENT MARKING, GROOVED		
STATION TO STATION	SIDE	LIN. FT.
106+87.58 - 109+00.00	LT/RT	425

INSTALL PERMANENT BARRICADE, TYPE 3, RED & WHITE STRIPES		
STATION	SIDE	EACH
105+21.84	℄	1



GENERAL NOTES

1. ALL PERMANENT PAVEMENT MARKING SHALL BE INSTALLED WITH SMOOTH AND GRADUAL TRANSITIONS AND ALIGNMENTS. WHEN NECESSARY, THE CONTRACTOR SHALL PREMARK THE SURFACE PRIOR TO PLACING THE MARKINGS.
2. NEW PAVEMENT MARKING SHALL BE ALIGNED WITH EXISTING PAVEMENT MARKING WHERE NECESSARY.
3. ALL LEGENDS AND SYMBOLS SHALL BE CENTERED IN RESPECTIVE LANES.
4. REMOVE ALL CONFLICTING PAVEMENT MARKING FROM ROADWAY. (SUBSIDIARY)

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PROJECT NO.	SHEET NO.
09336.001-C	M1

0 20' 40'
SCALE

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PAVEMENT MARKING AND SIGNING

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PM01.dgn
Scale: 1:40

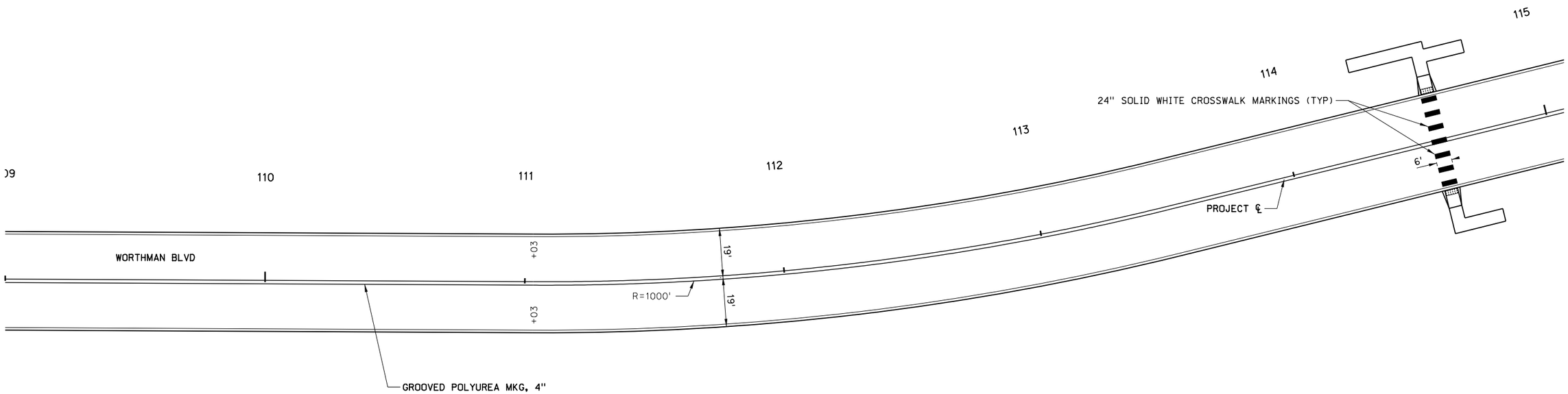
4" YELLOW POLYUREA PAVEMENT MARKING, GROOVED		
STATION TO STATION	SIDE	LIN. FT.
109+00.00 - 115+00.00	LT/RT	1,200

24" WHITE POLYUREA PAVEMENT MARKING, GROOVED		
STATION TO STATION	SIDE	LIN. FT.
114+57.50	LT/RT	42

SCHEMMER
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PROJECT NO.	SHEET NO.
09336.001-C	M2

0 20' 40'
SCALE



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PAVEMENT MARKING AND SIGNING

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

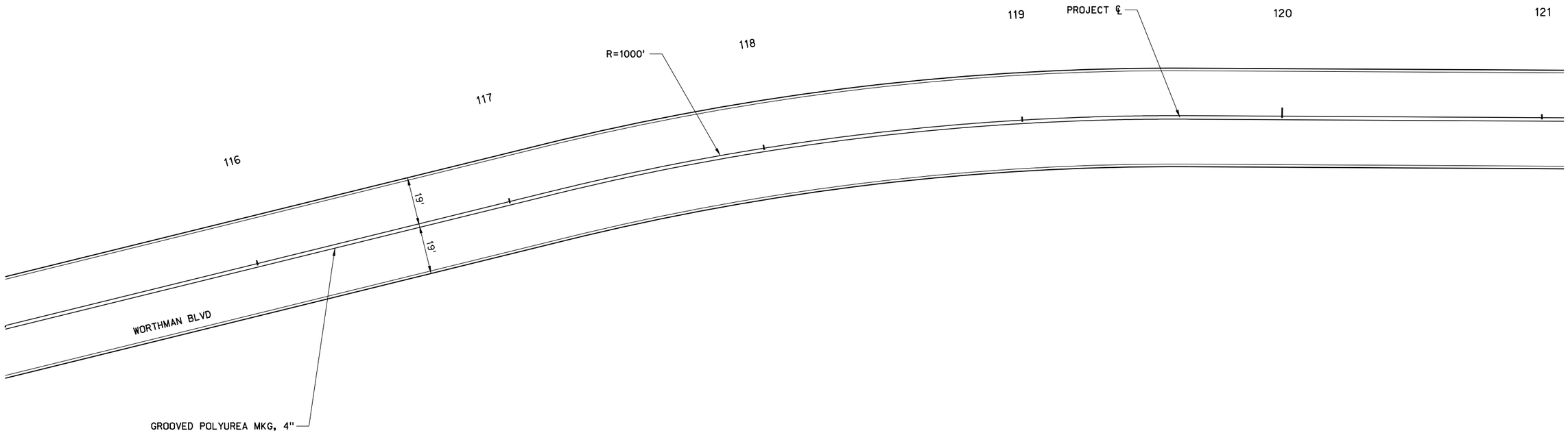
File: 09336001 PM02.dgn
Scale: 1:40

4" YELLOW POLYUREA PAVEMENT MARKING, GROOVED		
STATION TO STATION	SIDE	LIN. FT.
115+00.00 - 121+00.00	LT/RT	1,200

SCHEMMER
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PROJECT NO.	SHEET NO.
09336.001-C	M3

0 20' 40'
SCALE



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PAVEMENT MARKING AND SIGNING

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PM03.dgn
Scale: 1:40

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

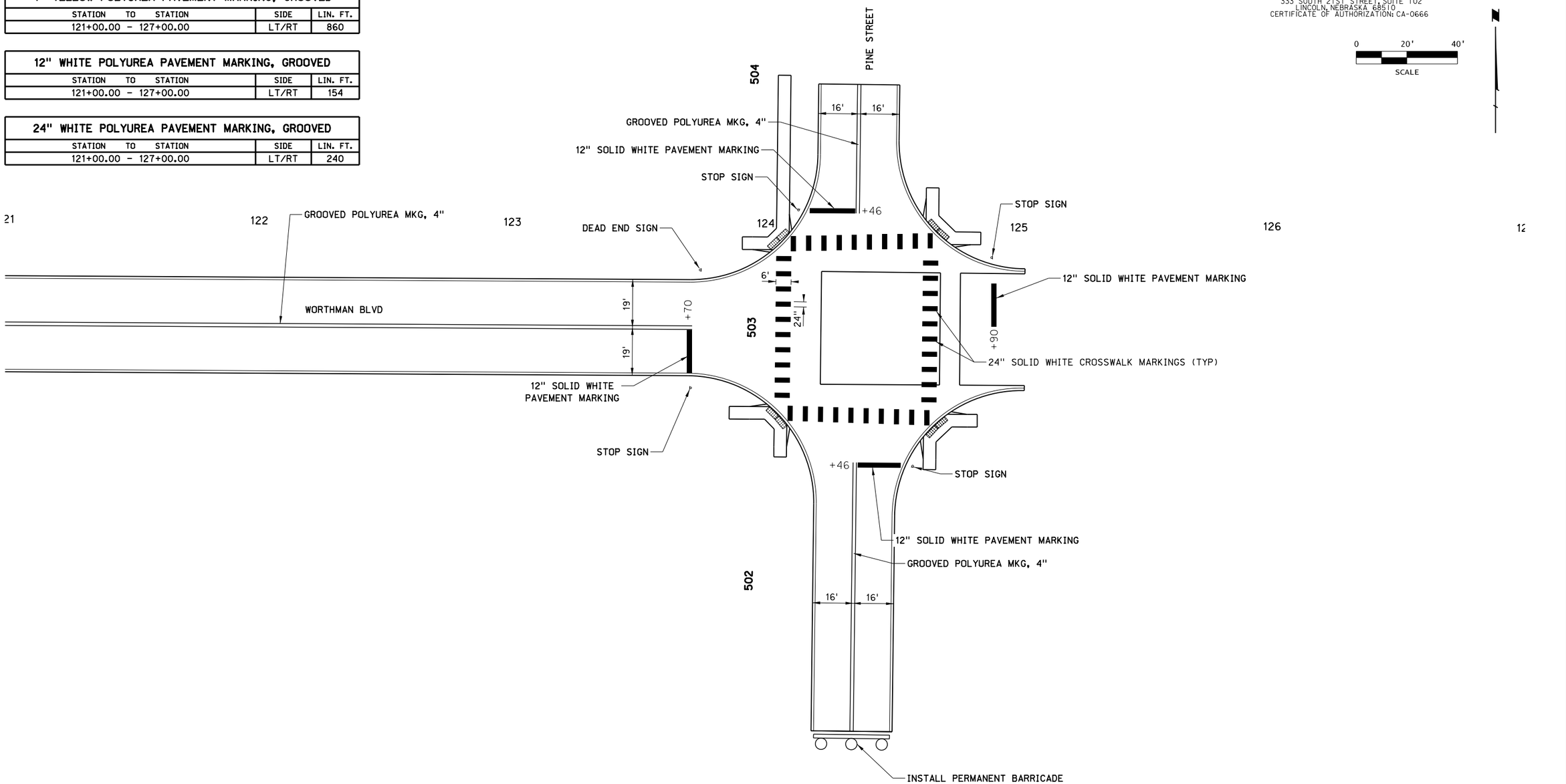
PROJECT NO.	SHEET NO.
09336.001-C	M4

ROADWAY DESIGN DIVISION.

4" YELLOW POLYUREA PAVEMENT MARKING, GROOVED		
STATION TO STATION	SIDE	LIN. FT.
121+00.00 - 127+00.00	LT/RT	860

12" WHITE POLYUREA PAVEMENT MARKING, GROOVED		
STATION TO STATION	SIDE	LIN. FT.
121+00.00 - 127+00.00	LT/RT	154

24" WHITE POLYUREA PAVEMENT MARKING, GROOVED		
STATION TO STATION	SIDE	LIN. FT.
121+00.00 - 127+00.00	LT/RT	240



0 20' 40'
SCALE

INSTALL PERMANENT BARRICADE, TYPE 3, RED & WHITE STRIPES		
STATION	SIDE	EACH
501+39.63	℄	1

INSTALL TYPE A SIGN			
STATION	SIDE	TYPE	EACH
123+70.76	24' RT.	R1-1-36	1
123+74.31	23' LT.	W-14-1-36	1
124+12.95	47' LT.	R1-1-36	1
124+58.64	54' RT.	R1-1-36	1
124+89.32	28' LT.	R1-1-36	1



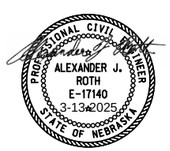
R1-1-36



W-14-1-36

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PM04.dgn
Scale: 1:40



PAVEMENT MARKING AND SIGNING

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 06-FEB-2025 14:21
Computer: LINMEGANS

File: 09336001 Lighting01.dgn
Scale: 1:40

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	N1

0 20' 40'
SCALE

EXISTING WATER MAIN
EXISTING EASEMENT
PERMANENT EASEMENT
PROPERTY LINE
RIGHT-OF-WAY
STREET LIGHT POLE 2
STA. 106+60.00, 26.45' LT
SL-BT-30-8-LED
CONTRACTOR TO MAINTAIN A MINIMUM OF 5' OF SEPARATION
BETWEEN STREET LIGHTING CONDUIT & WATER MAIN
LIMITS OF CONSTRUCTION
EXISTING WATER MAIN
FUTURE SIDEWALK
(BY OTHERS)
TEMPORARY EASEMENT
103
104
105
106
107
108
262'
DO NOT DISTURB PULL BOX
DO NOT DISTURB POWER POLE
DO NOT DISTURB FENCE
WORTHMAN BOULEVARD
90'
146'
PULL BOX 1
STA. 107+00.00, 22.00' RT
STREET LIGHT POLE 3
STA. 107+90.00, 22.00' RT
SL-BT-30-4-LED
UTILITY EASEMENT
RIGHT-OF-WAY
STREET LIGHT POLE 1
STA. 105+75.00, 84.00' RT
SL-BT-30-8-LED
LIMITS OF CONSTRUCTION
PERMANENT EASEMENT

LEGEND

- LIGHTING CONTROL CENTER
- SPARE BEND — SINGLE LIGHTING UNIT
- PAD MOUNTED TRANSFORMER
- EXISTING LIGHTING UNIT
- SPARE BEND — PULL BOX
- EXISTING PULL BOX
- PULL BOX TO BE REMOVED
- CONDUIT IN TRENCH
- CONDUIT UNDER ROADWAY
- P — EXISTING POWER LINE

PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

LIGHTING

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	N2

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 06-FEB-2025 14:21
Computer: LINMEGANS

File: 09336001 Lighting02.dgn
Scale: 1:40

0 20' 40'
SCALE

PROPERTY LINE

PROPERTY LINE

CONTRACTOR TO MAINTAIN A MINIMUM OF 5' OF SEPARATION
BETWEEN STREET LIGHTING CONDUIT & WATER MAIN

STREET LIGHT POLE 8
STA. 114+10.00, 27.05' LT
SL-BT-30-8-LED

FUTURE SIDEWALK
(BY OTHERS)

STREET LIGHT POLE 4
STA. 109+20.00, 26.50' LT
SL-BT-30-8-LED

EXISTING WATER MAIN

STREET LIGHT POLE 6
STA. 111+70.00, 26.50' LT
SL-BT-30-8-LED

LIMITS OF CONSTRUCTION

RIGHT-OF-WAY

109 110 111 112 113 114 115

250' 237' 214'

WORTHMAN BLVD

PROJECT ℄

250' 255' 252'

RIGHT-OF-WAY

LIMITS OF CONSTRUCTION

STREET LIGHT POLE 7
STA. 112+90.00, 25.00' RT
SL-BT-30-8-LED

LIMITS OF CONSTRUCTION

STREET LIGHT POLE 5
STA. 110+40.00, 25.00' RT
SL-BT-30-8-LED

UTILITY EASEMENT

PERMANENT EASEMENT

PROPERTY LINE

PROPERTY LINE

LIMITS OF CONSTRUCTION

LEGEND

- LIGHTING CONTROL CENTER
- SPARE BEND — SINGLE LIGHTING UNIT
- PAD MOUNTED TRANSFORMER
- EXISTING LIGHTING UNIT
- SPARE BEND — PULL BOX
- EXISTING PULL BOX
- PULL BOX TO BE REMOVED
- CONDUIT IN TRENCH
- CONDUIT UNDER ROADWAY
- P — EXISTING POWER LINE

PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

LIGHTING

SCHEMMER
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	N3

SCALE 0 20' 40'

SAN MH
RIM ELEV: 1451.93
(E) 8" PVC IE: 1441.05
(N) 10" PVC IE: 1441.05

PROPERTY LINE
1/4 SECTION LINE
EXISTING PROPERTY LINE
PERMANENT EASEMENT
TEMPORARY EASEMENT
STREET LIGHT POLE 12
STA. 118+70.00, 26.50' LT
SL-BT-30-8-LED
CONTRACTOR TO MAINTAIN A MINIMUM OF 5' OF SEPARATION
BETWEEN STREET LIGHTING CONDUIT & WATER MAIN
FUTURE SIDEWALK
(BY OTHERS)
LIMITS OF CONSTRUCTION
STREET LIGHT POLE 10
STA. 116+20.00, 26.50' LT
SL-BT-30-8-LED
RIGHT-OF-WAY
EXISTING WATER MAIN
WORTHMAN BLVD
PROJECT ℄
STREET LIGHT POLE 11
STA. 117+90.00, 22.00' RT
SL-BT-30-4-LED
PULL BOX 2
STA. 118+99.00, 44.00' RT
NEW POWER SERVICE LOCATED
WITHIN 15' UTILITY EASEMENT
STA. 119+03.73, 46.31' RT
TRANSFORMER FOR STREET LIGHT
FEED AND DISCONNECT
(TO BE INSTALLED BY THE CITY OF SEWARD)
STA. 119+08.40, 42.61' RT
STREET LIGHT POLE 13
STA. 120+40.00, 22.00' RT
SL-BT-30-4-LED
UTILITY EASEMENT
EXISTING EASEMENT
PROPERTY LINE
LIMITS OF CONSTRUCTION
PROPOSED 12" SANITARY SEWER
FUTURE SIDEWALK
(BY OTHERS)
STREET LIGHT POLE 9
STA. 115+40.00, 26.50' RT
SL-BT-30-8-LED
PERMANENT EASEMENT

116 117 118 119 120 12
261' 257' 249' 112' 151'
7' 6' 10' 6'

LEGEND

- LIGHTING CONTROL CENTER
- SINGLE LIGHTING UNIT (SPARE BEND)
- PAD MOUNTED TRANSFORMER
- EXISTING LIGHTING UNIT
- PULL BOX (SPARE BEND)
- EXISTING PULL BOX (P)
- PULL BOX TO BE REMOVED (P)
- CONDUIT IN TRENCH
- CONDUIT UNDER ROADWAY
- EXISTING POWER LINE (P)

PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

LIGHTING

File: 09336001 Lighting03.dgn
Scale: 1:40
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 06-FEB-2025 14:21
Computer: LINMEGANS

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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	N4

0 20' 40'
SCALE

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 06-FEB-2025 14:21
Computer: LINMEGANS

File: 09336001 Lighting04.dgn
Scale: 1:40

EXISTING PROPERTY LINE & 1/4 SECTION LINE
TEMPORARY EASEMENT
PULL BOX 3
STA. 503+60.04, 25.61' LT
CONNECT TO EXISTING POWER
LIMITS OF CONSTRUCTION
CONTRACTOR TO MAINTAIN A MINIMUM OF 5' OF SEPARATION
BETWEEN STREET LIGHTING CONDUIT & WATER MAIN
STREET LIGHT POLE 14
STA. 121+20.00, 26.50' LT
SL-BT-30-8-LED
REMOVE PULL BOX
PULL BOX 4
STA. 503+60.65, 25.00' RT
FUTURE SIDEWALK
(BY OTHERS)
EXISTING RIGHT-OF-WAY
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
STREET LIGHT POLE 16
STA. 123+70.00, 26.50' LT
SL-BT-30-8-LED
REMOVE PULL BOX, SPLICE NEW CONDUIT TO EXISTING
PERMANENT EASEMENT
RIGHT-OF-WAY
EXISTING WATER MAIN
WORTHMAN BLVD
FUTURE SIDEWALK
(BY OTHERS)
PROPOSED 12" SANITARY SEWER
STREET LIGHT POLE 15
STA. 122+45.00, 22.00' RT
SL-BT-30-4-LED
LIMITS OF CONSTRUCTION
UTILITY EASEMENT
TEMPORARY EASEMENT
RIGHT-OF-WAY
PINE STREET
PERMANENT EASEMENT
UTILITY EASEMENT
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION

LEGEND

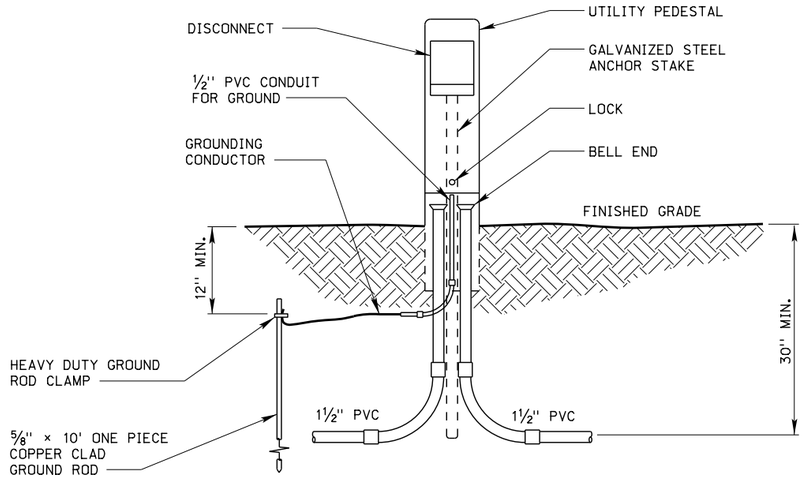
- LIGHTING CONTROL CENTER
- SPARE BEND — SINGLE LIGHTING UNIT
- PAD MOUNTED TRANSFORMER
- EXISTING LIGHTING UNIT
- SPARE BEND — PULL BOX
- EXISTING PULL BOX
- PULL BOX TO BE REMOVED
- CONDUIT IN TRENCH
- CONDUIT UNDER ROADWAY
- P — EXISTING POWER LINE

PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

LIGHTING

SCHEMMER
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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	N5



LIGHTING CONTROL CENTER, TYPE "DP"

UTILITY PEDESTAL

GLASS-FIBER REINFORCED, THERMOSETTING PLASTIC OF SUFFICIENT DIMENSION TO ALLOW ORDERLY PLACEMENT OF, AND UNRESTRICTED ACCESS TO, ALL CONTROL EQUIPMENT. PROVIDE WITH PADLOCK HASP.

DISCONNECT ENCLOSURE

DISCONNECT SHALL HAVE A NEMA-TYPE 1 ENCLOSURE. DOOR SHALL BE HINGED. PROVIDE CABLE-GRIP BUSHINGS OF CORRECT SIZE FOR ALL CABLE ENTRIES.

DISCONNECT

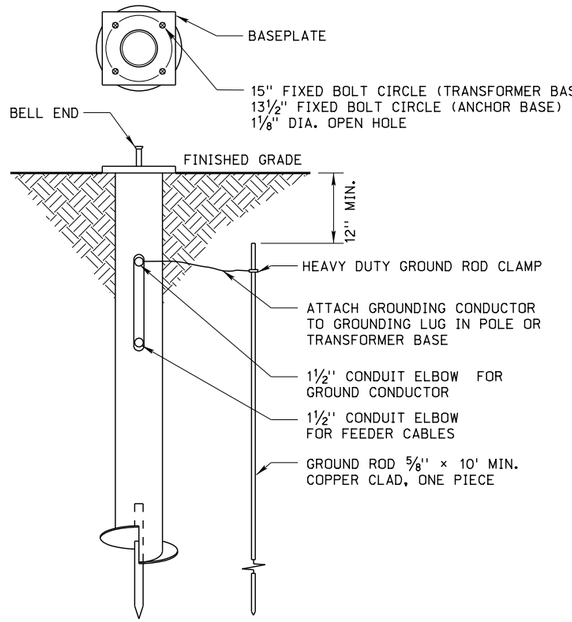
2-POLE/60 AMP, 240V, COMMON TRIP BREAKER IN HEAVY DUTY 60 AMP ENCLOSURE.

PAYMENT

THE DISCONNECT, UTILITY PEDESTAL, CONDUIT ENTRANCE BENDS AND GROUNDING SYSTEM ARE ALL SUBSIDIARY TO THE ITEM "LIGHTING CONTROL CENTER, TYPE "DP".

LOCATION

CONTROL CENTER LOCATION IS APPROXIMATE. ACTUAL LOCATION WILL BE AS DIRECTED BY THE ELECTRIC UTILITY AND PROJECT ENGINEER.



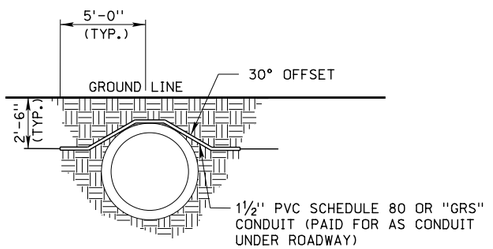
NOTES:

FOUNDATION MUST BE INSTALLED PRIOR TO TRENCHING AND WITHOUT PILOT HOLE.

FOUNDATION MUST BE INSTALLED WITH BOTTOM OF BASEPLATE LEVEL AND FLUSH WITH FINISHED GRADE.

ANY DEVIATION FROM ABOVE INSTALLATION PROCEDURES MUST BE APPROVED BY ENGINEER.

POWER INSTALLED FOUNDATION
(PERMANENT INSTALLATION)



CONDUIT INSTALLATION OVER CULVERT PIPE

PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

LIGHTING DETAILS

File: 09336001 Lighting05.dgn
Scale: 1:40
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 06-FEB-2025 14:21
Computer: LINMEGANS

SCHEMMER
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	N6

GENERAL NOTES:

1. A 72 HOUR BURN IS NOT REQUIRED ON INSTALLATIONS USING LED LUMINAIRES.

2. FOR PULL BOX DETAILS, SEE STANDARD PLAN 914-R7. ALL PULL BOXES WITH METAL FRAME AND LID SHALL BE GROUNDED, UNLESS INDICATED OTHERWISE.

3. ALL CONNECTIONS IN PULL BOXES WILL BE MADE USING SUBMERSIBLE SECONDARY CONNECTORS MEETING ANSI C119.1 REQUIREMENTS.

4. ELECTRICAL CONNECTIONS IN POLE OR TRANSFORMER BASE SHALL BE MADE USING U.L. APPROVED, MULTI-CABLE, DUAL RATED, MECHANICAL CONNECTOR BLOCKS WITH ALLEN HEAD SET SCREWS, THE CONNECTOR BLOCK SHALL BE COMPLETELY ENCASED IN A SILICONE GEL OR FULLY SURROUNDED BY A MOLDED INSULATING COVER. CONNECTORS SHALL BE RATED 600 VOLTS. COMPRESSION TAPS AND TAPING WILL NOT BE ALLOWED.

   THE CONNECTOR BLOCK MUST CONTAIN THE CORRECT NUMBER OF CABLE ENTRANCES TO ALLOW ONE CONDUCTOR PER WIRE HOLE AND MUST BE RATED FOR THE SIZE(S) AND TYPE(S) OF CABLE BEING USED. ANTIOXIDANT COMPOUND SHALL BE USED AND PROPER PROCEDURES FOLLOWED.

   THE ELECTRICAL CONNECTION, WHEN COMPLETE, SHALL BE FULLY INSULATED TO PREVENT ACCIDENTAL CONTACT WITH LIVE COMPONENTS.

5. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE BONDED:

   (A) TO ALL POLES OR TRANSFORMER BREAKAWAY BASES.

   (B) AT ALL CONTROL CENTER SERVICE LOCATIONS.

   (C) TO ALL METALLIC NONCURRENT CARRYING COMPONENTS.

   (D) TO ALL GROUND RODS.

6. IN PULL BOXES, POLE BASES, JUNCTION BOXES AND CONTROL CABINETS, THE DIRECTION OF EACH CABLE RUN SHALL BE INDICATED BY ATTACHING A PERMANENT TAG OF RIGID PLASTIC OR NON-FERROUS METAL TO THE CONDUIT. TAGS SHALL BE EMBOSSED, STAMPED OR ENGRAVED WITH LETTERS 3/16" OR GREATER IN HEIGHT AND SECURED TO THE CONDUIT WITH NYLON OR PLASTIC TIES.

   IN INSTANCES WHERE THE CONDUIT OR CONDUIT ENTRANCES ARE NOT VISIBLE OR ACCESSIBLE, AS IN ANCHOR BASE INSTALLATIONS, A DIRECTION TAG SHALL BE ATTACHED TO EACH CABLE.

7. CONDUIT SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 405 OF THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION".

8. ALL METALLIC AND NONMETALLIC CONDUIT SHALL BEAR THE U.L. LABEL.

9. UNLESS INDICATED OTHERWISE IN THE PLANS:

   (A) ALL CONDUIT SHALL BE 1½".

   (B) CONDUIT PLACED IN TRENCH OR UNDER THE ROADWAY SHALL BE NONMETALLIC AND OF THE FOLLOWING TYPES AS DEFINED IN THE SPECIFICATIONS: PVC, FRE, CID OR HDPE.

   (C) NONMETALLIC CONDUIT SURFACE MOUNTED ON STRUCTURES OR USED AS RISERS SHALL BE SCHEDULE 80 PVC.

   (D) METALLIC CONDUIT WHEN USED SHALL BE TYPE GRS OR IMC.

   (E) GALVANIZED INTERMEDIATE METAL CONDUIT (IMC) MAY BE USED IN LIEU OF GALVANIZED RIGID STEEL CONDUIT (GRS).

   (F) CONDUIT PLACED IN GROUND SHALL HAVE A MINIMUM EARTH COVER OF 30" UNLESS INDICATED OTHERWISE.

   (G) ALL UNDERGROUND CONDUIT RACEWAYS TERMINATING IN PULL BOXES, LIGHT POLE BASES, BREAKAWAY TRANSFORMER BASES, PEDESTAL BASES, LIGHTING CONTROL CENTER CABINETS OR OTHER IN GROUND OR GROUND MOUNTED ENCLOSURES, SHALL ENTER THE ENCLOSURE VERTICAL TO THE EARTH'S SURFACE. ALL CONDUIT ENDS SHALL BE EQUIPPED WITH BELLS OR BUSHINGS TO PROTECT THE CABLE THEY CARRY FROM CHAFING OR ABRASION.

10. CONDUIT UNDER ROADWAY SHALL BE MEASURED FOR PAYMENT AS EXTENDING 1 FT. BEYOND THE EDGE OF THE ROADWAY SURFACE (INCLUDING SURFACED SHOULDERS).

11. JACKED CONDUIT MAY BE EITHER METALLIC OR NONMETALLIC.

12. TRENCHING SHALL BE KEPT A MINIMUM OF 5 FT. FROM THE TRUNK OF EXISTING TREES. JACKING MAY BE REQUIRED UNDER THE CENTER OF LARGE TREES IN LIMITED SPACE.

13. ROUTING OF CONDUIT AND CABLE MAY BE ALTERED BY THE PROJECT ENGINEER, IF NECESSARY, TO SUIT FIELD CONDITIONS.

14. INSTALL SPARE BENDS AS SHOWN ON PLANS. SPARE BENDS MUST BE SECURELY CAPPED OR PLUGGED AT BOTH ENDS WITH FITTINGS OF THE CORRECT SIZE AND TYPE FOR THE CONDUIT BEING USED.

15. CONDUIT DRAINS ARE NOT REQUIRED.

16. LUMINAIRES SHALL BE LEVELED AFTER POLE HAS BEEN INSTALLED ON FOUNDATION. LUMINAIRE MOUNTING BOLTS SHALL BE TORQUED TO MANUFACTURERS SPECIFICATIONS.

17. ROADWAY LIGHTING SYSTEM MUST MEET PROJECT ENGINEERS FINAL INSPECTION. ROADWAY LIGHTING SYSTEMS ARE NOT SUBJECT TO STATE OR LOCAL ELECTRICAL INSPECTION. ELECTRICAL WORK PERFORMED ON REST AREAS OR WEIGH STATIONS WILL REQUIRE AN ELECTRICAL PERMIT AND WILL BE SUBJECT TO A FINAL INSPECTION BY THE STATE ELECTRICAL INSPECTOR.

18. CONTACT UTILITY THREE WORKING DAYS PRIOR TO REQUIRING SERVICE CONNECTION OR DISCONNECT.

19. GROUNDING CONNECTIONS IN PULL BOXES AND JUNCTION BOXES SHALL BE MADE USING MECHANICAL CONNECTORS SPECIFICALLY DESIGNED FOR THE PURPOSE.

20. UNLESS INDICATED OTHERWISE IN THE PLANS:

   (A) CONVENTIONAL LIGHTING UNITS MAY BE INSTALLED USING EITHER CONCRETE OR POWER DRIVEN FOUNDATIONS.

   (B) ALL FOUNDATIONS USED ON A PROJECT SHALL BE OF ONE TYPE.

21. A LEGIBLE POLE IDENTIFICATION NUMBER CONSISTING OF THE POLE TYPE (EXAMPLE: SL-BT-40-12) TOGETHER WITH THE POLE MANUFACTURER'S NAME AND THE DATE OF MANUFACTURE (MONTH AND YEAR) WILL BE REQUIRED ON ALL NEW LIGHT POLES. THE POLE IDENTIFICATION NUMBER SHALL BE APPLIED TO THE POLE BY EITHER OF THE FOLLOWING TWO METHODS.

   (A) THE TOP OF THE POLE BASE SHALL BE STAMPED OR ENGRAVED WITH THE REQUIRED INFORMATION. (PRIOR TO GALVANIZING IN THE CASE OF STEEL POLES).

   (B) A DURABLE METAL TAG, STAMPED WITH THE REQUIRED INFORMATION, SHALL BE SECURELY ATTACHED TO THE POLE BASE OR POLE SHAFT. THE TAG AND ITS METHOD OF ATTACHMENT MUST BE APPROVED BY THE LIGHTING ENGINEER.

DESCRIPTION OF EXISTING FACILITIES

THE DESCRIPTION OF EXISTING FACILITIES IS FOR INFORMATION ONLY. ACCURACY OR COMPLETENESS IS NOT GUARANTEED. THE CONTRACTOR SHOULD VERIFY ESSENTIAL DATA BEFORE ORDERING MATERIALS OR BEGINNING WORK.

SCHEDULE OF WIRING MATERIALS

WIRE & CABLE

THE ELECTRICAL, MECHANICAL AND PHYSICAL PROPERTIES OF THE CONDUCTORS LISTED IN THE FOLLOWING SCHEDULE ESTABLISH THE MINIMUM ACCEPTABLE REQUIREMENTS FOR EACH OF THE LISTED APPLICATIONS. CONDUCTORS WHICH HAVE PROPERTIES THAT EXCEED THESE MINIMUM REQUIREMENTS MAY BE FURNISHED, AT THE CONTRACTORS OPTION, WITH THE ENGINEERS' APPROVAL. NO ADJUSTMENT IN THE CONTRACT PRICE WILL BE ALLOWED.

UNLESS INDICATED OTHERWISE ALL CONDUCTORS SHALL BE SINGLE CONDUCTOR, STRANDED COPPER U.L. LISTED, 600V. WITH SIZE OF CONDUCTOR AND TYPE AND COLOR OF INSULATION AS LISTED BELOW.

ONE PHASE CONDUCTOR MUST, AT THE TIME OF INSTALLATION, BE PERMANENTLY IDENTIFIED AS THE LINE 2 (RED) CONDUCTOR AT EACH END AND AT EVERY POINT WHERE THE CONDUCTOR IS ACCESSIBLE, IDENTIFICATION WILL BE ACCOMPLISHED BY (A) COLORING THE EXPOSED INSULATION RED (B) MARKING THE EXPOSED INSULATION WITH RED TAPE.

SERVICE ENTRANCE:	TYPE USE OR XHHW, NO. 6 AWG
EQUIPMENT GROUND:	BARE OR INSULATED, NO. 6 AWG
POLE:	NO. 12 AWG, THW OR THWN.
BRANCH CIRCUIT FEEDERS, INCLUDING NEUTRALS:	USE OR XHHW (IF PLACED IN CONDUIT) USE OR UF (IF DIRECT BURIED). NO. 6 AWG
COLOR CODES:	"NEUTRAL" - WHITE OR GREY; "INSULATED EQUIPMENT GROUND" - GREEN. "LINE 1" - BLACK "LINE 2" - RED

PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

LIGHTING DETAILS

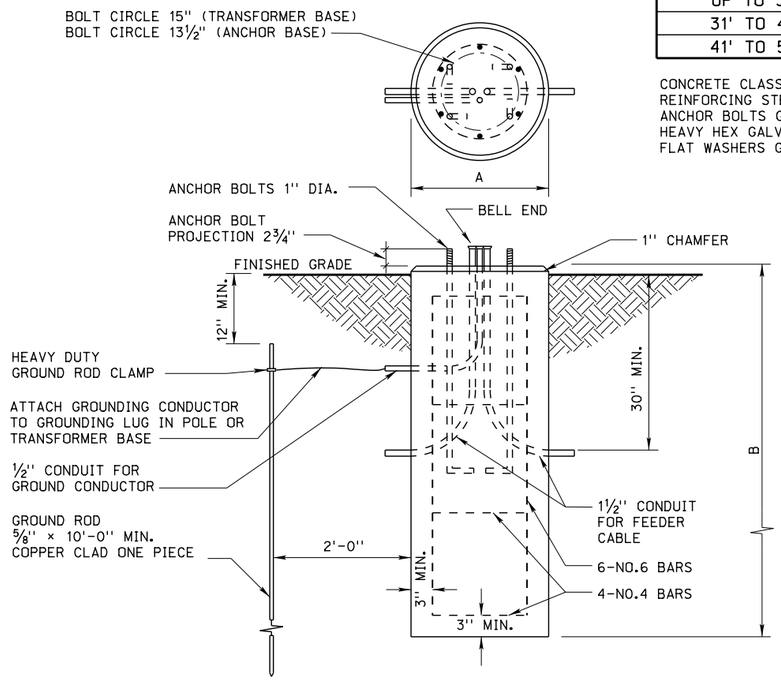
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Scale: 1:40
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
Date: 06-FEB-2025 14:21
Computer: LINMEGANS

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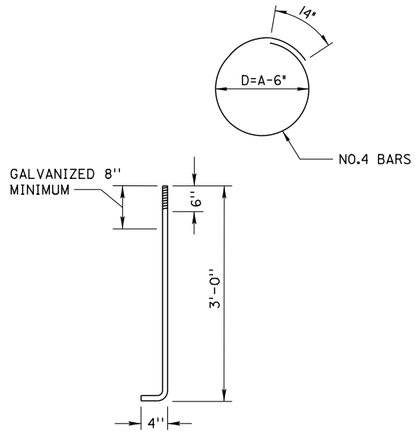
PROJECT NO.	SHEET NO.
09336001-C	N7

STREET LIGHT FOUNDATION DATA				
MOUNTING HEIGHT	A	B	STEEL	CONCRETE
UP TO 30'	2'-0''	5'-0''	56 LB.	0.58 CU. YDS.
31' TO 40'	2'-0''	5'-6''	61 LB.	0.64 CU. YDS.
41' TO 50'	2'-6''	6'-0''	70 LB.	1.10 CU. YDS.

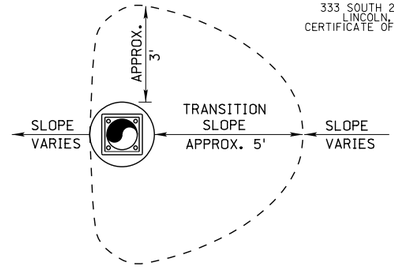
CONCRETE CLASS ''47B-3000''
REINFORCING STEEL: GRADE 60
ANCHOR BOLTS GALVANIZED: 1'' DIA. (AASHTO M314, GR.55)
HEAVY HEX GALVANIZED NUTS: (AASHTO M291, GR A)
FLAT WASHERS GALVANIZED: (AASHTO M293)

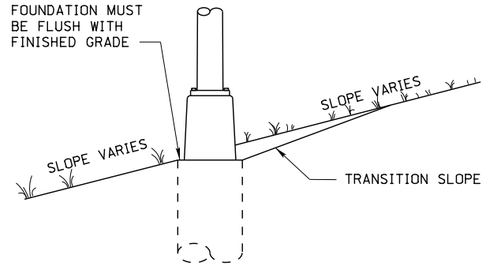


CONCRETE FOUNDATION



ANCHOR BOLT DETAIL

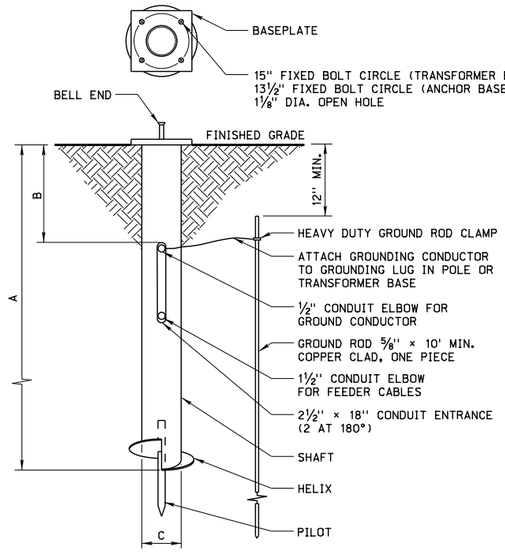




BREAK-A-WAY SUPPORTS ARE DESIGNED TO YIELD OR SEPARATE WHEN STRUCK BY AN ERRANT VEHICLE, THEREBY MINIMIZING INJURY TO THE OCCUPANTS OF THE VEHICLE AND DAMAGE TO THE VEHICLE ITSELF. IN ORDER FOR THE BREAK-A-WAY SUPPORT TO WORK AS DESIGNED, THE SUPPORT MUST BE KEPT FREE OF ALL ENCUMBRANCES AND ITS BASE MUST BE FLUSH WITH FINAL GRADE.

WHEN PERFORMING EARTHWORK IN THE VICINITY OF BREAK-A-WAY SUPPORTS, NO EMBANKMENT (BACKFILL) SHALL BE ALLOWED TO COVER ANY PORTION OF THE SUPPORT NOR SHALL THE POLE FOUNDATION (CONCRETE OR POWER) BE ALLOWED TO PROJECT ABOVE FINAL GRADE. SHOULD THE TOE OF THE BACKFILL EXTEND BEYOND THE BREAK-A-WAY SUPPORT, A TRANSITION SLOPE, CONSTRUCTED AS SHOWN IN THE PLAN DETAIL TITLED ''LIGHT POLES LOCATED ON SLOPE'' MUST BE PROVIDED TO PROTECT THE INTEGRITY OF THE SUPPORT.

LIGHT POLES LOCATED ON SLOPE



POWER INSTALLED FOUNDATION

NOTES:

FOUNDATION SHOWN IS OF A "HELIX/PILOT" DESIGN. FOUNDATIONS OF A "KEY-HOLE" DESIGN AND MEETING OR EXCEEDING ALL OTHER REQUIREMENTS ARE EQUALLY ACCEPTABLE.

FOUNDATION MUST BE INSTALLED PRIOR TO TRENCHING AND WITHOUT PILOT HOLE.

FOUNDATION MUST BE INSTALLED WITH BASEPLATE LEVEL AND FLUSH WITH FINISHED GRADE.

ANY DEVIATION FROM THE ABOVE INSTALLATION PROCEDURES MUST BE APPROVED BY THE ENGINEER.

INSTALL IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATIONS.

STREET LIGHT FOUNDATION DATA			
MOUNTING HEIGHT	A	B	C
UP TO 30'	5'-0''	1'-6''	8''
31' TO 40'	6'-0''	1'-6''	8''
41' TO 50'	7'-0''	1'-6''	8''

FOUNDATION

SHAFT: ASTM A53 SCHEDULE 20, GRADE B. OR ASTM A252, GRADE 2, 0.25 WALL THICKNESS.

BASE PLATE: ASTM A36

HELIX: ASTM A29

PILOT: ASTM 575

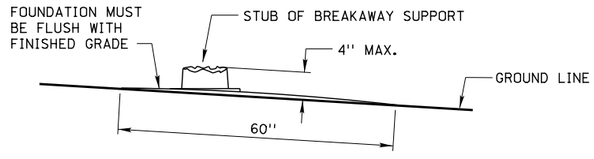
GALVANIZE FOUNDATION PER ASTM A123 AFTER FABRICATION.

HARDWARE

HEX HEAD BOLTS: ASTM A325; GALVANIZED ASTM A153

HEAVY HEX NUTS: ASTM A563 GRADE D OR DH; GALVANIZED ASTM A153

WASHERS: ASTM F436; GALVANIZED ASTM A153



ANY SUBSTANTIAL REMAINS OF A BREAKAWAY DEVICE, AFTER BEING BROKEN AWAY, SHALL NOT PROJECT MORE THAN 4 INCHES ABOVE A 60-INCH CHORD ALIGNED RADIALLY TO THE CENTERLINE OF THE HIGHWAY AND CONNECTING ANY POINT, WITHIN THE LENGTH OF THE CHORD, ON THE GROUND SURFACE ON ONE SIDE OF THE SUPPORT TO A POINT ON THE GROUND SURFACE ON THE OTHER SIDE.

BREAKAWAY SUPPORT STUB CLEARANCE DIAGRAM

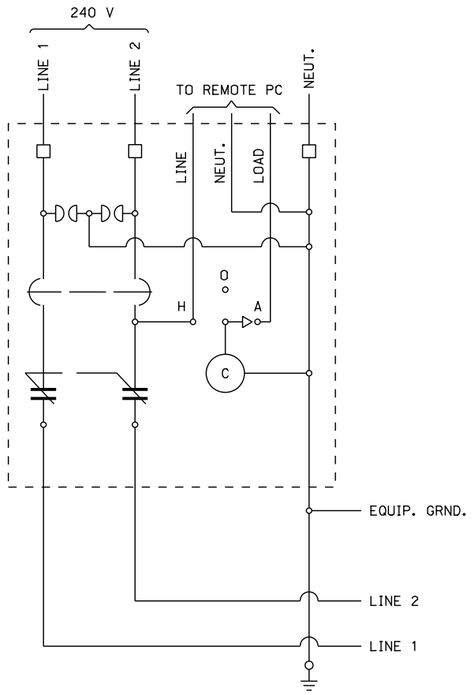
PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

LIGHTING DETAILS

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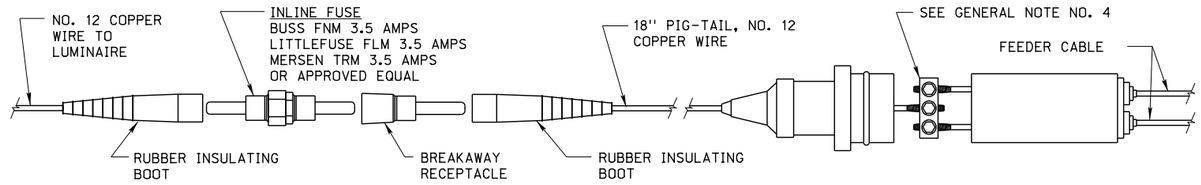


TYPE "R" OR "R-3" CONTROL CENTER SCHEMATIC

(240 VOLT-2 WIRE)

POLE WIRING SCHEMATIC

(240 VOLT-2 WIRE)



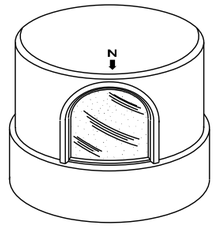
FUSEHOLDER AND BREAKAWAY DISCONNECT

BUSS HEB-AW-RLC-A
LITTLEFUSE LEB-AA-S
TRON HEB-AW-RLC-A
OR APPROVED EQUAL

MECHANICAL CABLE CONNECTOR

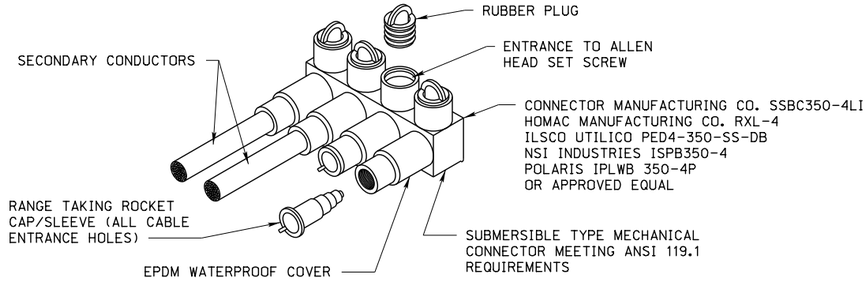
HMC SL3-2K
POLARIS SLOWB2/O-21P
BUCHANAN 84S-ADB1
OR APPROVED EQUAL

CONNECTIONS FOR BREAKAWAY INSTALLATIONS

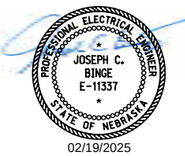


SOLID STATE, LED COMPATIBLE, LONG LIFE, FAIL ON, 105-285VAC
MEETING ANSI SPECIFICATIONS.
ACUITY BRANDS DLL127
RIPLEY LIGHTING CONTROLS 6390LL-BK
INTERMATIC LED4536SC
SUN-TECH TRS-2
TORK NSI INDUSTRIES ZTL124-510J-LED
OR APPROVED EQUAL

PHOTO CONTROL



URD CONNECTOR IN PULL BOX



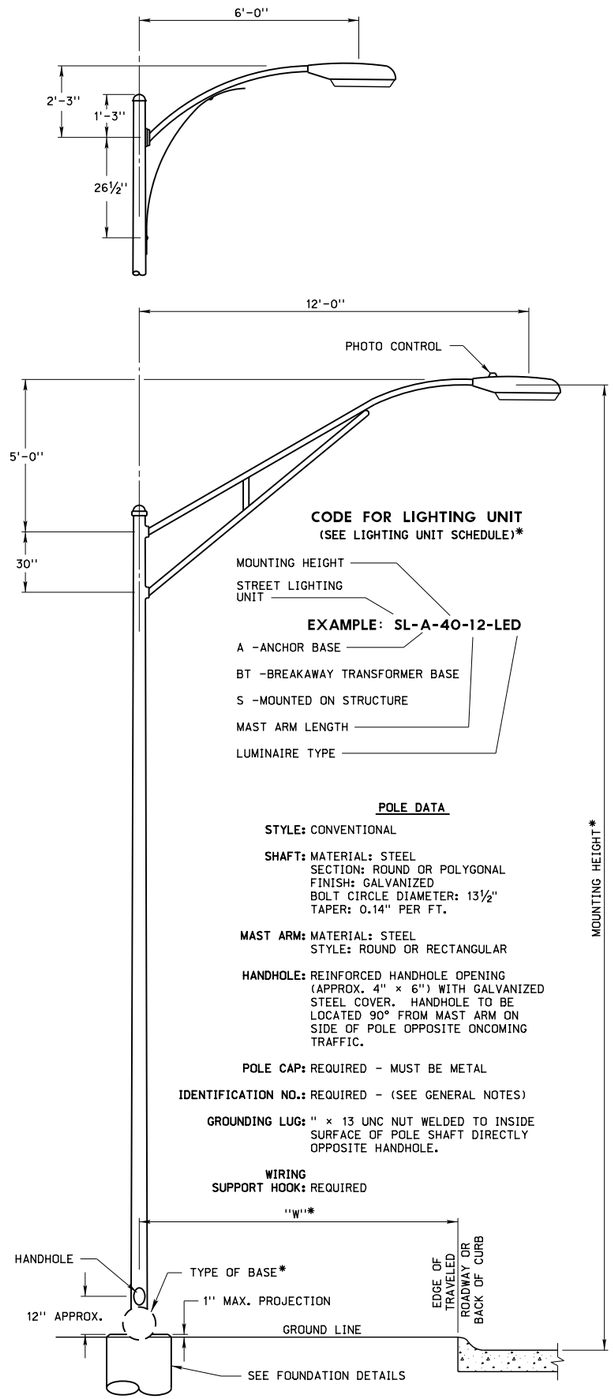
02/19/2025

LIGHTING DETAILS

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PROJECT NO.	SHEET NO.
09336001-C	N9



LIGHTING UNIT SCHEDULE

UNIT NO.	STATION	TYPE	''W''	REMARKS
1	105+75, 84.0' RT	SL-BT-30-4-LED	3'	CONC. FOUNDATION
2	106+60, 26.5' LT	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION
3	107+90, 22' RT	SL-BT-30-4-LED	3'	CONC. FOUNDATION
4	109+20, 26.5' LT	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION
5	110+40, 25' RT	SL-BT-30-8-LED	6'	CONC. FOUNDATION
6	111+70, 26.5' LT.	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION
7	112+90, 25' RT.	SL-BT-30-8-LED	6'	CONC. FOUNDATION
8	114+10, 27.05' LT.	SL-BT-30-8-LED	8'	CONC. FOUNDATION
9	115+40, 26.5' RT.	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION
10	116+20, 26.5' LT.	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION
11	117+90, 22' RT.	SL-BT-30-4-LED	3'	CONC. FOUNDATION
12	118+70, 26.5' LT.	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION
13	120+40, 22' RT.	SL-BT-30-4-LED	3'	CONC. FOUNDATION
14	121+20, 26.5' LT.	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION
15	122+45, 22' RT.	SL-BT-30-4-LED	3'	CONC. FOUNDATION
16	123+70, 26.5' LT.	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION

PULL BOX SCHEDULE

UNIT NO.	STATION	TYPE	REMARKS
1	107+22, 22.0' RT.	PB-5	--
2	118+99, 44.0' RT.	PB-5	--
3	503+60, 25.6' LT.	PB-5	--
4	503+60, 25.0' RT.	PB-5	--

LED LUMINAIRE REQUIREMENTS

UNIT NO.	SPECIFICATION AND PERFORMANCE CRITERIA
ALL	SEE SPECIAL PROVISIONS

PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

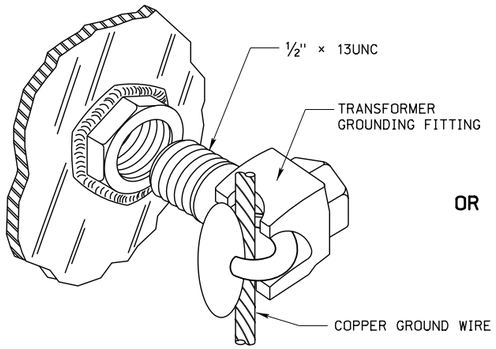
LIGHTING DETAILS

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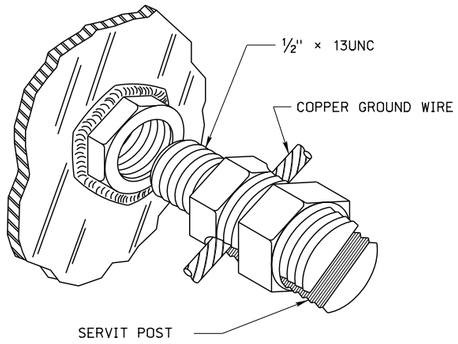
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PROJECT NO.	SHEET NO.
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ROADWAY DESIGN DIVISION.



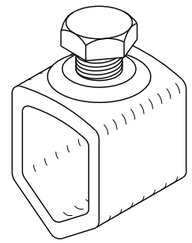
OR



CONNECTOR MANUF. CO. TGC2
BLACKBURN TTC3
BURNDY EQC632C
BURNDY KC22B2TN
OR APPROVED EQUAL

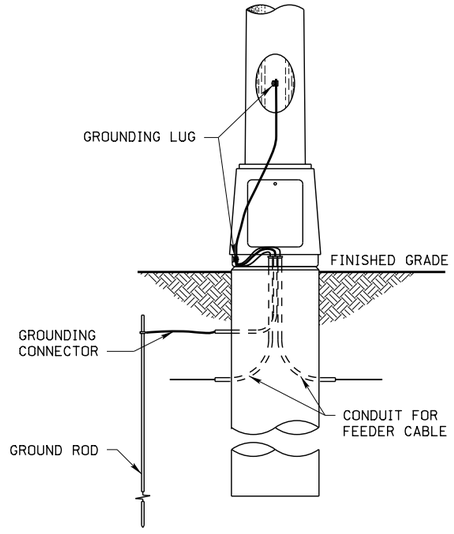
POLE GROUNDING CONNECTORS

GROUND ROD (NOT SHOWN)
ERITECH 615800
BLACKBURN 6260
ROBBINS LIGHTING INC. 94-10
OR APPROVED EQUAL

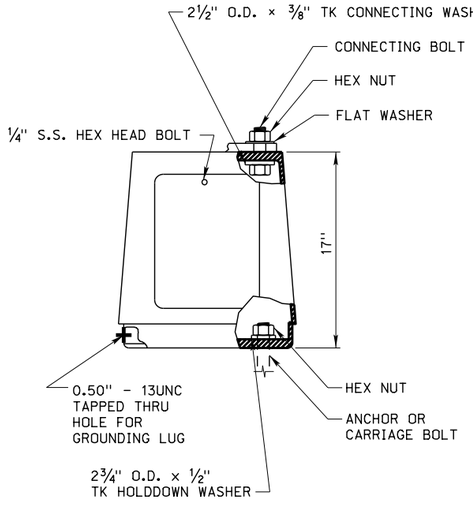


CONNECTOR MANUF. CO. WB58H
ERITECH HDC58R
BLACKBURN JAB58H
BURNDY GKP635
OR APPROVED EQUAL

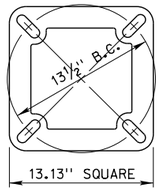
GROUND ROD CLAMP



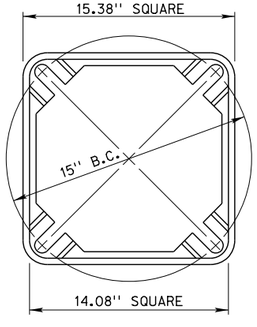
GROUNDING CONNECTION TO BREAKAWAY BASE AND POLE



ELEVATION



TOP PLAN



BOTTOM PLAN

TRANSFORMER BASE INSTALLATION

TRANSFORMER BASE INSTALLATION NOTES:

1. POLE FAILURES AND IRREGULAR BREAKAWAY PERFORMANCE CAN RESULT FROM IMPROPER INSTALLATION OF THE TRANSFORMER BASE. TO OBTAIN THE MAXIMUM CAPABILITY OF EACH BASE THE CONTRACTOR MUST COMPLY WITH THE FOLLOWING:
   - (A) USE THE LARGEST POSSIBLE BOLT CIRCLES, BOTH TOP AND BOTTOM.
   - (B) USE GALVANIZED STEEL WASHERS OF THE SIZE AND TYPE ILLUSTRATED. (THE HOLD DOWN AND CONNECTING WASHERS ARE AVAILABLE FROM THE TRANSFORMER BASE MANUFACTURER).
   - (C) INSTALL WASHERS EXACTLY AS SHOWN.
   - (D) SHIM BETWEEN FOUNDATION AND TRANSFORMER BASE IF NEEDED USING ONLY REGULAR "U" SHAPED SHIM STOCK CAPABLE OF PROVIDING SUPPORT ON THREE SIDES OF THE ANCHOR BOLT. INSTALL WITH BACK EDGE OF SHIM FLUSH WITH BOTTOM EDGE OF TRANSFORMER BASE.
   - (E) TORQUE ALL NUTS TO A MINIMUM OF 150 FT. LBS.
2. INSTALL BREAKAWAY TRANSFORMER BASE WITH DOOR OPENING ON SAME SIDE OF POLE AS HANDHOLE.
3. SECURE EQUIPMENT GROUNDING CONDUCTOR TO TRANSFORMER BASE BY USE OF APPROVED GROUNDING CONNECTOR (LUG) THREADED INTO TAPPED HOLE IN BASE. ROUTE GROUNDING CONDUCTOR FROM GROUNDING LUG IN "T" BASE TO GROUNDING LUG IN POLE AS SHOWN.

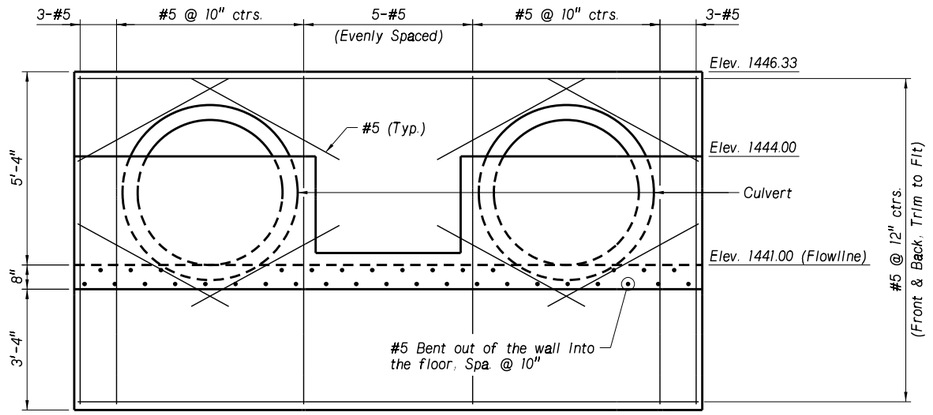
PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 06-FEB-2025 14:21
Computer: LINMEGANS

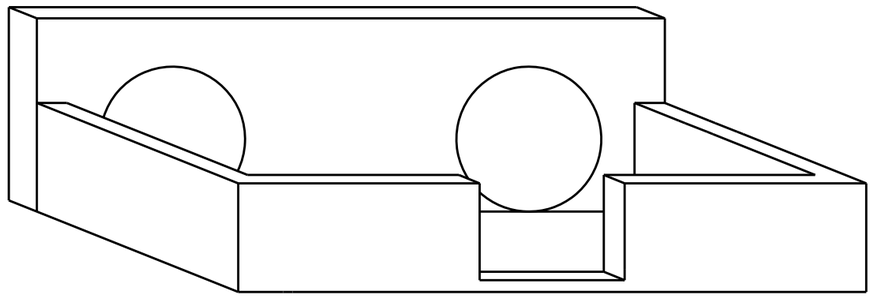
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Scale: 1:40

LIGHTING DETAILS

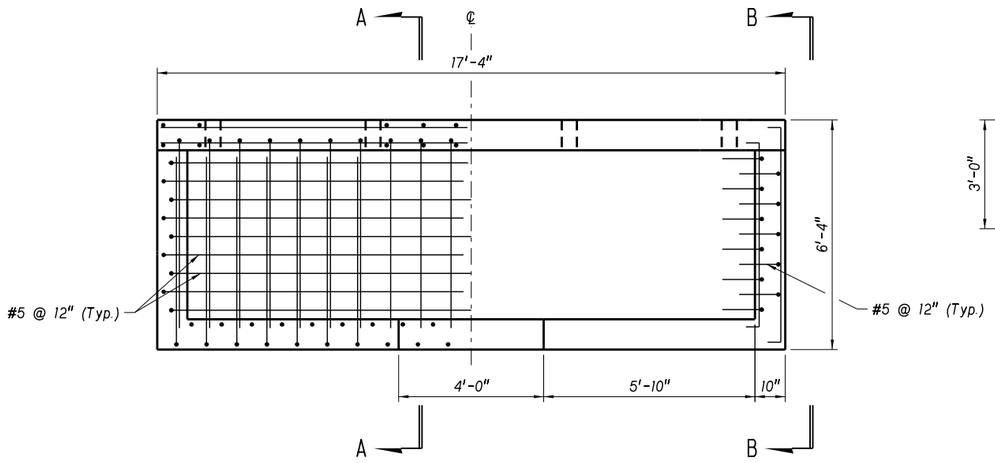
BRIDGE DIVISION.



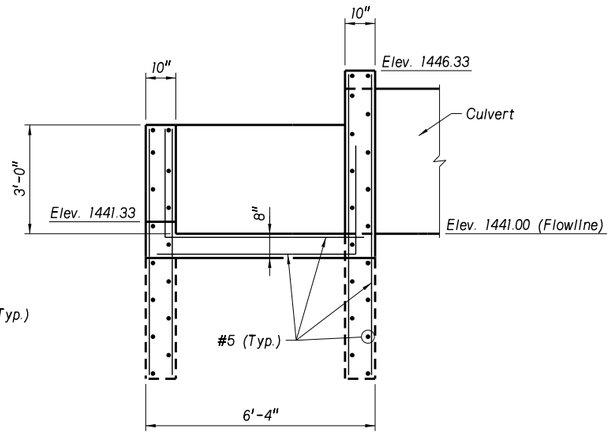
ELEVATION VIEW
No Scale



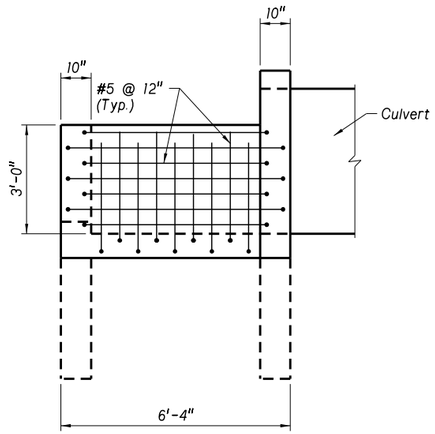
ORIENTATION VIEW



PLAN VIEW
(Symmetrical about ℄)
No Scale



SECTION A-A
No Scale



SECTION B-B
No Scale

NOTES:
Provide ¾" chamfer on all exposed wall edges.
Optional construction joint allowed at elevation 1441.33.
Reinforcing steel shall be Grade 60, AASHTO LRFD Sect. 5.
Concrete shall attain a strength of 4000 psi.

...\plan_number_brg.tbl

2/5/2025

..._CAD\Struct\09336001brg.dgn

PROJECT NUMBER	SHEET NO.
09336.001	U1

SEWARD NEBRASKA

WORTHMAN BOULEVARD EXTENSION
PRINCIPAL SPILLWAY

ROADWAY WORTHMAN BOULEVARD
STA. 21+93.57
SKEW 0°
DESIGN LIVE LOAD N/A
DESIGNED BY MKR **DETAILED BY** JLK **CHECKED BY** DGB **DATE** NOVEMBER 2024

DETENTION POND DETAILS

SCHEMMER
402-493-4800
1044 N. 115th St., Suite 300
Omaha, NE 68154

PROFESSIONAL CIVIL ENGINEER
DARIN G. BROWN
E-12246
STATE OF NEBRASKA

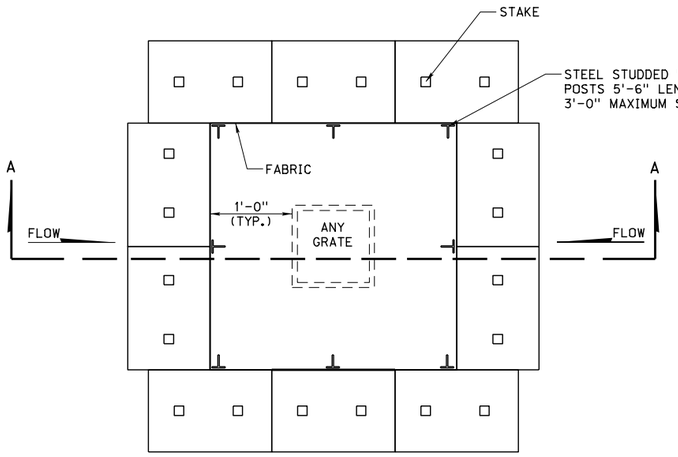
The Schemmer Associates, Inc.
COA NE CA-0666

SPECIAL PLAN NO.	
1C	1 / 1

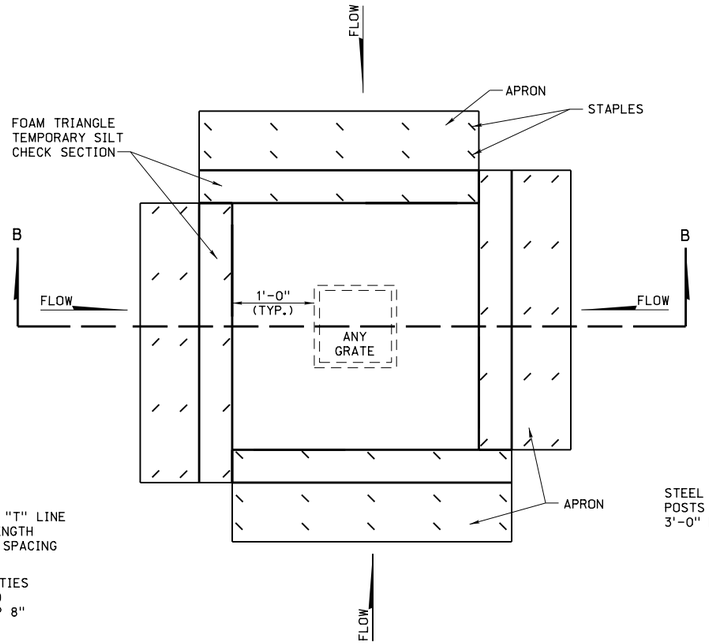
SCHEMMER
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	U2

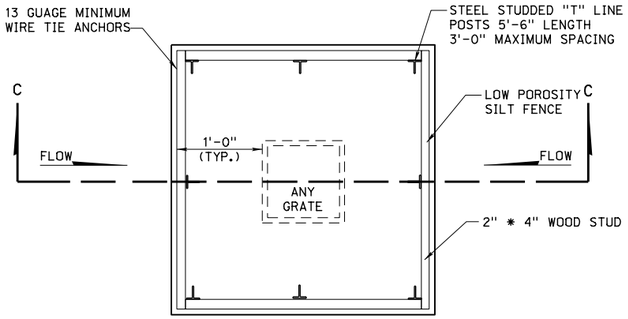
ROADWAY DESIGN DIVISION.



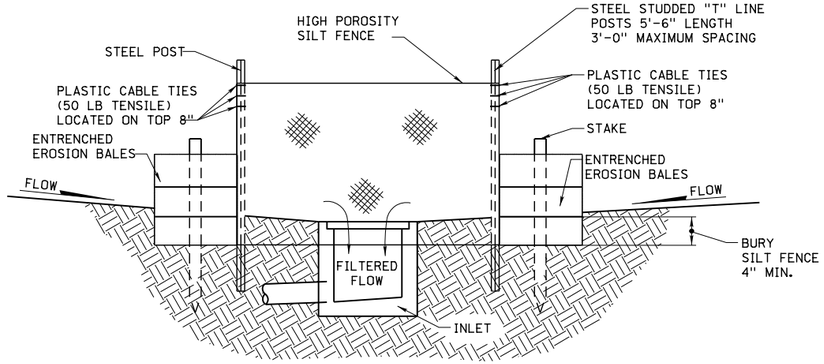
PLAN VIEW



PLAN VIEW



PLAN VIEW



SECTION A-A

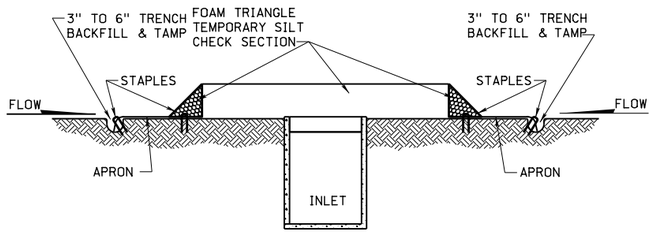
EROSION BALE AND SILT FENCE FILTER AT INLET

NOTES:

STAKES SHALL BE WOOD AND BE 2" * 2" * 3'-0" NOMINAL.

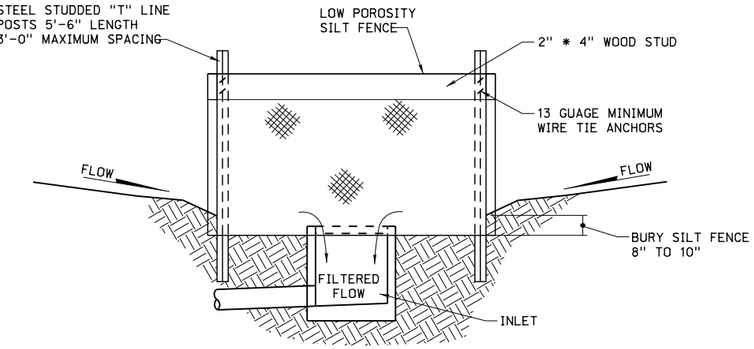
EROSION BALES SHALL BE 18" * 18" * 36".

EROSION BALES SHALL BE ENTRENCHED 4 INCH MINIMUM INTO THE SOIL, TIGHTLY ABUTTED WITH NO GAPS, STAKED, AND BACKFILLED AROUND THE ENTIRE OUTSIDE PERIMETER.



SECTION B-B

FOAM TRIANGLE FILTER AT INLET



ELEVATION

SECTION C-C

SILT FENCE AND WOOD FRAME FILTER AT INLET

NOTES:

1. THE TOP OF THE STRUCTURE (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

SHEET 1 OF 2

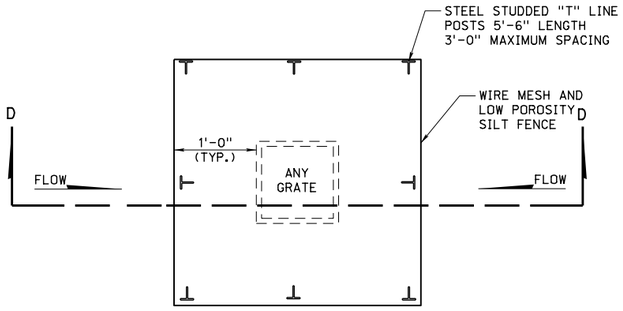
SPECIAL PLAN 2C - INLET PROTECTION

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Scale: 1:40
Date: 12-MAR-2025 10:47
Computer: LINMEGANS

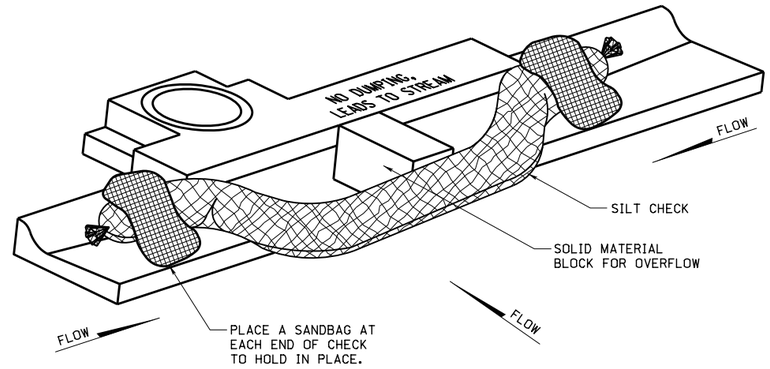
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	U3

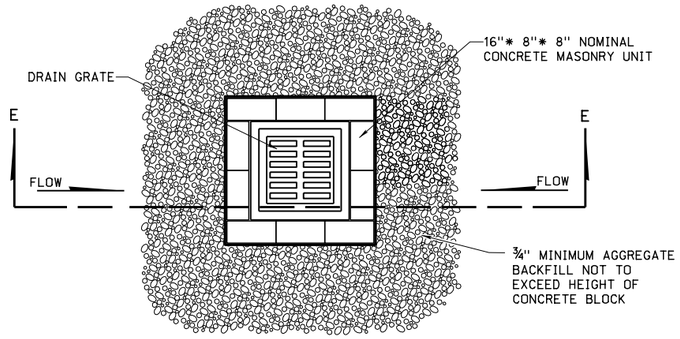
ROADWAY DESIGN DIVISION.



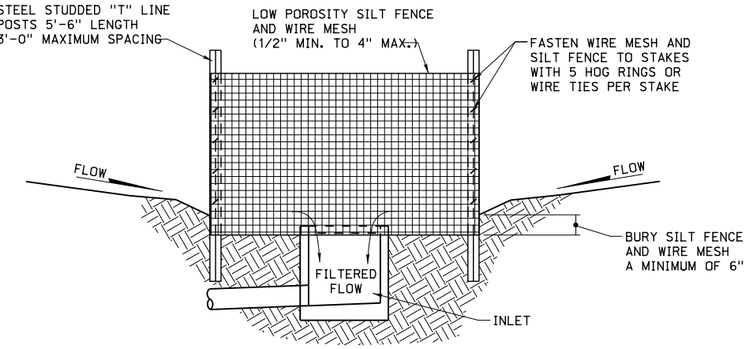
PLAN VIEW



CURB INLET PERSPECTIVE VIEW



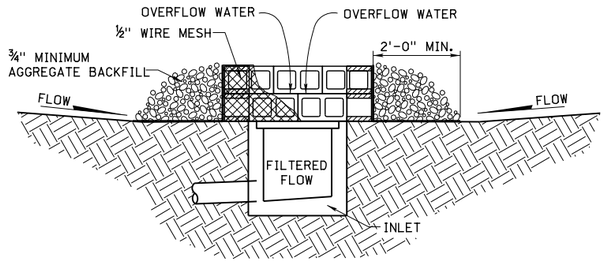
PLAN VIEW



ELEVATION

SECTION D-D

WIRE MESH BACKED SILT FENCE
FILTER AT INLET



SECTION E-E

BLOCK AND GRAVEL
FILTER AT INLET

NOTES:

1. APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.
2. ½" WIRE MESH SHALL COVER ENTIRE VERTICAL FACE OF BLOCKS AND APRON BELOW THE AGGREGATE BACKFILL.
3. THE TOP OF THE STRUCTURE (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.
4. BLOCK COURSES SHOULD OFFSET TO IMPROVE STRUCTURAL STABILITY.

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

SHEET 2 OF 2

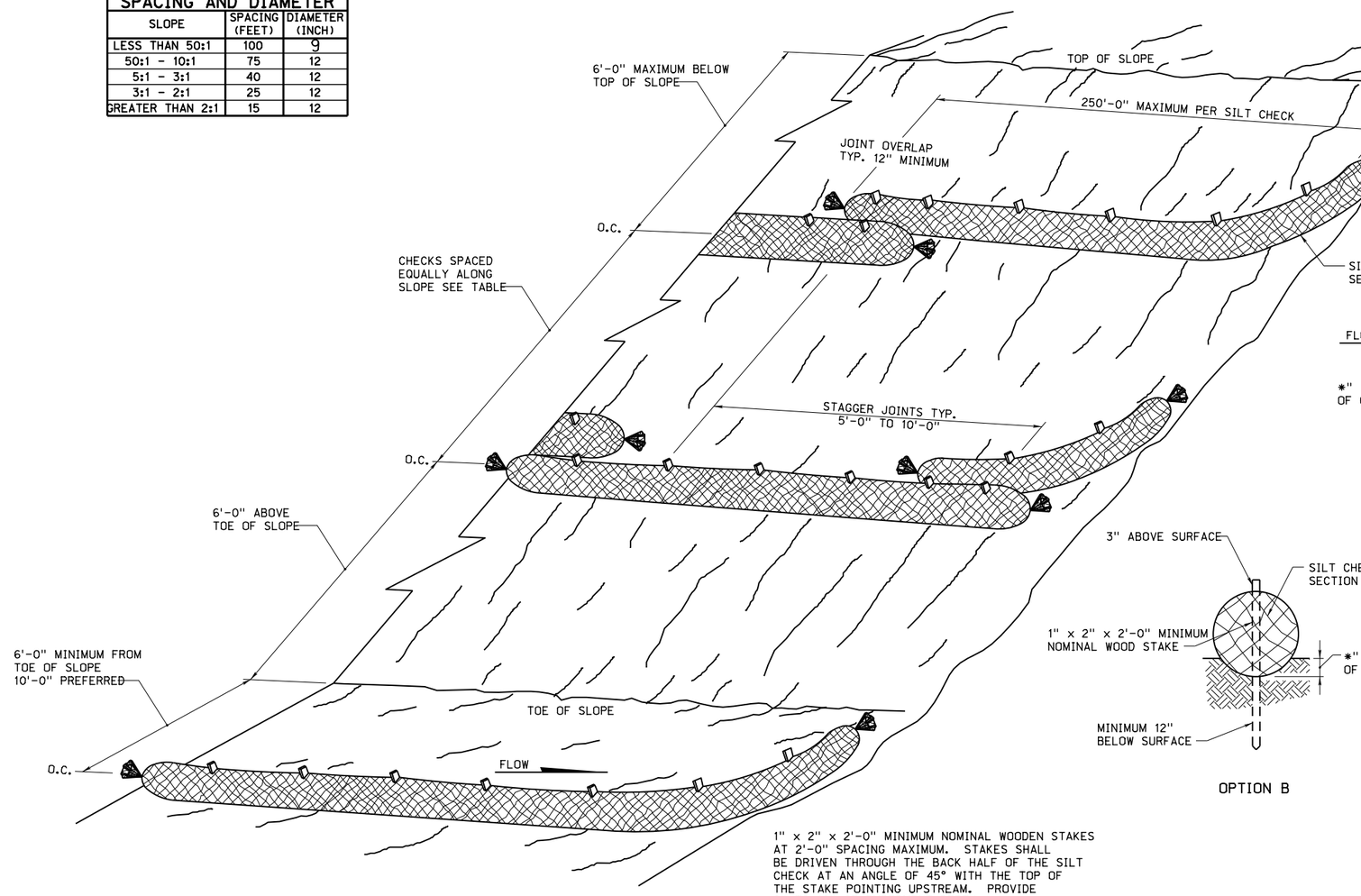
SPECIAL PLAN 2C - INLET PROTECTION

File: 09336001 Special Plan 3C - IRRIGATION HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40
Date: 12-MAR-2025 10:47
Computer: LINMEGANS

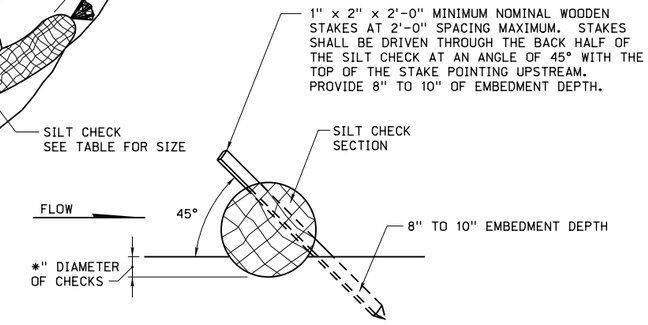
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PROJECT NO.	SHEET NO.
09336.001-C	U4

SILT CHECKS, SLOPE, SPACING AND DIAMETER		
SLOPE	SPACING (FEET)	DIAMETER (INCH)
LESS THAN 50:1	100	9
50:1 - 10:1	75	12
5:1 - 3:1	40	12
3:1 - 2:1	25	12
GREATER THAN 2:1	15	12

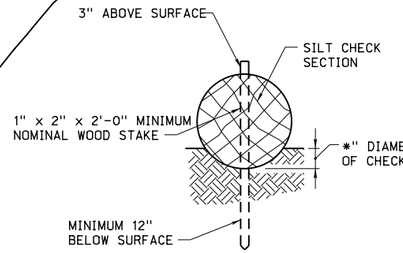


SLOPE APPLICATION
PERSPECTIVE VIEW

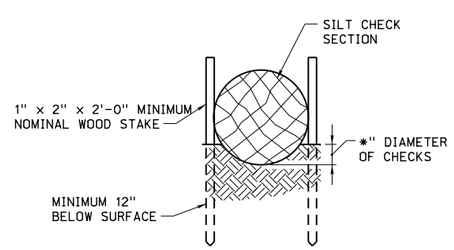


OPTION A

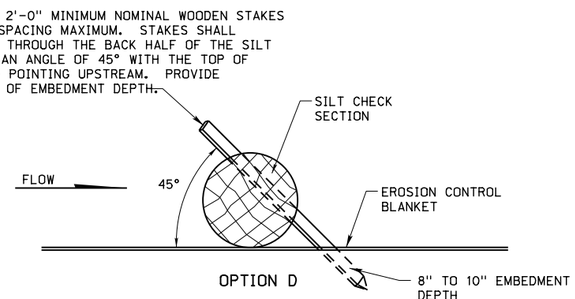
SILT STAKE DETAIL (WITH TRENCH)



OPTION B



OPTION C



OPTION D

STAKE DETAIL
(NO TRENCH)

NOTE:

TRENCHING IS OPTIONAL FOR CHECKS ON BACKSLOPES & FORESLOPES

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

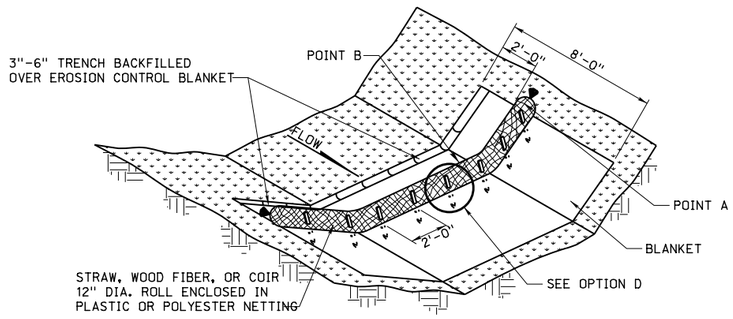
SHEET 1 OF 4

SPECIAL PLAN 3C

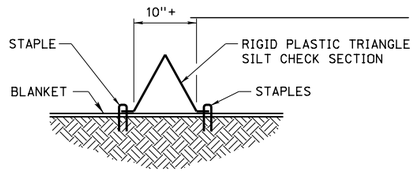
File: 09336001 Special Plan 4C - SPROADWAY DESIGN DIVISION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
Scale: 1:40 Date: 12-MAR-2025 10:09 Computer: LINMEGANS
1 OF 4 5104 1 R0

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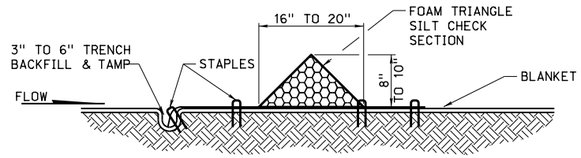
PROJECT NO.	SHEET NO.
09336.001-C	U5



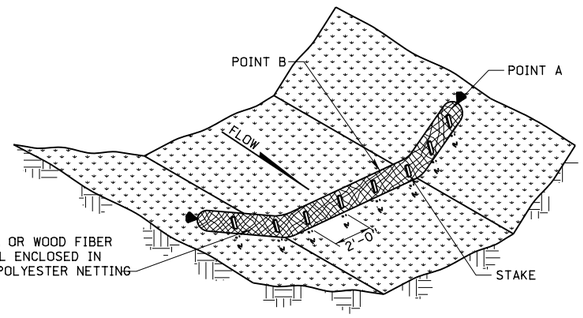
TYPE 2 & 3: HIGH & LOW
WITH EROSION CONTROL



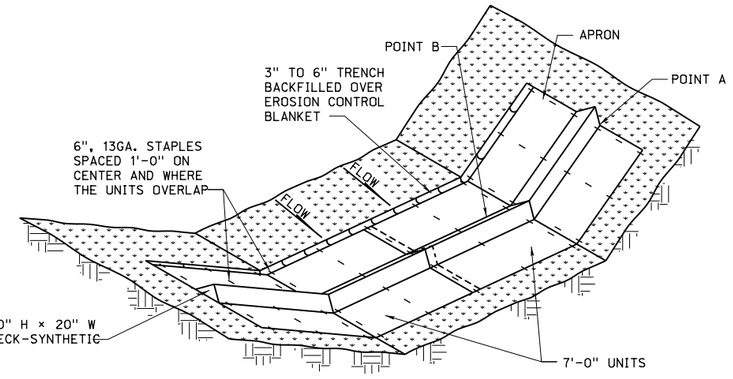
TYPE 4 SECTION



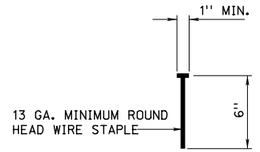
TYPE 4 SECTION

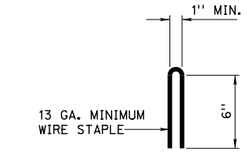


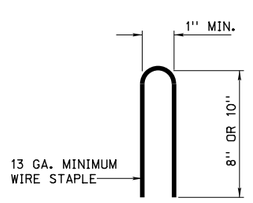
TYPE 1, 2 & 3: HIGH & LOW
USE ON ROUGH GRADED & BARE SOIL AREAS



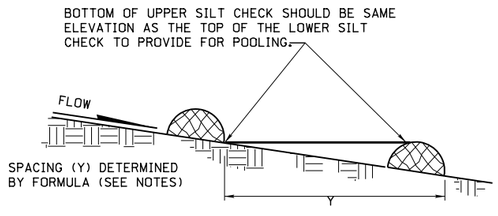
SILT CHECK: TYPE 4







WIRE STAPLE DETAIL



SILT CHECK SPACING-DITCH

NOTES:

APPROXIMATE SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM THE FOLLOWING SPACING FORMULA:

APPROXIMATE SPACING OF DITCH CHECKS (FT.) = $Y = \frac{\text{SILT CHECK HEIGHT (FT.)}}{\text{\% CHANNEL SLOPE}} \times 100$

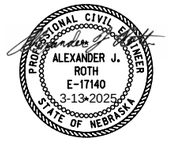
POINT A MUST BE A MINIMUM OF 6" HIGHER THAN POINT B TO ENSURE THAT WATER FLOWS OVER THE CHECK AND NOT AROUND THE ENDS.

PERMANENT ROCK CHECKS PLACED WITHIN THE CLEAR ZONE WILL NEED TO BE 18" OR LESS IN HEIGHT. A 10:1 APPROACH AND DEPARTURE SLOPE SHALL BE PROVIDED.

THE TRENCH ON THE UPSTREAM SIDE OF THE SILT CHECK IS NOT REQUIRED IF THE EROSION CONTROL BLANKET CONTINUES IN THE ENTIRE LENGTH OF THE DITCH.

THE MANUFACTURERS RECOMMENDED INSTALLATION DETAILS SHALL GOVERN OVER THE PLANS.

SEE STAKING DETAIL SHEET 1 OF 4

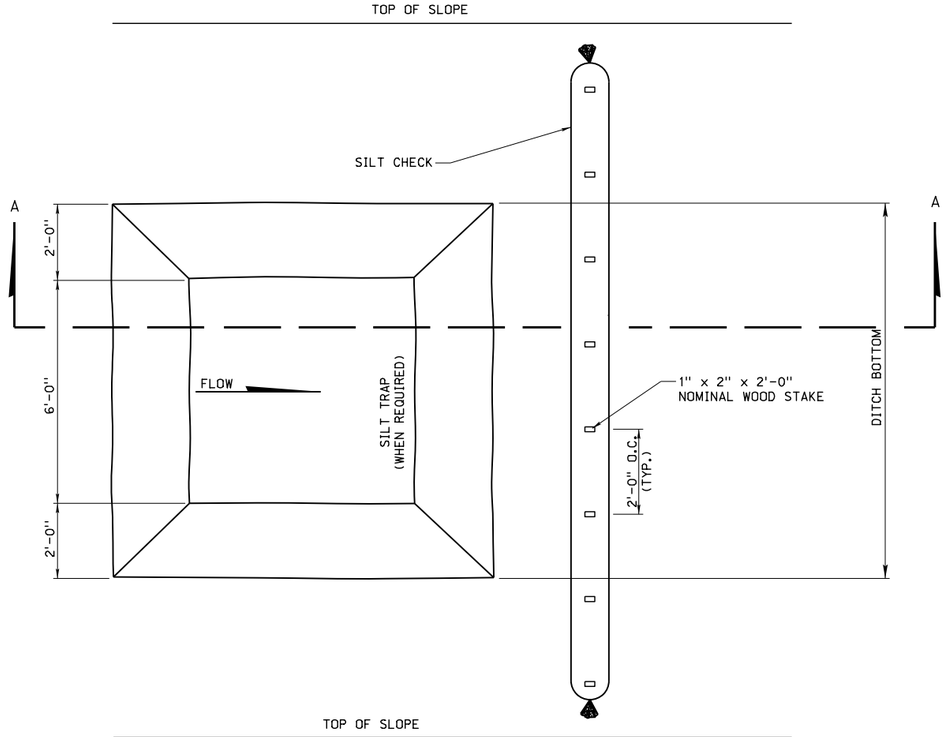


SPECIAL PLAN 3C

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Scale: 1:40
Date: 12-MAR-2025 10:09
Computer: LINMEGANS
2 OF 4 5104 1 R0

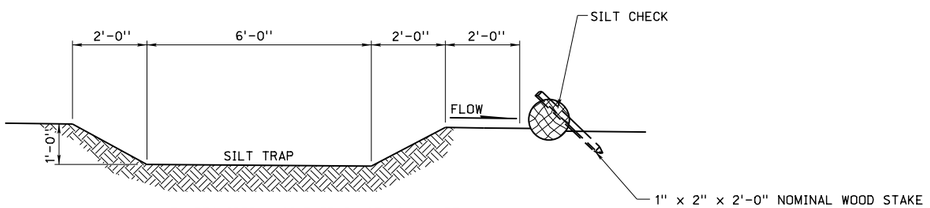
SCHEMMER
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	U6



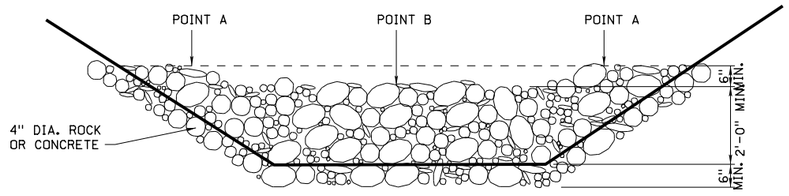
PLAN VIEW

FOR FLAT BOTTOM DITCH

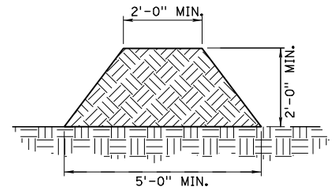


WHEN REQUIRED A SILT TRAP (ST) SHALL BE EXCAVATED TO THE WIDTH OF THE DITCH AND NO DIRECT PAYMENT WILL BE MADE.

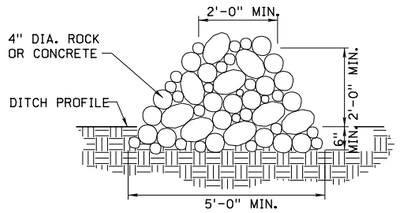
SECTION A-A



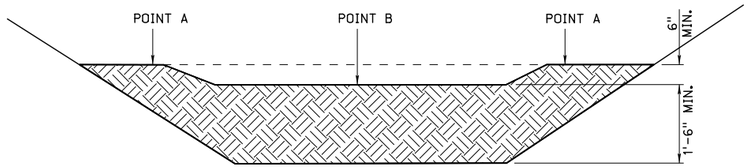
ROCK CHECK
ELEVATION VIEW



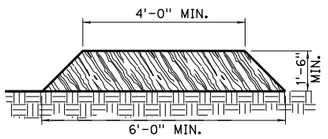
EARTH-SLASH MULCH PERIMETER BERM
CROSS SECTION



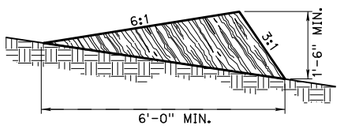
ROCK CHECK
CROSS SECTION



EARTH-SLASH MULCH CHECK
ELEVATION VIEW



CROSS SECTION
SILT CHECK-SLASH MULCH
OPTION A



CROSS SECTION
SILT CHECK-SLASH MULCH
OPTION B

SEE STAKING DETAIL SHEET 1 OF 4



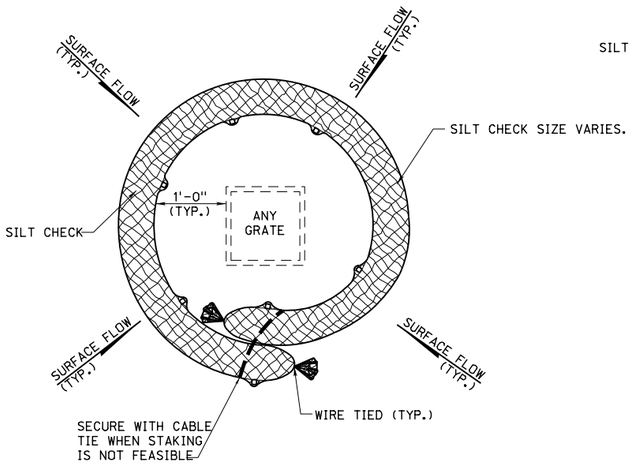
SPECIAL PLAN 3C

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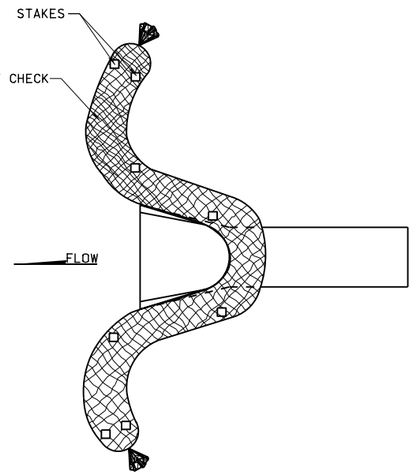
SCHEMMER
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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	U7

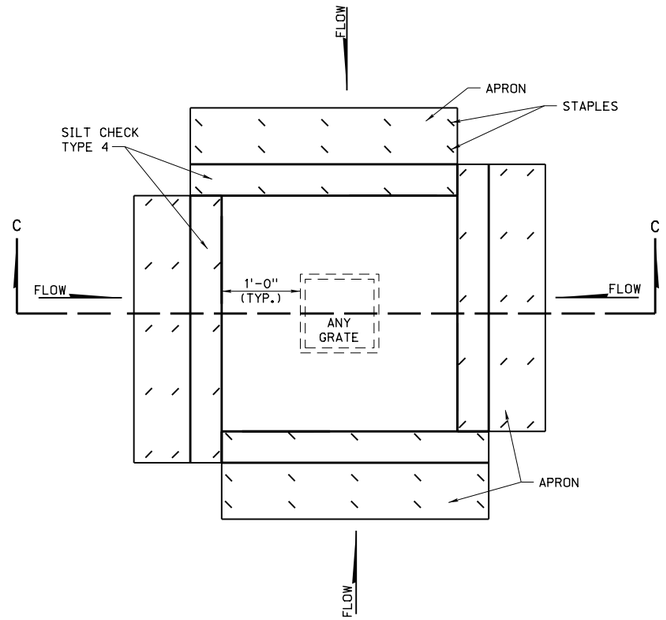
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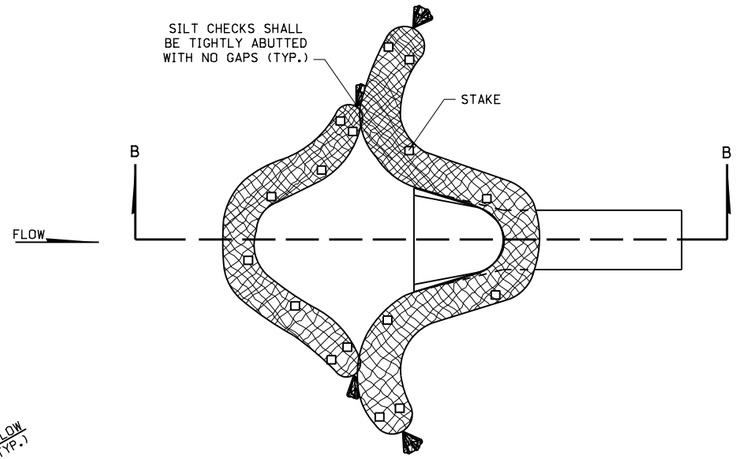
PLAN VIEW



SILT CHECK OUTLET PROTECTION

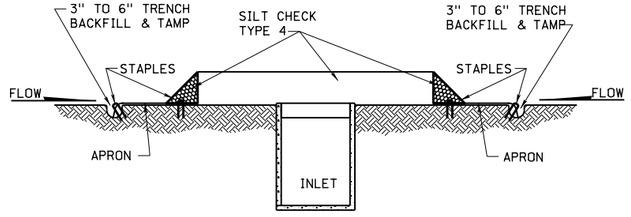


PLAN VIEW



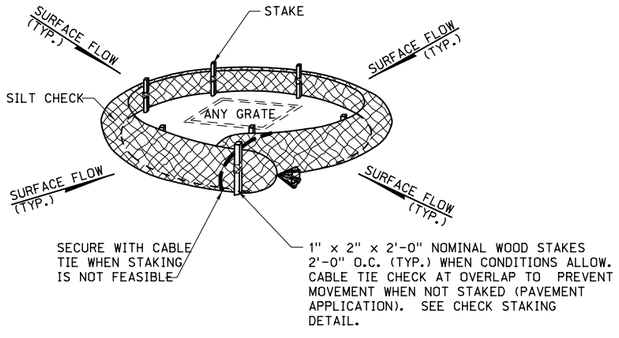
PLAN VIEW

SILT CHECK INLET PROTECTION

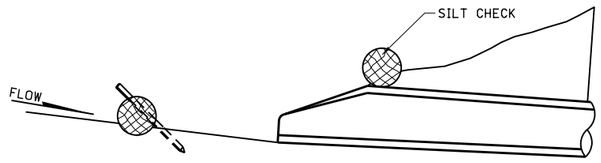


SECTION C-C

SILT CHECK TYPE 4 AT INLET



SILT CHECK INLET FILTER
PERSPECTIVE VIEW



SECTION B-B

SEE STAKING DETAIL SHEET 1 OF 4

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E-17140
3-13-2025
STATE OF NEBRASKA

SHEET 4 OF 4

SPECIAL PLAN 3C

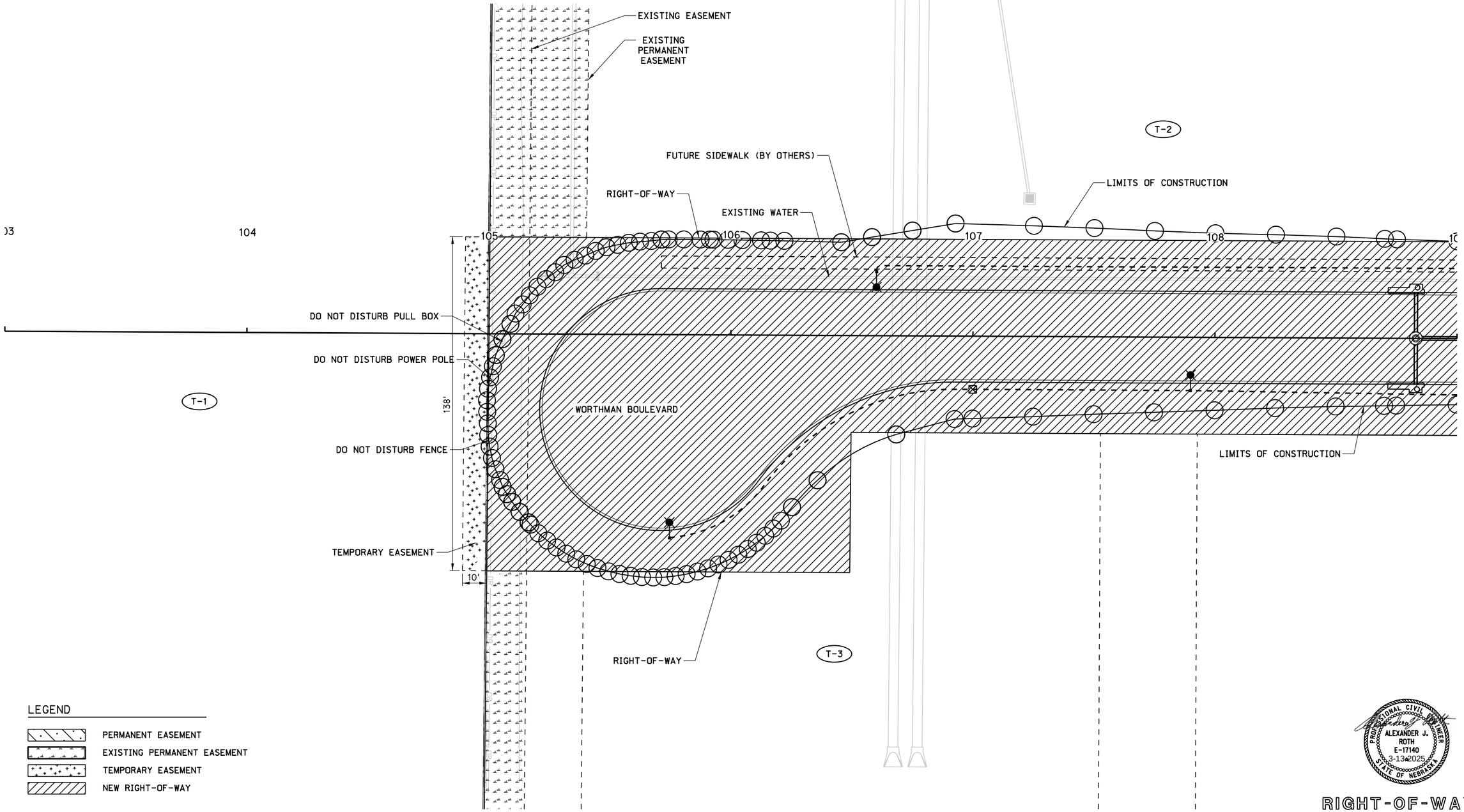
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PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:09
Computer: LINMEGANS
4 OF 4 SHT 1 RO

OWNERSHIP				EASEMENTS	
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-1	DENNIS & LODEEN KORANDA	29-11-3 #SW 1/4 150 AC	-	-	1,380
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-2	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 17	-	6,440	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-3	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 16	-	-	-

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PROJECT NO.	SHEET NO.
09336.001-C	W1

0 20' 40'
SCALE



LEGEND

- PERMANENT EASEMENT
- EXISTING PERMANENT EASEMENT
- TEMPORARY EASEMENT
- NEW RIGHT-OF-WAY

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

RIGHT-OF-WAY

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:09
Computer: LINMEGANS

File: 09336001 ROW01.dgn
Scale: 1:40

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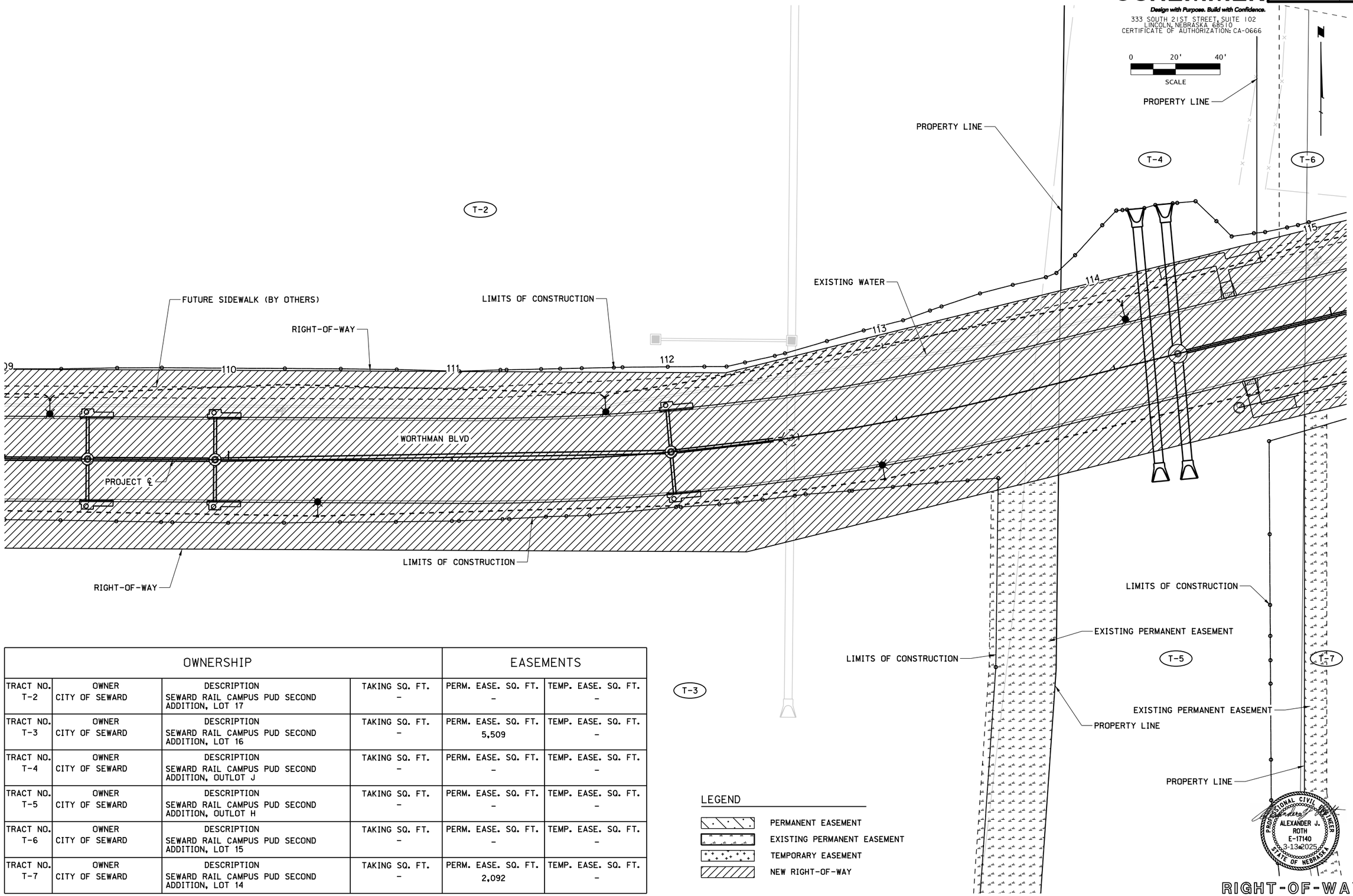
PROJECT NO.	SHEET NO.
09336.001-C	W2

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:09
Computer: LINMEGANS

File: 09336001 ROW02.dgn
Scale: 1:40

0 20' 40'
SCALE



OWNERSHIP				EASEMENTS	
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-2	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 17	-	-	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-3	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 16	-	5,509	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-4	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, OUTLOT J	-	-	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-5	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, OUTLOT H	-	-	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-6	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 15	-	-	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-7	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 14	-	2,092	-

LEGEND

- PERMANENT EASEMENT
- EXISTING PERMANENT EASEMENT
- TEMPORARY EASEMENT
- NEW RIGHT-OF-WAY

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

RIGHT-OF-WAY

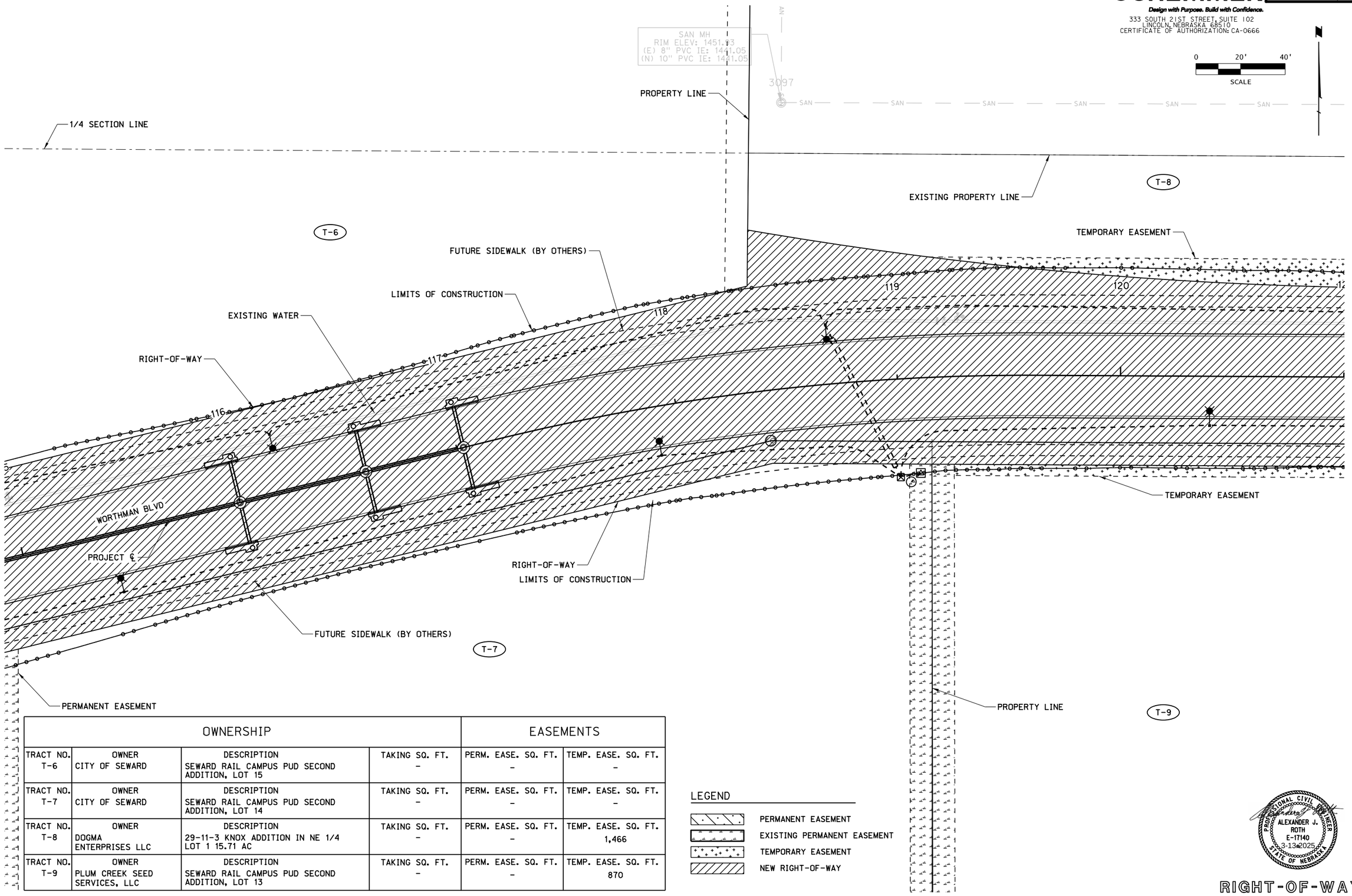
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PROJECT NO.	SHEET NO.
09336.001-C	W3

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:09
Computer: LINMEGANS

File: 09336001 ROW03.dgn
Scale: 1:40



OWNERSHIP				EASEMENTS	
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-6	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 15	-	-	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-7	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 14	-	-	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-8	DOGMA ENTERPRISES LLC	29-11-3 KNOX ADDITION IN NE 1/4 LOT 1 15.71 AC	-	-	1,466
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-9	PLUM CREEK SEED SERVICES, LLC	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 13	-	-	870

LEGEND

- PERMANENT EASEMENT
- EXISTING PERMANENT EASEMENT
- TEMPORARY EASEMENT
- NEW RIGHT-OF-WAY

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3-13-2025
STATE OF NEBRASKA

RIGHT-OF-WAY

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CERTIFICATE OF AUTHORIZATION: CA-0666

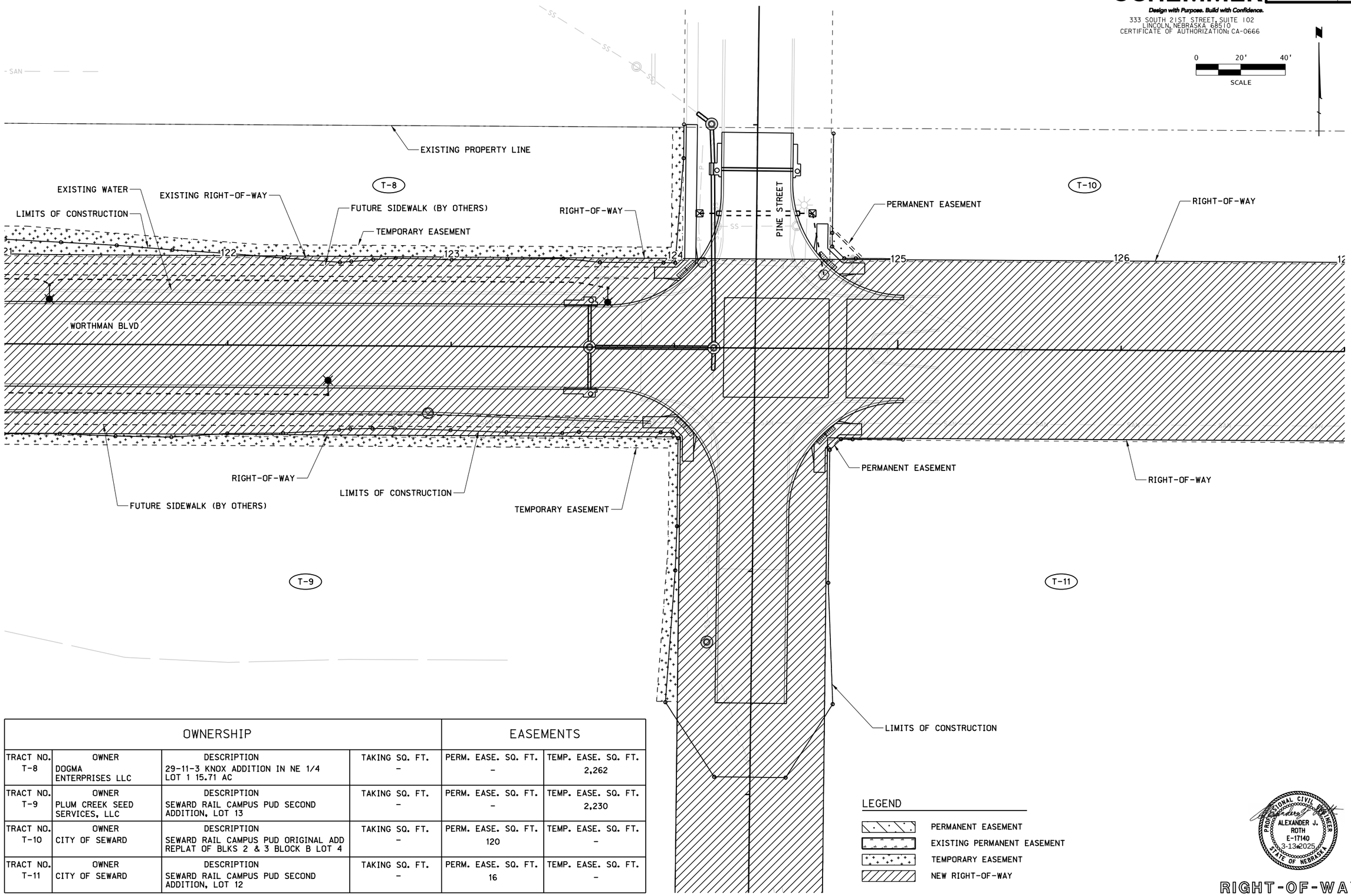
PROJECT NO.	SHEET NO.
09336.001-C	W4

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:09
Computer: LINMEGANS

File: 09336001 ROW04.dgn
Scale: 1:40

0 20' 40'
SCALE



OWNERSHIP				EASEMENTS	
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-8	DOGMA ENTERPRISES LLC	29-11-3 KNOX ADDITION IN NE 1/4 LOT 1 15.71 AC	-	-	2,262
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-9	PLUM CREEK SEED SERVICES, LLC	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 13	-	-	2,230
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-10	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD ORIGINAL ADD REPLAT OF BLKS 2 & 3 BLOCK B LOT 4	-	120	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-11	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 12	-	16	-

LEGEND

- PERMANENT EASEMENT
- EXISTING PERMANENT EASEMENT
- TEMPORARY EASEMENT
- NEW RIGHT-OF-WAY

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

RIGHT-OF-WAY

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Horizontal Scale 1 : 10
Vertical Scale 1 : 10

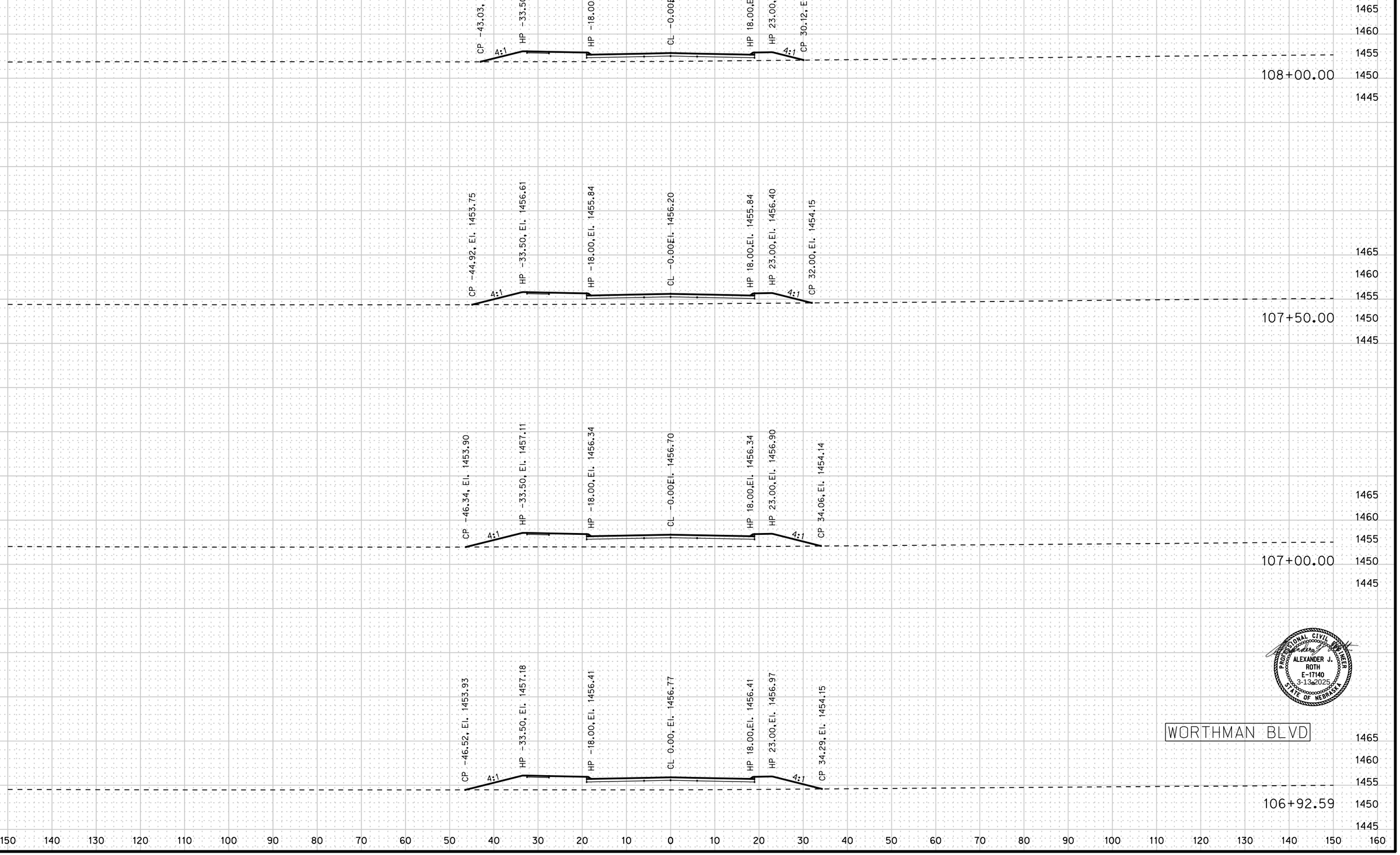
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09336001-C	XS1

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE ROADWAY DESIGN DIVISION.

Computer: LINMEGANS

File: 09336001 Cross Sections - Worthman.dgn 22-MAR-2025 10:09



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3-13-2025
STATE OF NEBRASKA

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CERTIFICATE OF AUTHORIZATION: CA-0666

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Vertical Scale	1 : 10

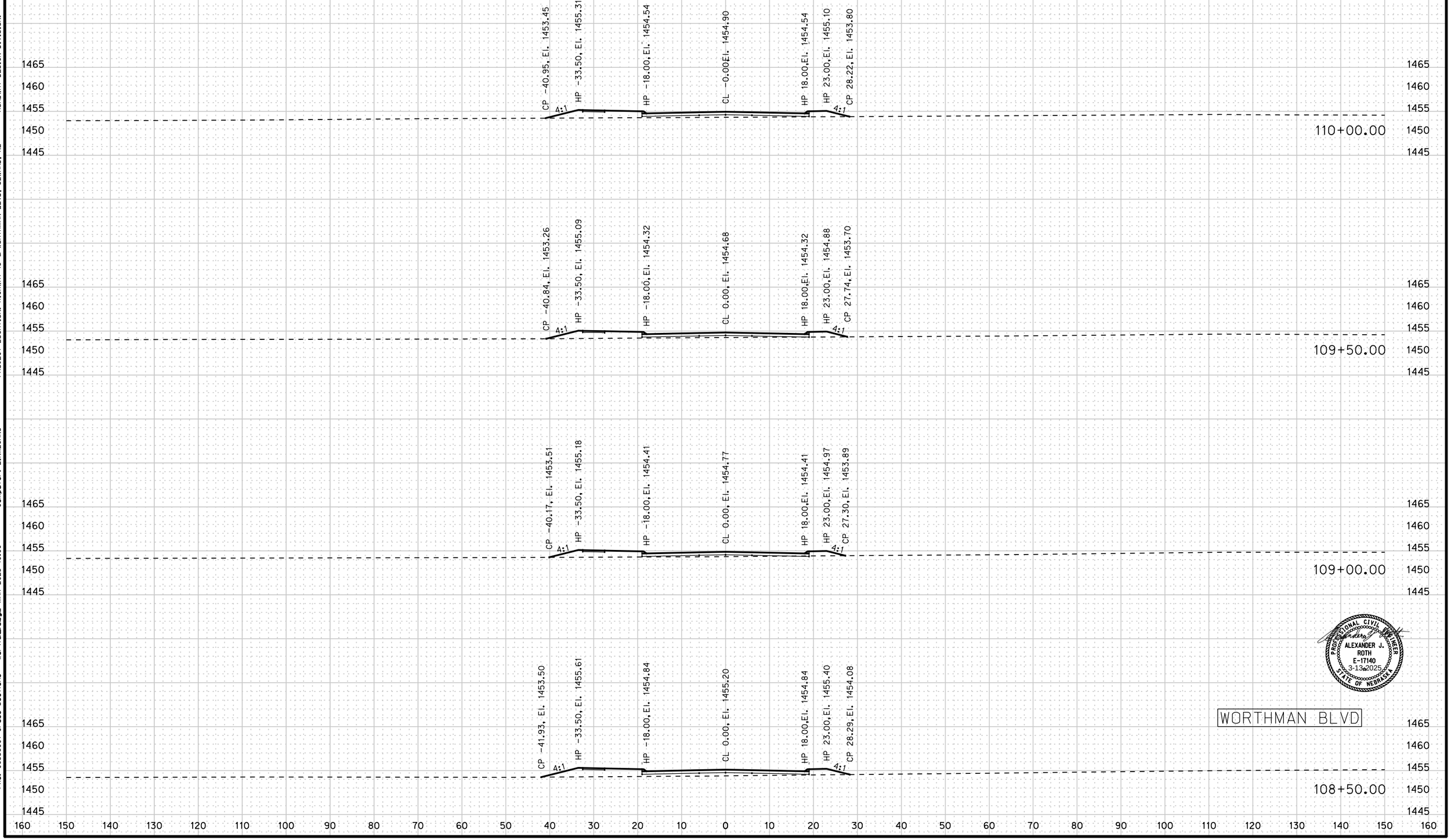
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09336001-C	XS2

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PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE ROADWAY DESIGN DIVISION.

Computer: LINMEGANS

File: 09336001 Cross Sections - Worthman.dgn 22-MAR-2025 10:09



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3-13-2025
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

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Vertical Scale 1 : 10

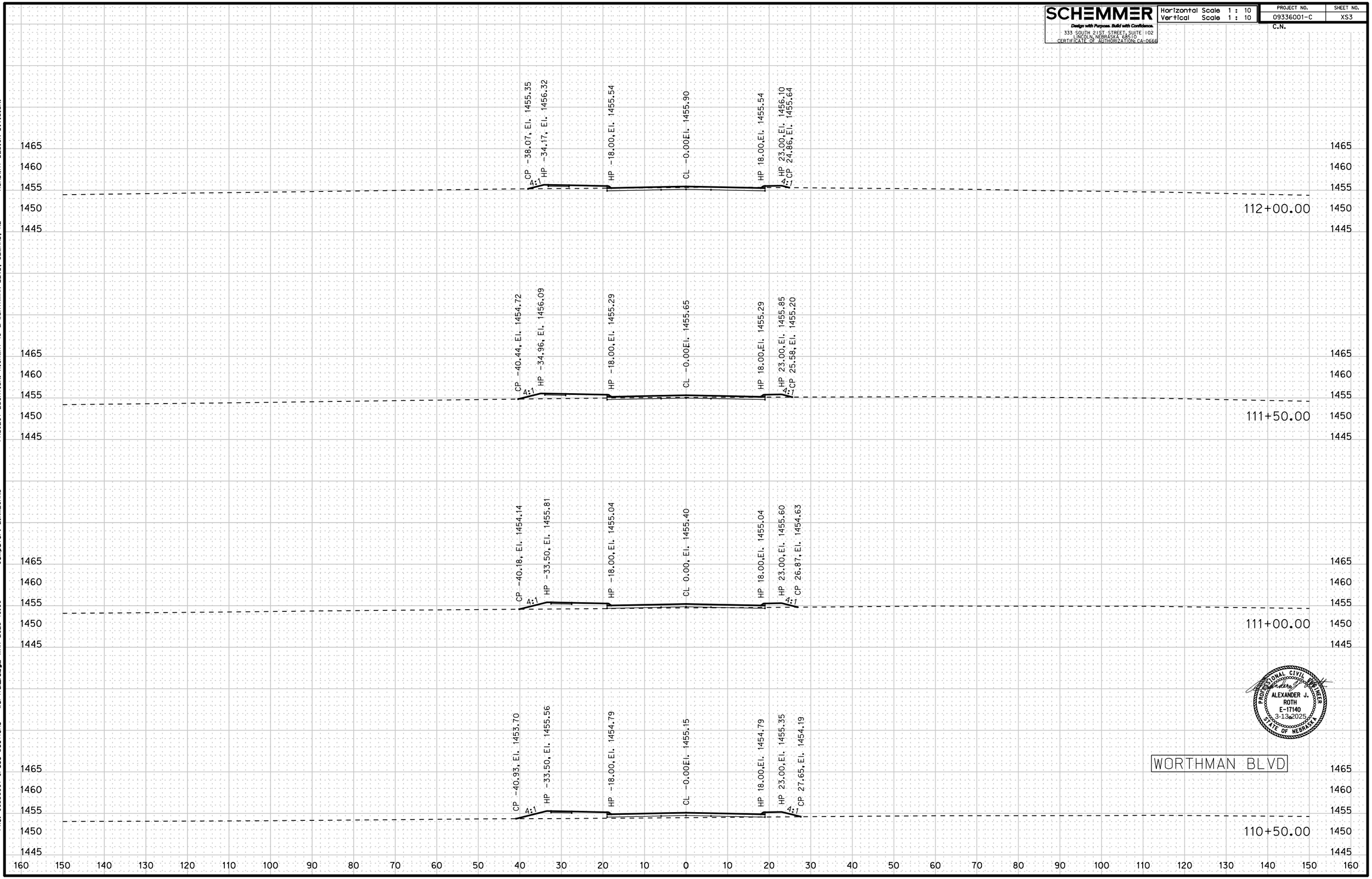
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PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE ROADWAY DESIGN DIVISION.

Computer: LINMEGANS

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CERTIFICATE OF AUTHORIZATION: CA-0666

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Vertical Scale 1 : 10

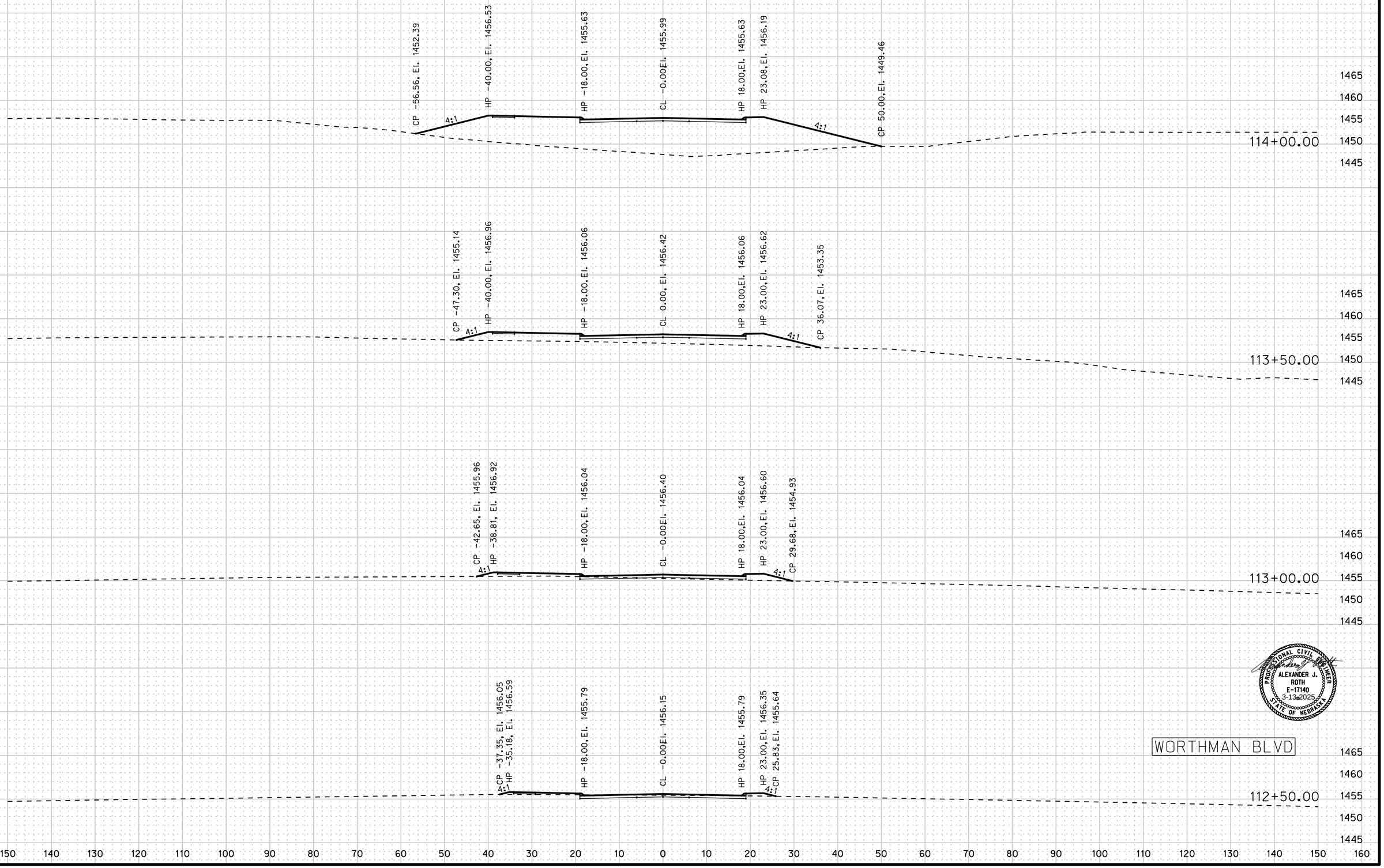
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09336001-C	XS4

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE ROADWAY DESIGN DIVISION.

Computer: LINMEGANS

File: 09336001 Cross Sections - Worthman.dgn 12-MAR-2025 10:09



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STATE OF NEBRASKA

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CERTIFICATE OF AUTHORIZATION: CA-0666

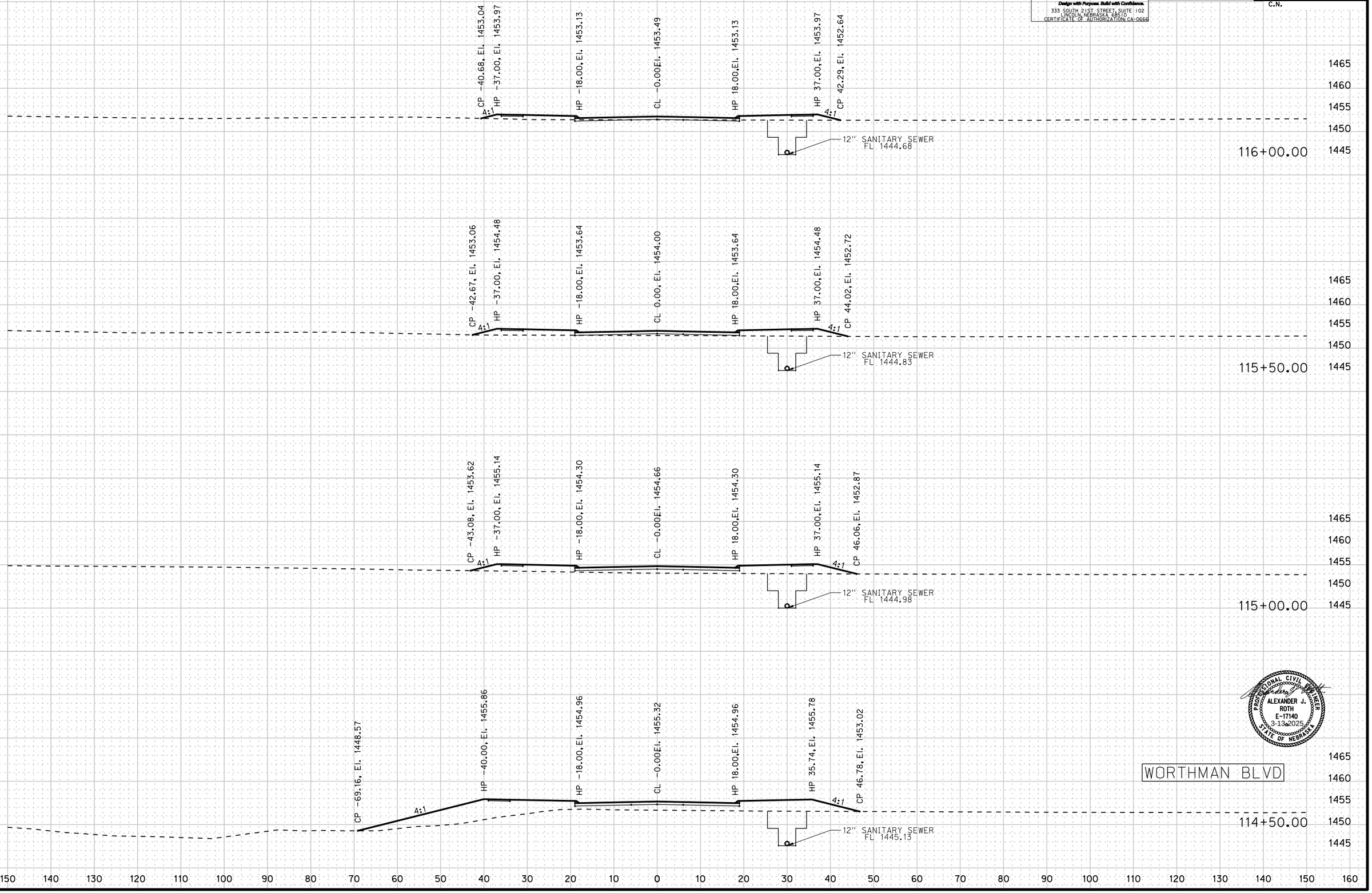
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PROJECT NO.	SHEET NO.
09336001-C	XS5

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE ROADWAY DESIGN DIVISION.

File: 09336001 Cross Sections - Worthman.dgn Computer: LINMEGANS Date: 22-MAR-2025 10:09



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3-13-2025
STATE OF NEBRASKA

WORTHMAN BLVD

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

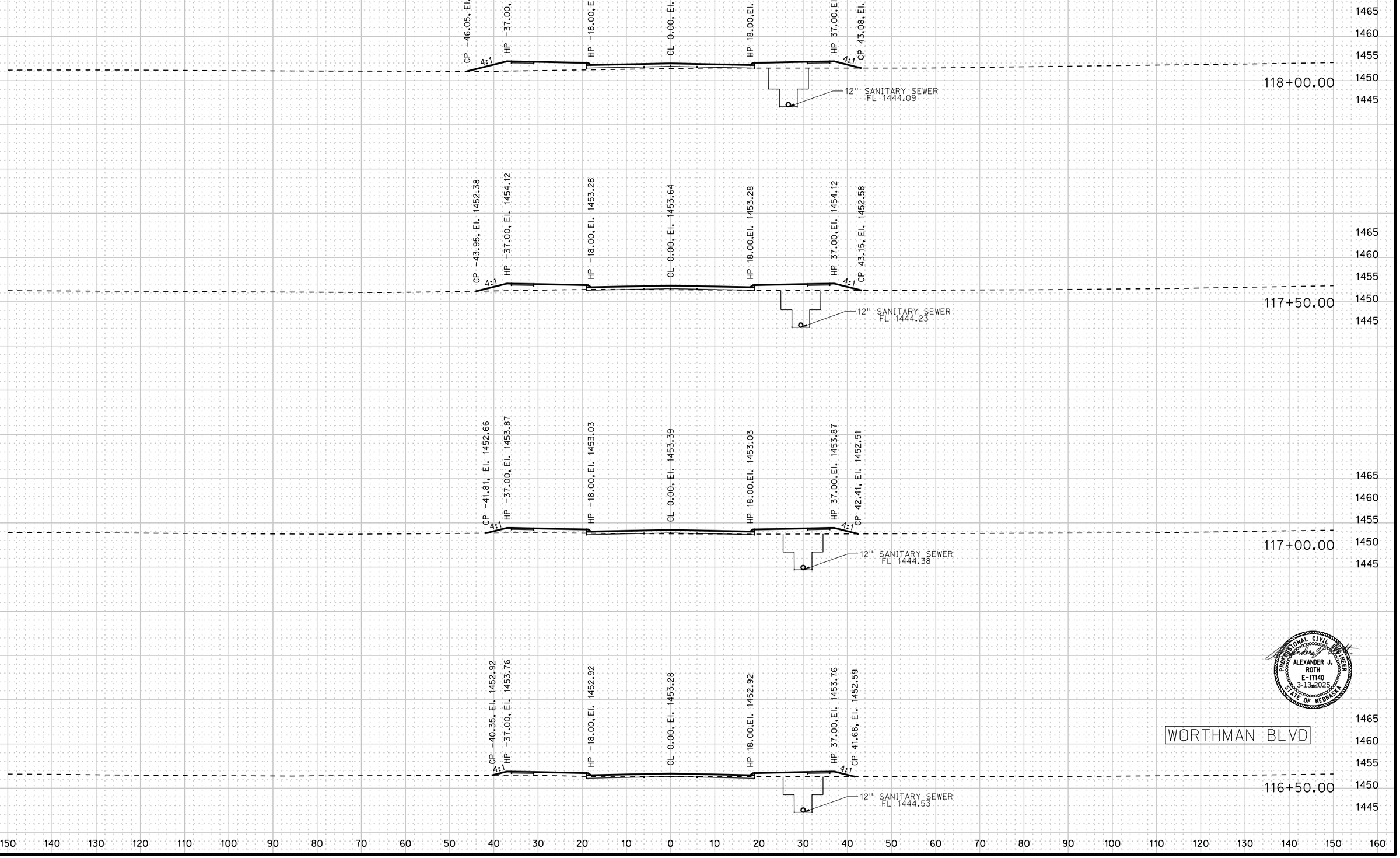
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PROJECT NO.	SHEET NO.
09336001-C	XS6

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE ROADWAY DESIGN DIVISION.

File: 09336001 Cross Sections - Worthman.dgn Computer: LINMEGANS 22-MAR-2025 10:09



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CERTIFICATE OF AUTHORIZATION: CA-0666

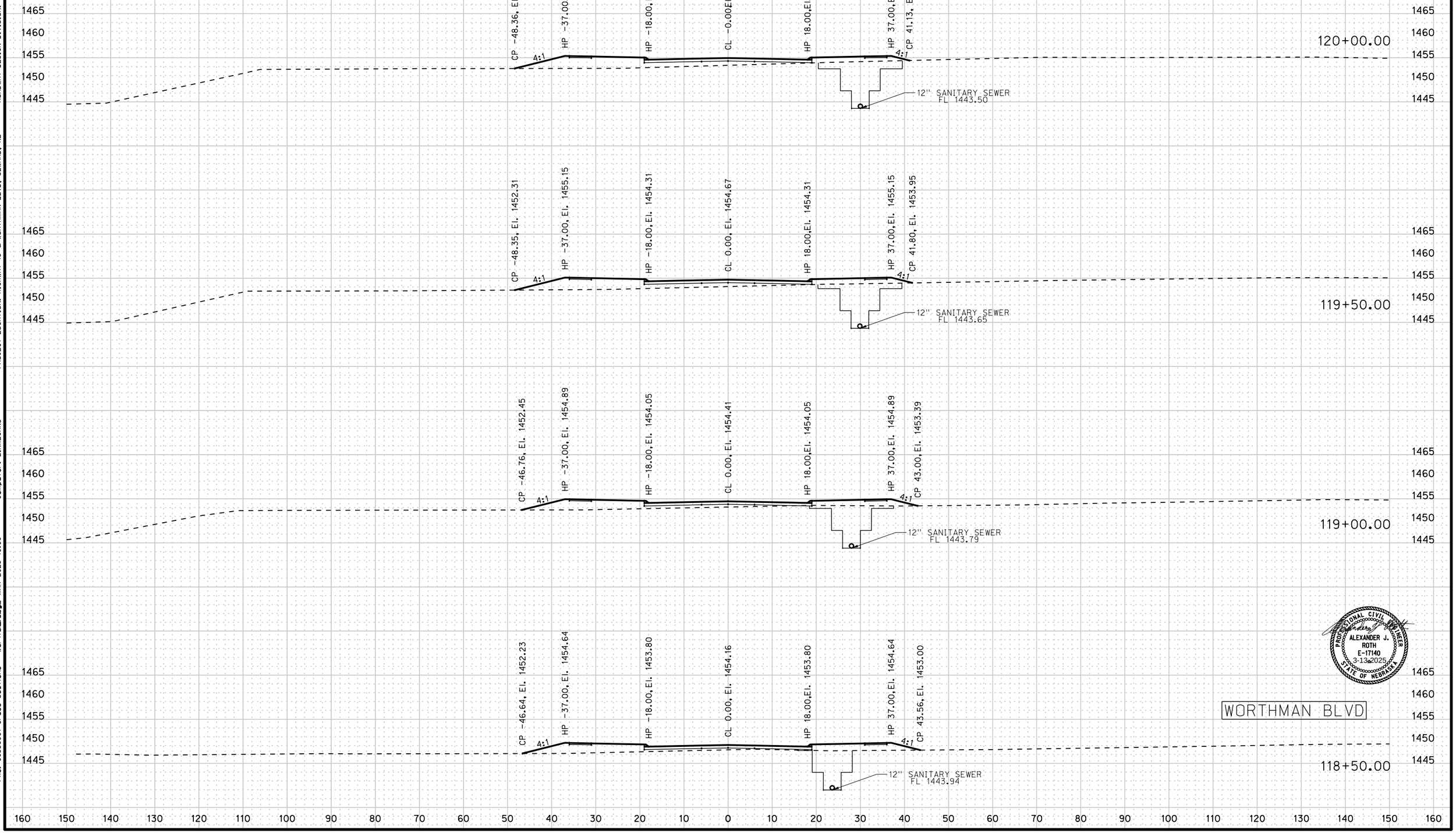
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PROJECT NO.	SHEET NO.
09336001-C	XS7

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
ROADWAY DESIGN DIVISION.

Computer: LINMEGANS
Date: 22-MAR-2025 10:09
File: 09336001 Cross Sections - Worthman.dgn



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ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

WORTHMAN BLVD

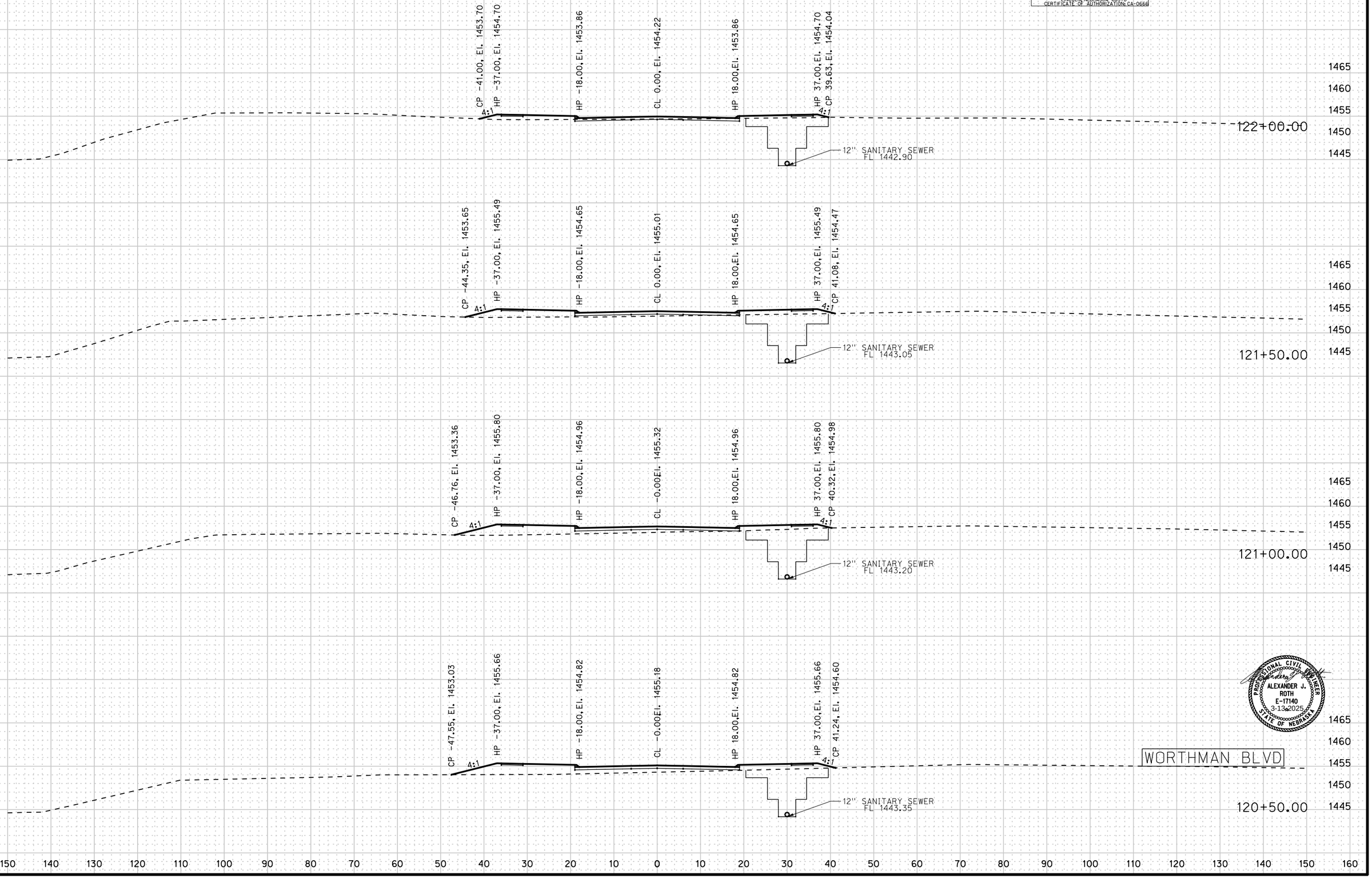
SCHEMMER
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale 1 : 10
Vertical Scale 1 : 10

PROJECT NO.	SHEET NO.
09336001-C	XS8

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
ROADWAY DESIGN DIVISION.
Computer: LINMEGANS
File: 09336001 Cross Sections - Worthman.dgn 22-MAR-2025 10:09



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3-13-2025
STATE OF NEBRASKA

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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

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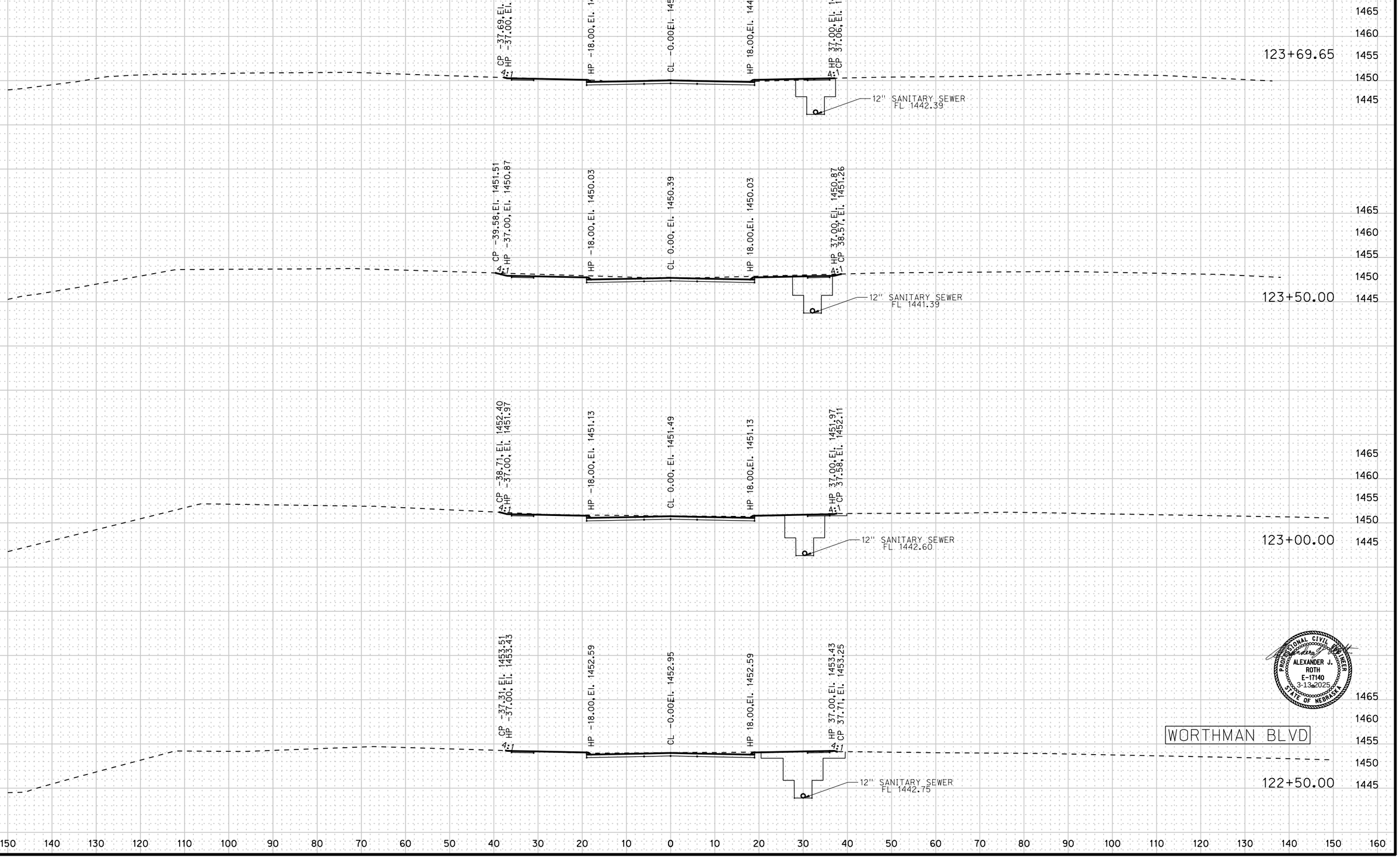
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C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE ROADWAY DESIGN DIVISION.

Computer: LINMEGANS

File: 09336001 Cross Sections - Worthman.dgn 22-MAR-2025 10:09



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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale 1 : 10
Vertical Scale 1 : 10

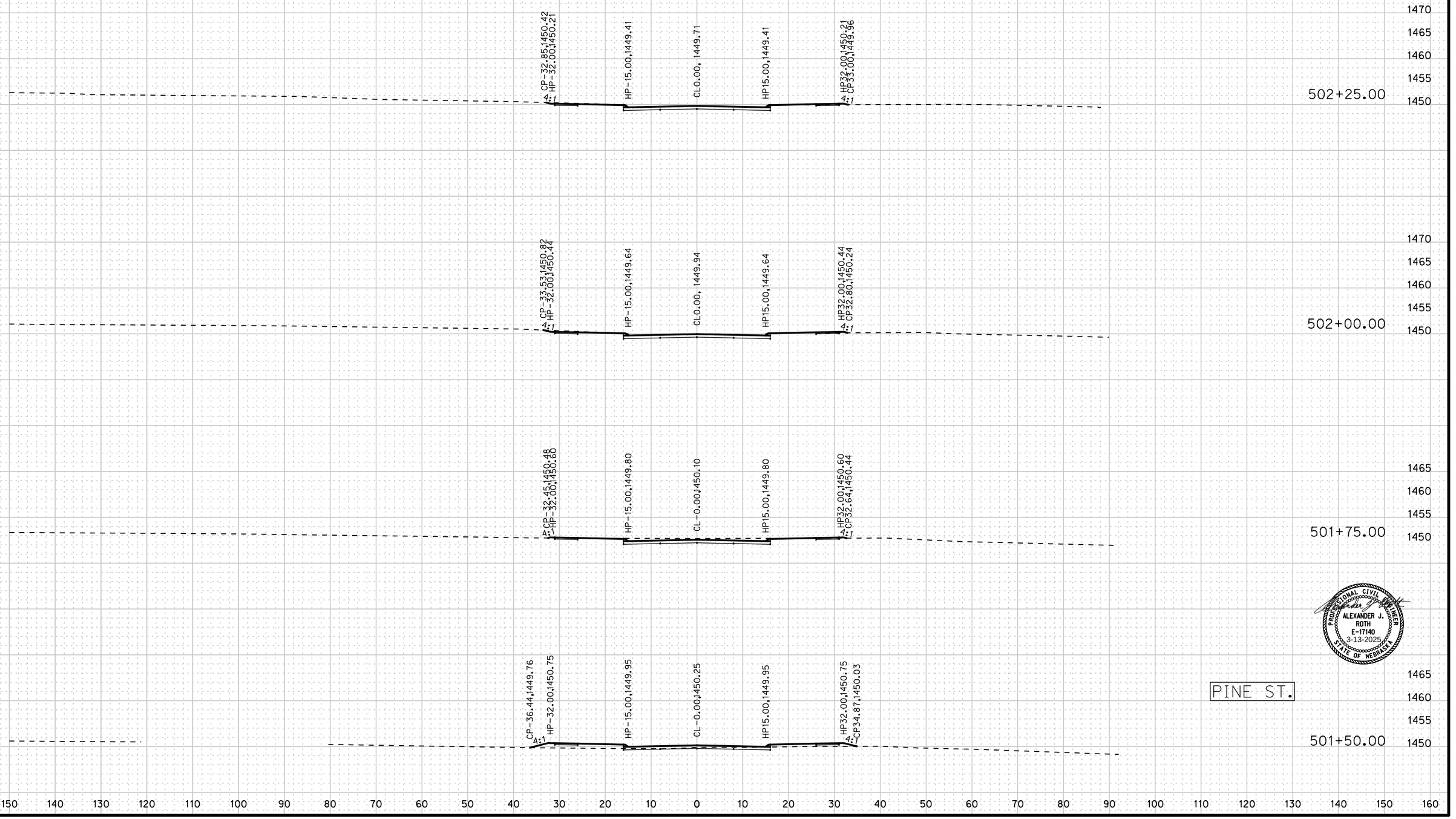
PROJECT NO.	SHEET NO.
09336001-C	XS10

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE ROADWAY DESIGN DIVISION.

...\BW with Gray topo.tbl

...\09336001 Cross Sections - Pine.dgn 3/12/2025



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3-13-2025
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CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale	1 : 10
Vertical Scale	1 : 10

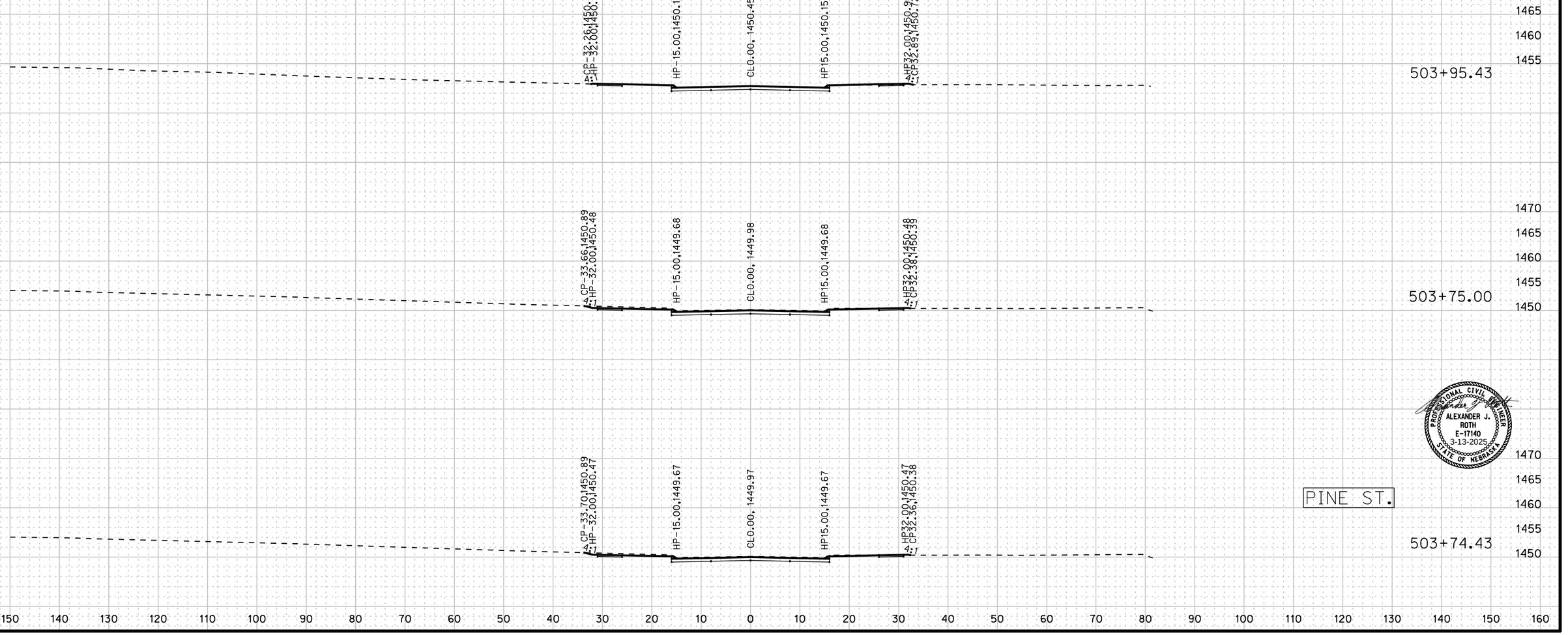
PROJECT NO.	SHEET NO.
09336001-C	XS11

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE ROADWAY DESIGN DIVISION.

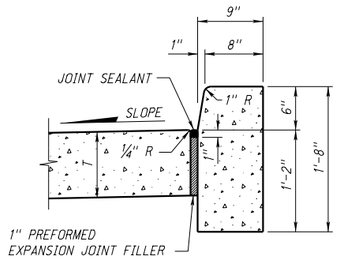
...\BW with Gray topo.tbl

...\09336001 Cross Sections - Pine.dgn 3/12/2025



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

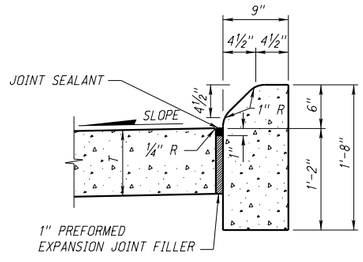
ROADWAY DESIGN DIVISION
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CONCRETE BARRIER CURB *

QUANTITIES

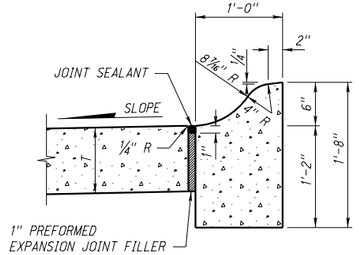
CONCRETE 4.55 CU. YDS./STA.
AREA 1.228 SQ. FT.



CONCRETE MEDIAN CURB *

QUANTITIES

CONCRETE 4.42 CU. YDS./STA.
AREA 1.192 SQ. FT.

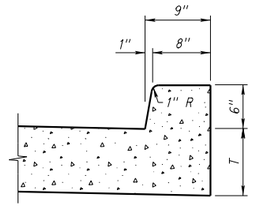


CONCRETE CURB, * TYPE I

QUANTITIES

CONCRETE 5.22 CU. YDS./STA.
AREA 1.408 SQ. FT.

*NOTE: * ONE INCH PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 100 FEET THRU CONCRETE BARRIER CURB, CONCRETE MEDIAN CURB, AND CONCRETE CURB, TYPE I.*

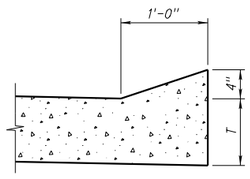


NOTE: MAY BE USED WHEN T IS LESS THAN 1 FOOT.

INTEGRAL CONCRETE BARRIER CURB

QUANTITIES

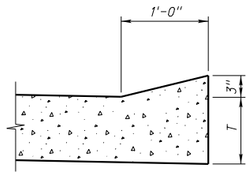
CONCRETE 1.33 CU. YDS./STA.
AREA 0.359 SQ. FT.



INTEGRAL CONCRETE SLOPING CURB

QUANTITIES

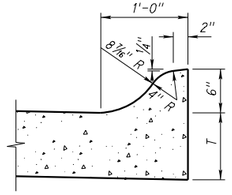
CONCRETE 0.62 CU. YDS./STA.
AREA 0.167 SQ. FT.



INTEGRAL CONCRETE SLOPING CURB

QUANTITIES

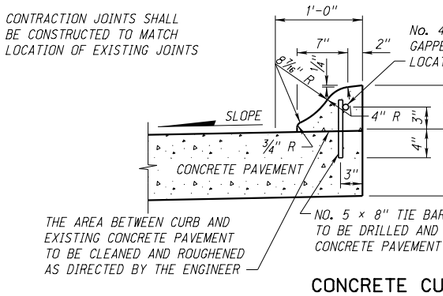
CONCRETE 0.46 CU. YDS./STA.
AREA 0.123 SQ. FT.



INTEGRAL CONCRETE CURB

QUANTITIES

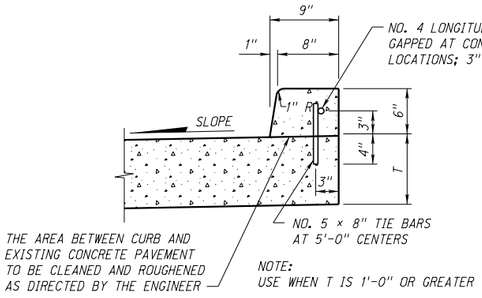
CONCRETE 0.89 CU. YDS./STA.
AREA 0.239 SQ. FT.



CONCRETE CURB, TYPE II

QUANTITIES

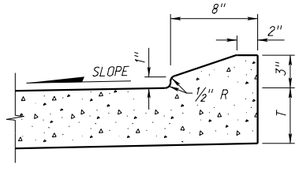
CONCRETE 0.87 CU. YDS./STA.
AREA 0.234 SQ. FT.



CONCRETE BARRIER CURB ALTERNATE

QUANTITIES

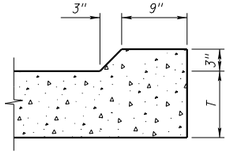
CONCRETE 1.33 CU. YDS./STA.
AREA 0.359 SQ. FT.



INTEGRAL CONCRETE TRUCK APRON CURB

QUANTITIES

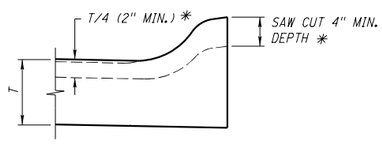
CONCRETE 0.47 CU. YDS./STA.
AREA 0.127 SQ. FT.



EROSION CONTROL CURB

QUANTITIES

CONCRETE 0.81 CU. YDS./STA.
AREA 0.219 SQ. FT.



CONTRACTION JOINT THRU CURB

* FOR NON-INTEGRAL CURB THE CONTRACTION JOINTS MAY BE MADE WITH A DOUBLE EDGER WHILE THE CONCRETE IS STILL PLASTIC.

NOTE: T = PAVEMENT THICKNESS

REV. NO.	DATE	DESCRIPTION OF REVISION
R12	JAN 18	NDOR BORDER TO NDOT BORDER
R11	JUL 15	ADDED TRUCK APRON CURB
R10	FEB 09	MULTIPLE REVISIONS

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 301-R12

PAVEMENT DETAILS

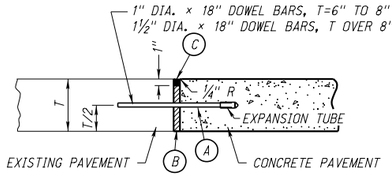
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

DATE

ORIGINAL: JANUARY 31, 1974
DATE

ROADWAY DESIGN DIVISION
Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:17
File: 30100e12.dgn



(A) GREASE DOWEL BAR ON EXPANSION TUB SIDE
(B) 1" PREFORMED EXPANSION JOINT FILLER
(C) JOINT SEALANT

NOTES:

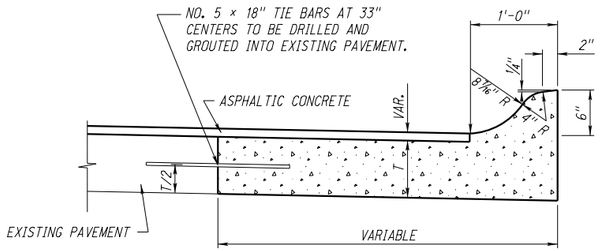
DOWEL BARS SHALL BE DRILLED TO A DEPTH OF 8" INTO EXISTING PAVEMENT AND GROUTED.

DOWEL BARS SHALL BE PLACED AT 1 FOOT CENTERS. THE OUTSIDE DOWEL BAR SHALL BE PLACED 6" FROM THE EDGE OF THE PAVEMENT.

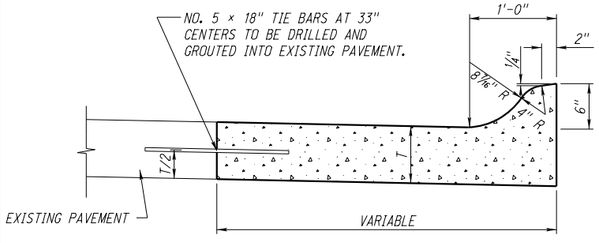
THIS JOINT SHALL BE CONSTRUCTED TRANSVERSE TO THE ROADWAY WHERE THE NEW CONCRETE ABUTS THE EXISTING CONCRETE.

DOWEL BARS SHALL BE PLACED PARALLEL TO THE ROADWAY ℄ AND TO THE ROAD BED.

EXPANSION JOINT (SUBSIDIARY)

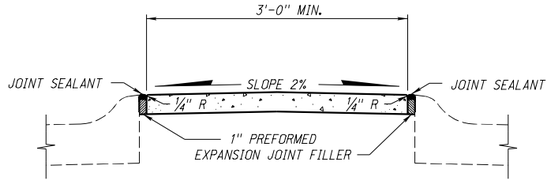


CONCRETE BASE COURSE W/INTEGRAL CURB



THE FOLLOWING NOTE IS TYPICAL FOR CONCRETE BASE COURSE WITH INTEGRAL CURB AND CONCRETE PAVEMENT WIDENING: CONTRACTION AND EXPANSION JOINTS SHALL BE CONSTRUCTED TO MATCH LOCATIONS OF EXISTING JOINTS.

CONCRETE PAVEMENT WIDENING



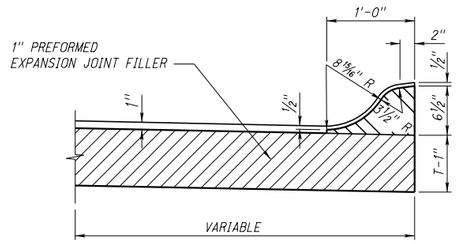
CONCRETE MEDIAN SURFACING

ONE INCH PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED ACROSS THE FULL WIDTH OF THE MEDIAN SURFACING AT INTERVALS OF NOT MORE THAN 49 FEET.

LONGITUDINAL JOINTS ONE INCH DEEP SHALL BE MADE IN ALL MEDIANS WHEN SURFACING WIDTH IS 16 FEET OR GREATER.

TRANSVERSE JOINTS ONE INCH DEEP SHALL BE MADE IN ALL MEDIANS AT INTERVALS OF NOT MORE THAN 8 FEET.

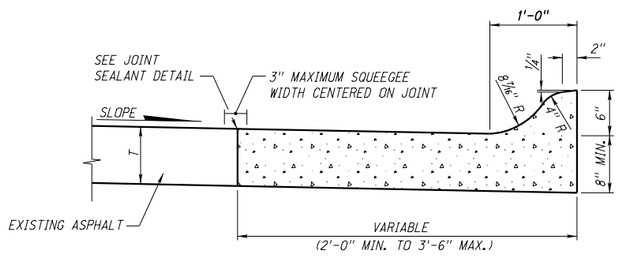
TRANSVERSE AND LONGITUDINAL JOINTS SHALL NOT BE FILLED.



ONE INCH PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED AT INTERSECTION RETURNS AND WHERE SHOWN ON THE PLANS. TRANSVERSE JOINTS SHALL BE PLACED EVERY 8 FEET OR WHERE SHOWN ON THE PLANS.

NOTE:
RECESS THE EXPANSION JOINT FILLER 1/2" FROM THE TOP SURFACE OF THE CURB UNDER CONSTRUCTION

DETAIL FOR CUTTING & PLACEMENT OF EXPANSION JOINT FILLER

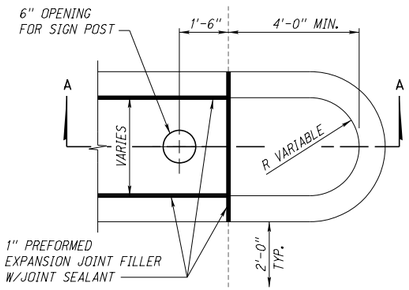


COMBINATION CONCRETE CURB & GUTTER

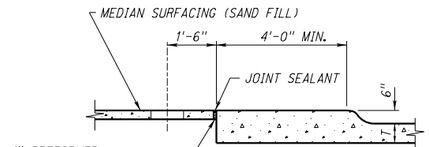
NOTE:

TRANSVERSE JOINTS SHALL BE PLACED EVERY 8 FEET AND JOINTS SHALL BE PLACED AT EACH HEADER, 2-NO. 5 x 18" TIE BARS ARE TO BE USED.

PLACE 1" PREFORMED EXPANSION JOINT FILLER AND SEAL AT THE RETURN OF RADIUS AT INTERSECTIONS.

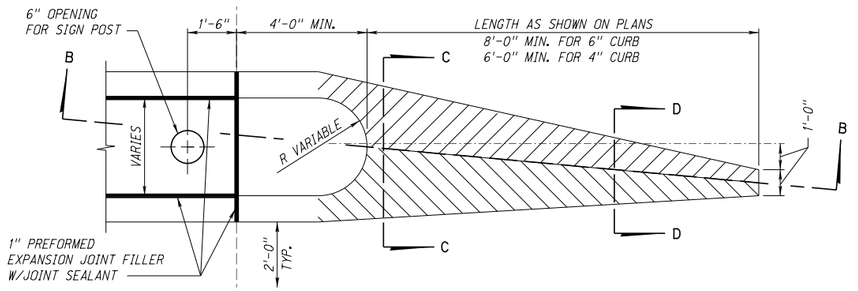


PLAN

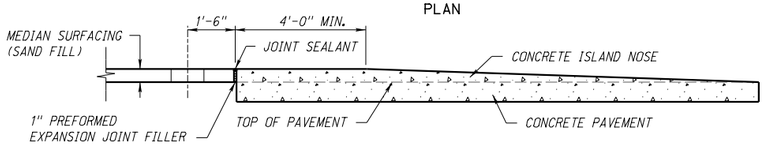


SECTION A-A

END OF MEDIAN ISLAND



PLAN



SECTION B-B

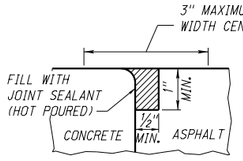


SECTION C-C SECTION D-D

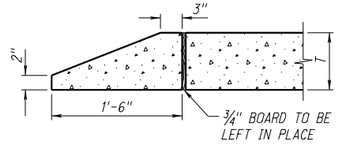
CONCRETE ISLAND NOSE

NOTE:
EXISTING CONCRETE PAVEMENT IS TO BE REMOVED TO BUILD CONCRETE ISLAND NOSE.

NOTE: T = PAVEMENT THICKNESS



JOINT SEALANT DETAIL



CONCRETE HEADER

REV. NO.	DATE	DESCRIPTION OF REVISION
R12	JAN 18	NDOR BORDER TO NDOT BORDER
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NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 301-R12

PAVEMENT DETAILS

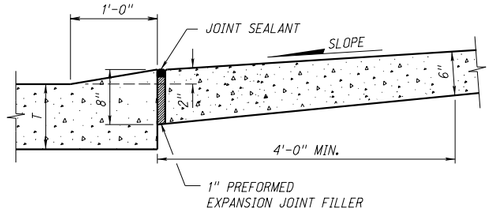
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

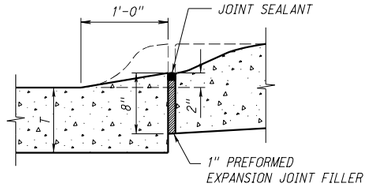
DATE

ORIGINAL: JANUARY 31, 1974
DATE

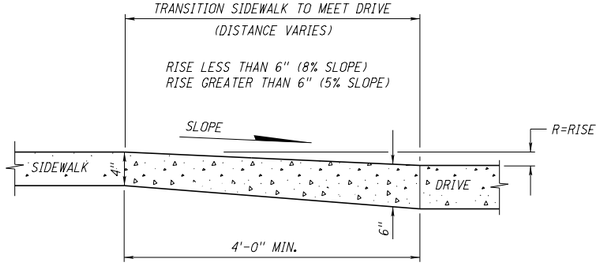
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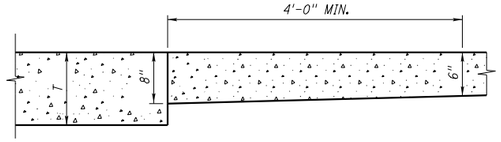
SECTION E-E



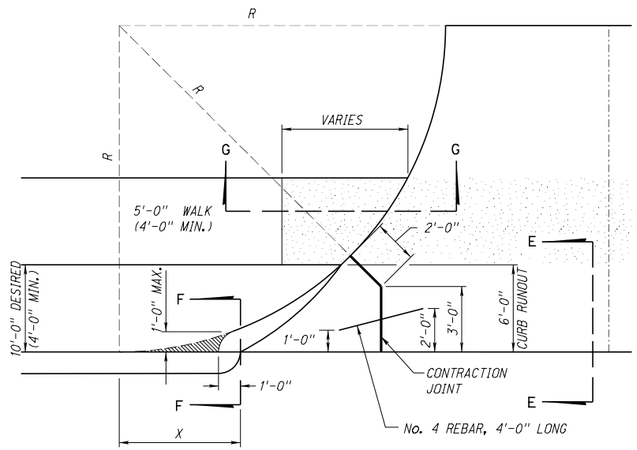
SECTION F-F



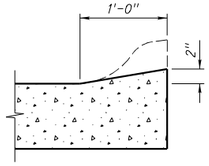
SECTION G-G



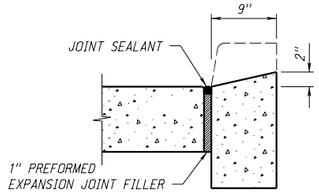
(RURAL DRIVEWAY)



URBAN DRIVEWAY PLAN

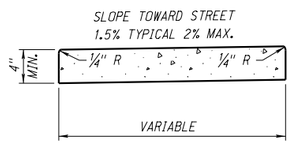


INTEGRAL CURB

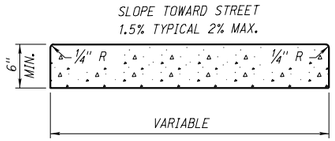


BARRIER CURB

DETAILS OF CURB DROPS



SIDEWALK



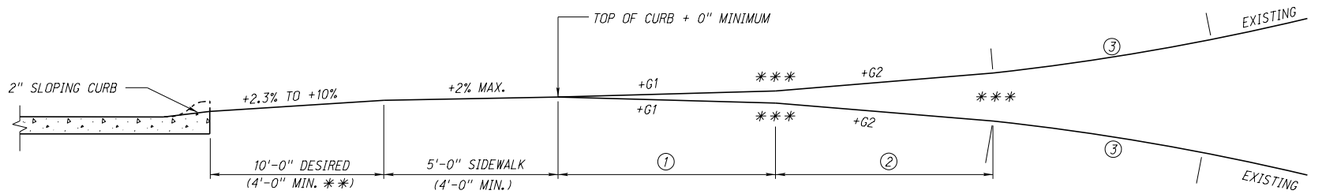
SIDEWALK AT DRIVEWAY

NOTE:

1 INCH PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED IN ALL SIDEWALKS OR CROSSWALKS AT INTERVALS OF NOT MORE THAN 50 FOOT, AND AT ALL POINTS WHERE SIDEWALKS OR CROSSWALKS ARE ADJACENT TO CURB. IF SIDEWALK OR CROSSWALK TO BE CONSTRUCTED IS LESS THAN 50 FOOT IN LENGTH, ONE SUCH EXPANSION JOINT SHALL BE PLACED AS DIRECTED BY THE ENGINEER.

R	X
10'-0"	4.6'
15'-0"	5.6'
20'-0"	6.0'
25'-0"	7.0'
30'-0"	8.0'
35'-0"	8.6'
40'-0"	9.0'

R = RADIUS
$X = \sqrt{(2R-1)}$
(X & R IN FEET)



DRIVEWAY TYPE	G1 (MAX.)	G2 (MAX.)
COMMERCIAL, INDUSTRIAL	±5%	±8%
DWELLINGS (RESIDENTIAL)	±8%	±15%

PROFILE URBAN DRIVEWAY WITH SIDEWALK
(MAXIMUM PERCENT OF GRADE)

① 10'-0" MINIMUM IS REQUIRED WHEN THE EXISTING GRADE IS GREATER THAN ±8%
② 10'-0" MINIMUM IS REQUIRED WHEN THE EXISTING GRADE IS GREATER THAN ±15%
③ 10'-0" MINIMUM ROUNDING IS REQUIRED WHEN THE EXISTING GRADE IS GREATER THAN ±22%

** 0 FEET IS ALLOWED IN URBAN BUSINESS DISTRICTS WITH SIDEWALKS OF 6 FEET MINIMUM WIDTH.
*** 10 FEET MINIMUM ROUNDING DESIRABLE FOR THE FOLLOWING GRADE CHANGES.

NOTE: T = PAVEMENT THICKNESS

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NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 301-R12

PAVEMENT DETAILS

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

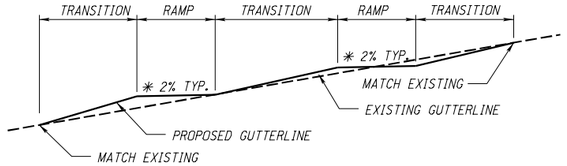
DATE

ORIGINAL:
JANUARY 31, 1974
DATE

3
3

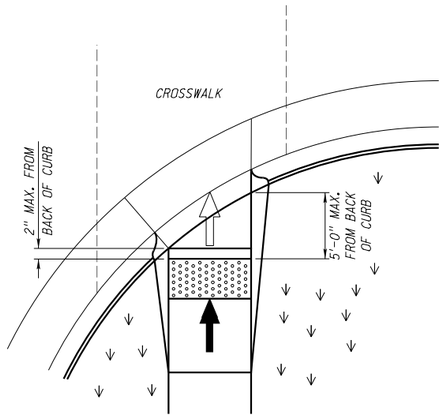
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ROADWAY DESIGN DIVISION

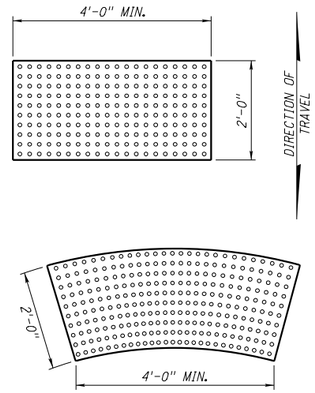


* 2% PREFERRED WHERE TRAFFIC STOPS, UP TO 5% ALLOWED WHERE TRAFFIC CONTINUES THROUGH THE CROSSWALK WITHOUT STOPPING (INCLUDING TRAFFIC SIGNALS).

GUTTER PROFILE DETAIL



DETECTABLE WARNING PANEL PLACEMENT DETAIL

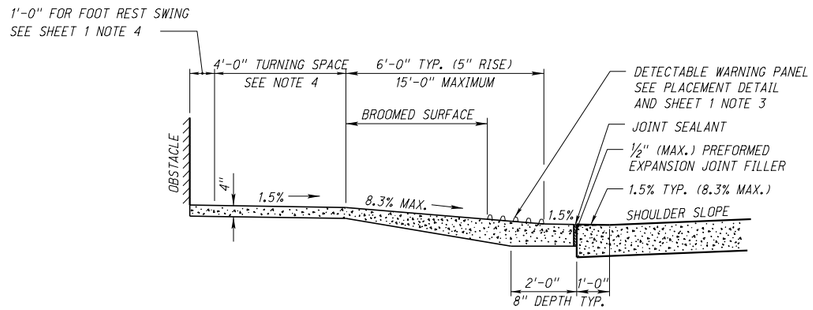


DETECTABLE WARNING PANELS

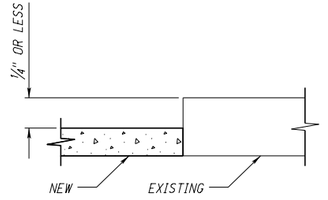
NOTES:

1. THE SURFACE OF ALL CURB RAMPS SHALL BE BROOMED PERPENDICULAR TO THE SLOPE OF THE CURB RAMP.
2. CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE CURB RAMP, FREE OF SAGS AND SHORT GRADE CHANGES.
3. DETECTABLE WARNING PANELS SHALL CONTRAST VISUALLY AND EXTEND 2 FT. MINIMUM IN THE DIRECTION OF PEDESTRIAN TRAVEL FOR THE WIDTH OF THE RAMP. TYPE C RAMP; DETECTABLE WARNING PANELS SHALL EXTEND THE FULL LENGTH OF THE TRAVERSABLE CURB.

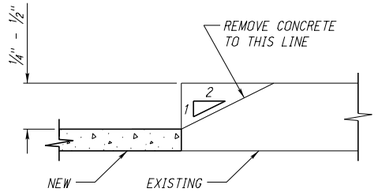
   NEW CURB RAMPS SHALL HAVE CAST IN CONCRETE DETECTABLE WARNING PANELS.
4. TURNING SPACE SHALL HAVE MINIMUM DIMENSIONS OF 4 FT. × 4 FT. AND SHALL BE A MINIMUM OF 1 FT. FROM ANY OBSTACLE SUCH AS A CURB OR RETAINING WALL FOR SWING OF WHEELCHAIR FOOT REST. THE SLOPE SHALL BE 2% MAXIMUM IN ANY DIRECTION.
5. THE WORK OF CONSTRUCTING CURB RAMPS SHALL BE INCLUDED IN THE QUANTITIES FOR "CONCRETE SIDEWALKS", "CONCRETE MEDIAN SURFACING" OR "CONCRETE BIKEWAY". THE WORK OF MODIFICATION OF NEW OR EXISTING CURB WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS OF WORK FOR WHICH DIRECT PAYMENT IS MADE.



TYPICAL RAMP PROFILE



NO BEVELING



BEVEL AS REQUIRED

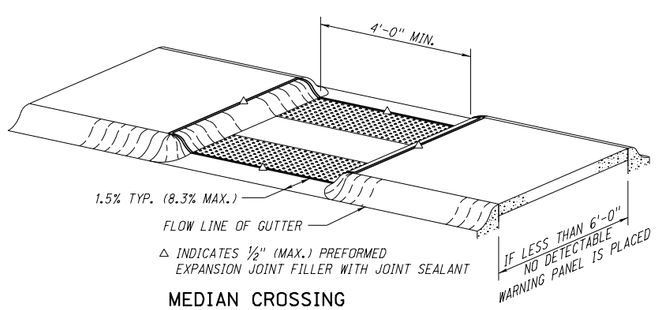
WHEN EXISTING SIDEWALK DOES NOT MEET THE 2% CROSS SLOPE, BEVELING TO MEET PROPOSED GUIDELINES IS REQUIRED.

THE SIDEWALK PANEL ABUTTING THE EXISTING SIDEWALK (WHICH MAY NOT BE 2% SLOPE): BUILD FULL WIDTH OF THE NEW SIDEWALK, ON 2% MAXIMUM CROSS SLOPE AND BEVEL THE EXISTING SIDEWALK EDGE WHERE IT DOES NOT MEET THE NEW WITHIN ¼", THIS WORK IS SUBSIDIARY.

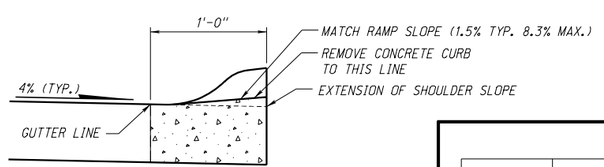
BEVELING DETAIL

LEGEND

- DETECTABLE WARNING PANEL
- BROOMED CURB RAMP WHEN 5% TO 8.3%
- RAMP FLARE
- GRASS OR NON WALKING SURFACE
- CURB TRANSITION
- CURB FACE SLOPE 1 VERT. : 2 HORZ.



MEDIAN CROSSING



NOTE:
COMBINATION CONCRETE CURB AND GUTTER MAY BE REMOVED AND REPLACED IN LIEU OF MILLING.

CURB DETAIL

SLOPE LEGEND

⇦	SIDEWALK/TURNING SPACE AND RAMP CROSS SLOPE 1.5% TYPICAL, 2.0% MAX. SLOPE
⬅	RAMP RUNNING SLOPE 8.0% TYPICAL, 8.3% MAX. SLOPE
◁	FLARE 90° TO RAMP 9.0% TYPICAL, 10.0% MAX. SLOPE

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REV. NO.	DATE	DESCRIPTION OF REVISION
R3	JAN 18	NDOR BORDER TO NDOT BORDER
R2	OCT 14	CHANGE PM TO ROADWAY DESIGN ENGINEER
R1	FEB 13	ALL OF PLAN REWORKED (PROWAG)

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 303-R3

CURB RAMPS

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

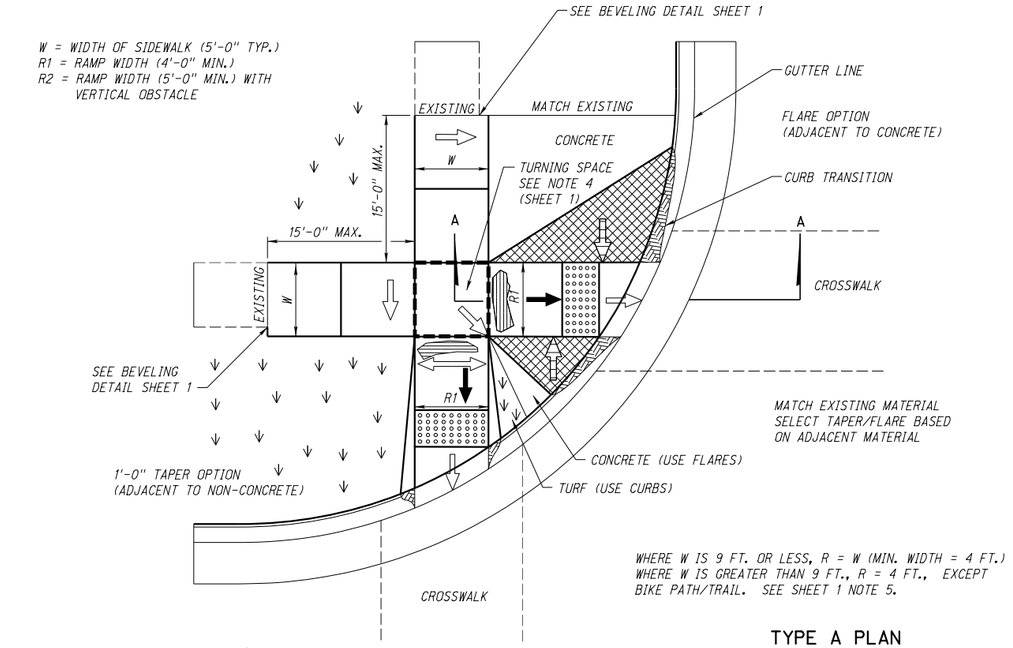
DATE

ORIGINAL: MARCH 22, 2010
DATE

1
5

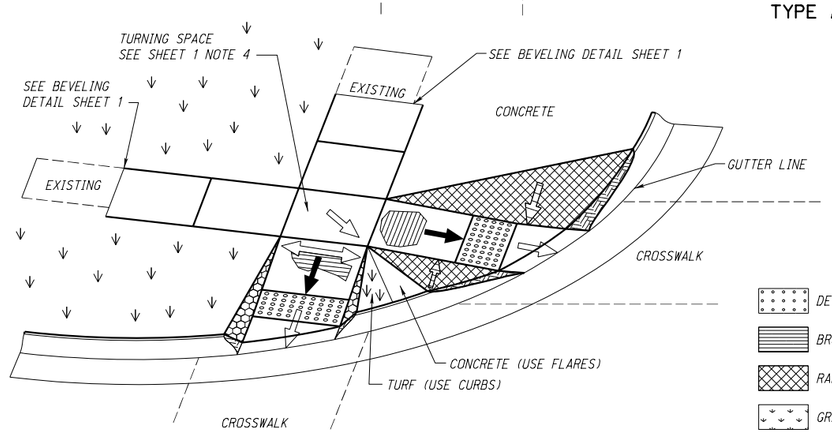
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Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:18
File: 30300e03.dgn

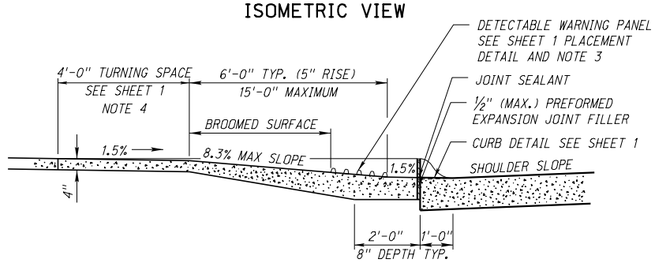


WHERE W IS 9 FT. OR LESS, R = W (MIN. WIDTH = 4 FT.)
WHERE W IS GREATER THAN 9 FT., R = 4 FT., EXCEPT BIKE PATH/TRAIL. SEE SHEET 1 NOTE 5.

TYPE A PLAN



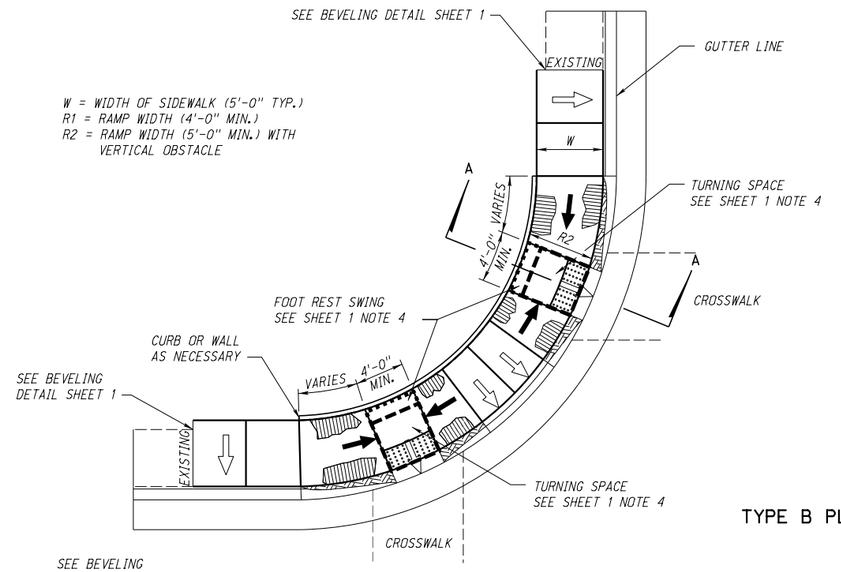
ISOMETRIC VIEW



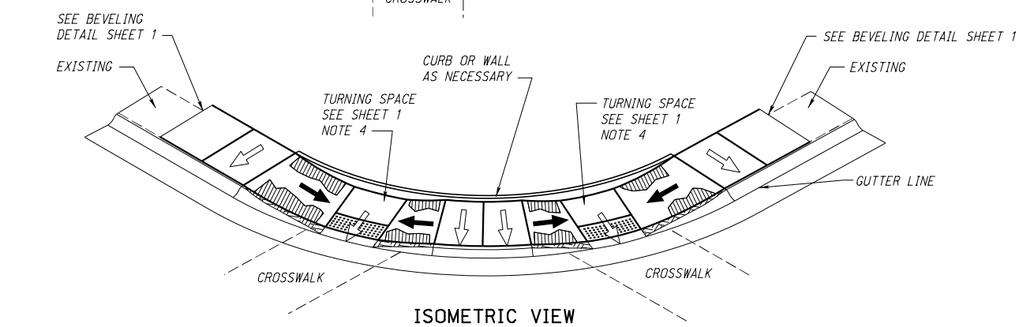
TYPE A CROSS SECTION
SECTION A-A

LEGEND

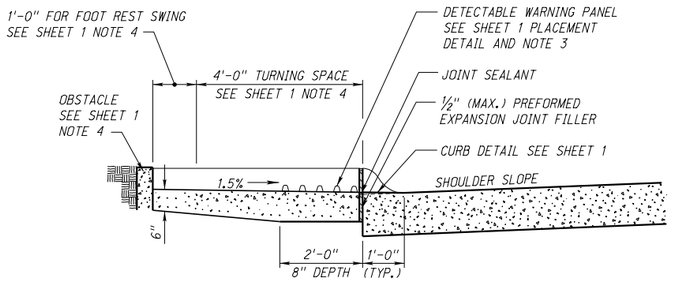
- DETECTABLE WARNING PANEL
- BROOMED CURB RAMP WHEN 5% TO 8.3%
- RAMP FLARE
- GRASS OR NON WALKING SURFACE
- CURB TRANSITION
- CURB FACE SLOPE 1 VERT. : 2 HORZ.



TYPE B PLAN



ISOMETRIC VIEW



TYPE B CROSS SECTION
SECTION A-A

SLOPE LEGEND

⇦	SIDEWALK/TURNING SPACE AND RAMP CROSS SLOPE 1.5% TYPICAL, 2.0% MAX. SLOPE
⬅	RAMP RUNNING SLOPE 8.0% TYPICAL, 8.3% MAX. SLOPE
⇦	FLARE 90° TO RAMP 9.0% TYPICAL, 10.0% MAX. SLOPE

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R1	FEB 13	ALL OF PLAN REWORKED (PROWAG)

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 303-R3

CURB RAMPS

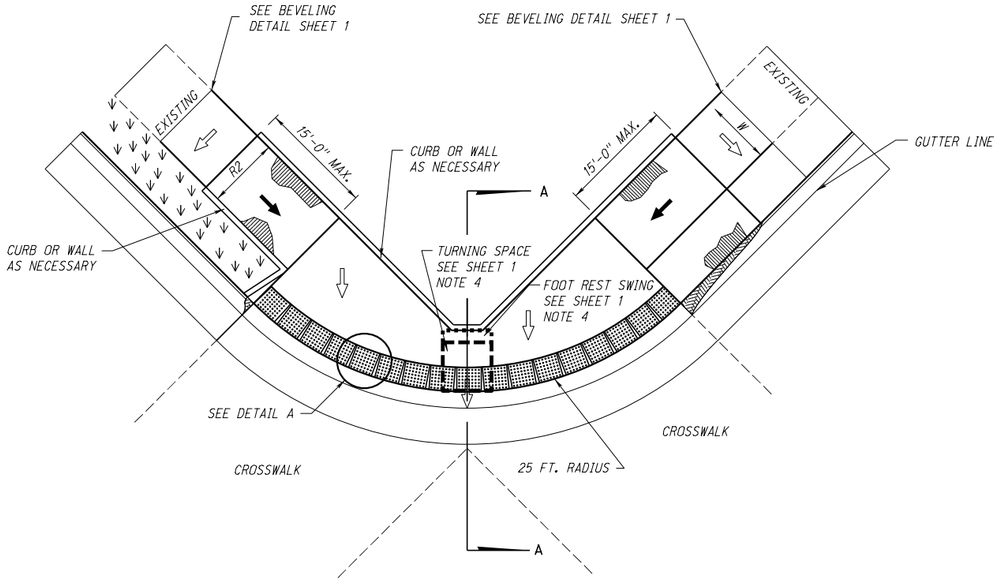
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

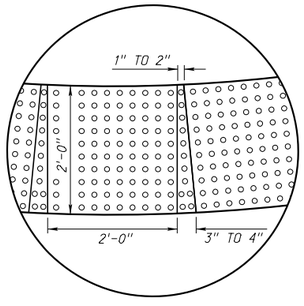
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ORIGINAL:
MARCH 22, 2010
DATE

ROADWAY DESIGN DIVISION
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Date: 29-JUN-2021 09:18
File: 303000e03.dgn



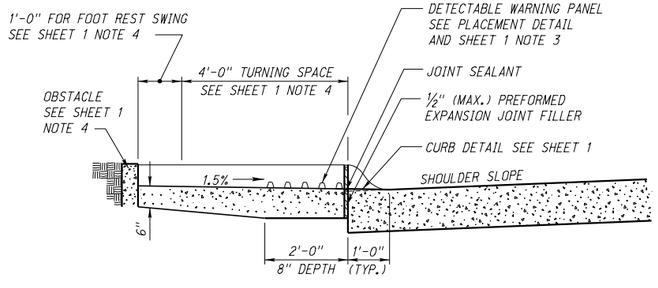
TYPE C PLAN



DETAIL A

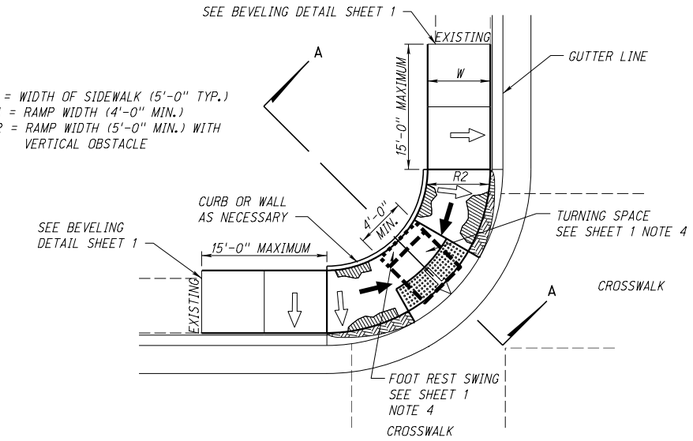
LEGEND

- DETECTABLE WARNING PANEL
- BROOMED CURB RAMP WHEN 5% TO 8.3%
- RAMP FLARE
- GRASS OR NON WALKING SURFACE
- CURB TRANSITION
- CURB FACE SLOPE 1 VERT. : 2 HORZ.

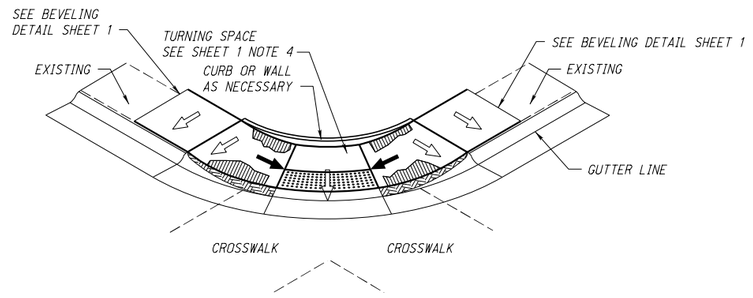


TYPE C CROSS SECTION
SECTION A-A

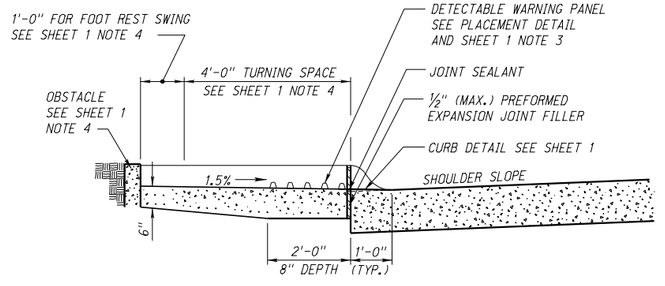
W = WIDTH OF SIDEWALK (5'-0" TYP.)
R1 = RAMP WIDTH (4'-0" MIN.)
R2 = RAMP WIDTH (5'-0" MIN.) WITH VERTICAL OBSTACLE



TYPE D PLAN



ISOMETRIC VIEW



TYPE D CROSS SECTION
SECTION A-A

SLOPE LEGEND

⇦	SIDEWALK/TURNING SPACE AND RAMP CROSS SLOPE 1.5% TYPICAL, 2.0% MAX. SLOPE
⬅	RAMP RUNNING SLOPE 8.0% TYPICAL, 8.3% MAX. SLOPE
⇦	FLARE 90° TO RAMP 9.0% TYPICAL, 10.0% MAX. SLOPE

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NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 303-R3

CURB RAMPS

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

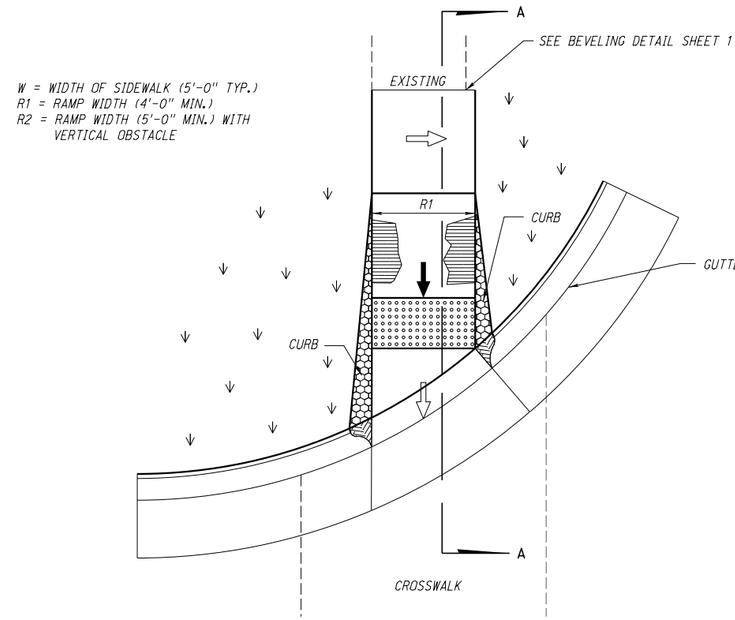
DATE

PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

ORIGINAL:
MARCH 22, 2010
DATE

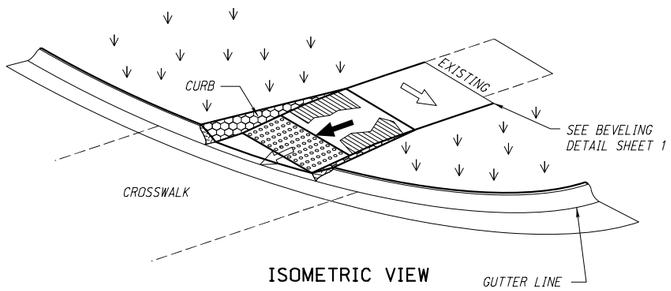
ROADWAY DESIGN DIVISION
Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:18
File: 30300e03.dgn

W = WIDTH OF SIDEWALK (5'-0" TYP.)
R1 = RAMP WIDTH (4'-0" MIN.)
R2 = RAMP WIDTH (5'-0" MIN.) WITH VERTICAL OBSTACLE



WHERE W IS 9 FT. OR LESS, R = W (MIN. WIDTH = 4 FT.) WHERE W IS GREATER THAN 9 FT., R = 4 FT., EXCEPT BIKE PATH/TRAIL. SEE NOTE 5 (SHEET 1)

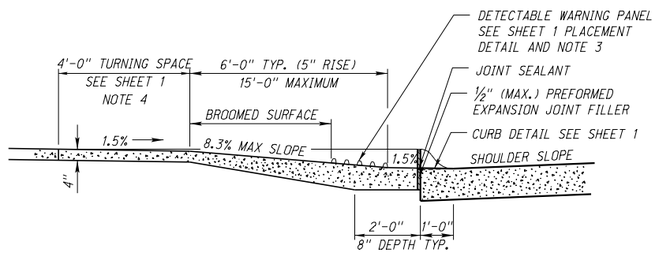
TYPE E PLAN



ISOMETRIC VIEW

LEGEND

- DETECTABLE WARNING PANEL
- BROOMED CURB RAMP WHEN 5% TO 8.3%
- RAMP FLARE
- GRASS OR NON WALKING SURFACE
- CURB TRANSITION
- CURB FACE SLOPE 1 VERT. : 2 HORZ.



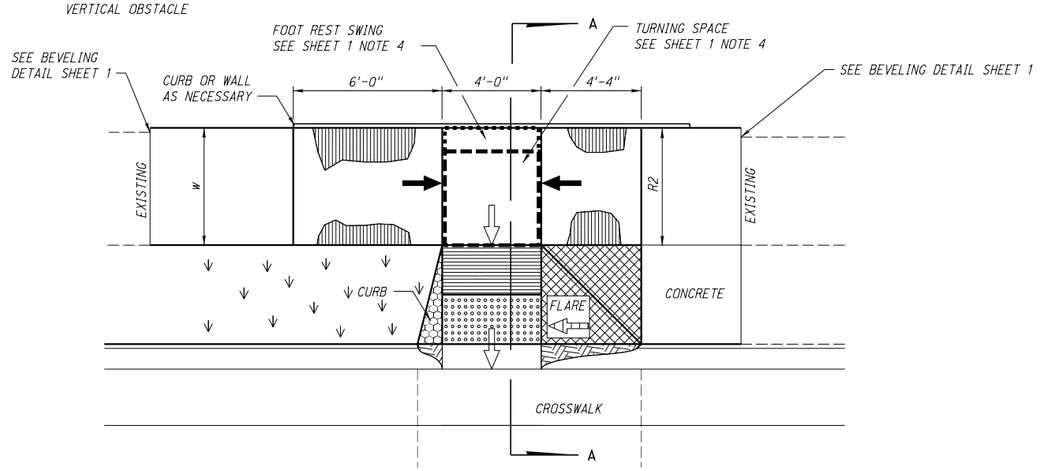
TYPE E CROSS SECTION
SECTION A-A

SLOPE LEGEND

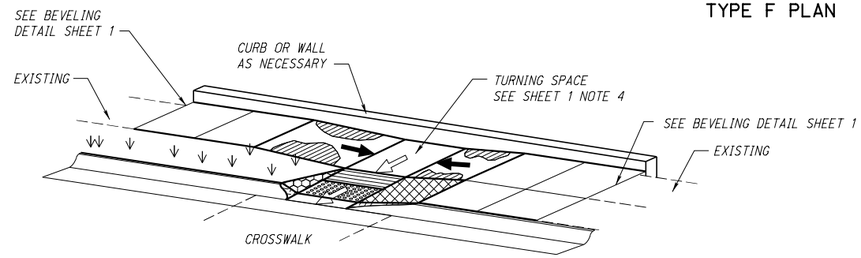
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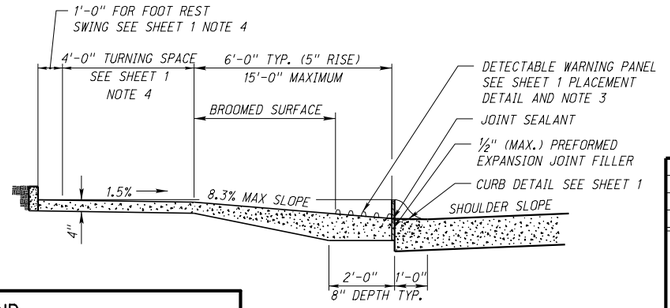
W = WIDTH OF SIDEWALK (5'-0" TYP.)
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R2 = RAMP WIDTH (5'-0" MIN.) WITH VERTICAL OBSTACLE



TYPE F PLAN



ISOMETRIC VIEW



TYPE F CROSS SECTION
SECTION A-A

REV. NO.	DATE	DESCRIPTION OF REVISION
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R1	FEB 13	ALL OF PLAN REWORKED (PROWAG)

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 303-R3

CURB RAMPS

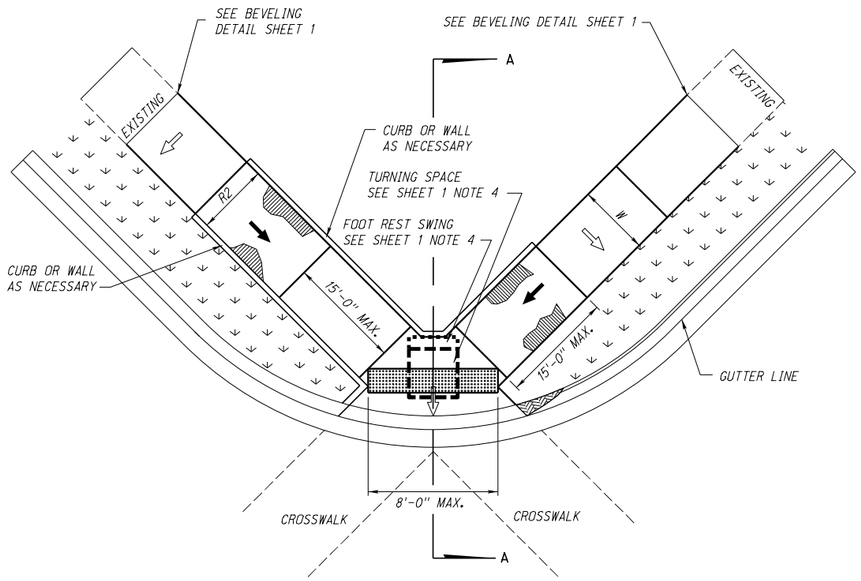
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

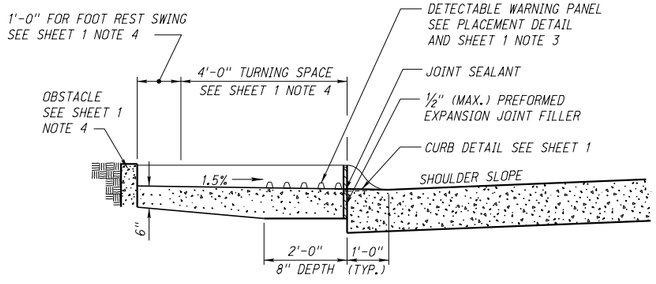
DATE

ORIGINAL: MARCH 22, 2010
DATE

ROADWAY DESIGN DIVISION
Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:18
File: 30300e03.dgn



TYPE G PLAN



TYPE G CROSS SECTION
SECTION A-A

LEGEND

- DETECTABLE WARNING PANEL
- BROOMED CURB RAMP WHEN 5% TO 8.3%
- RAMP FLARE
- GRASS OR NON WALKING SURFACE
- CURB TRANSITION
- CURB FACE SLOPE 1 VERT. : 2 HORZ.

SLOPE LEGEND

⇦	SIDEWALK/TURNING SPACE AND RAMP CROSS SLOPE 1.5% TYPICAL, 2.0% MAX. SLOPE
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NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 303-R3

CURB RAMPS

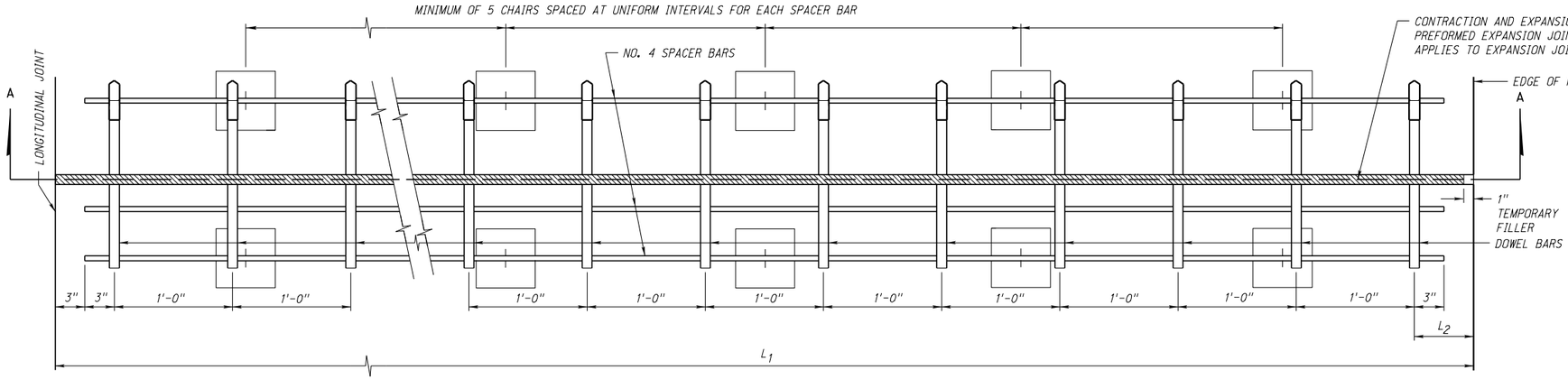
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

DATE

ORIGINAL:
MARCH 22, 2010
DATE

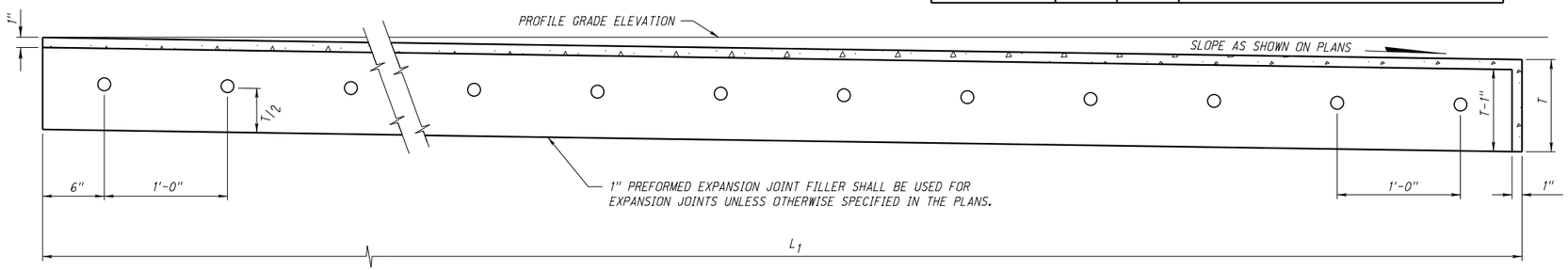
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ASSEMBLY PLAN

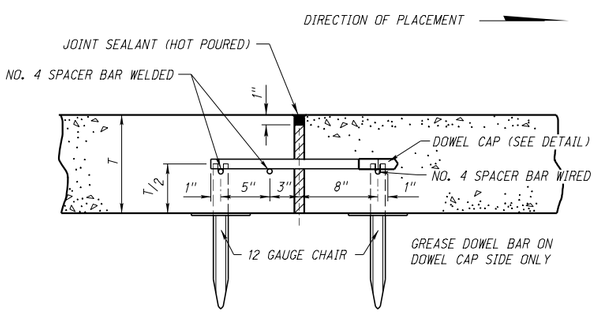
DOWEL BAR HEIGHT AND DIAMETER			
PAVEMENT THICKNESS (T)	MINIMUM BAR DIA.	DOWEL BAR HEIGHT (T/2)	SKEW TOLERANCE
LESS THAN 10"	1¼"	T/2 ± ½"	¼"
10" OR MORE	1½"	T/2 ± ½"	¼"

DOWEL BAR LOCATION TABLE			
L_1	L_2	#BARS	DESCRIPTION
* LESS THAN 12'-0'	6"	VARIES	IRREGULAR AREAS (WIDEN, FILLETS, GORE....)
12'-0"	6"	12	12'-0" PAVEMENT
14'-0"	2'-6"	12	14'-0" PAVEMENT
15'-0"	2'-6"	13	15'-0' PAVEMENT (INCLUDES 3'-0" SHOULDER)
16'-0"	3'-6"	13	16'-0" PAVEMENT (INCLUDES 4'-0" SHOULDER)
16'-0"	6"	16	16'-0" RAMP & LOOPS
LESS THAN 14'-6"	1'-6"	VARIES	PAVEMENT WITH CURB
14'-6" OR MORE	2'-6"	VARIES	

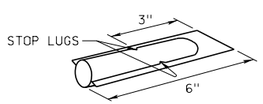


SECTION A-A

CONTRACTION AND EXPANSION JOINTS (PREFORMED EXPANSION JOINTS FILLER APPLIES TO EXPANSION JOINTS ONLY)

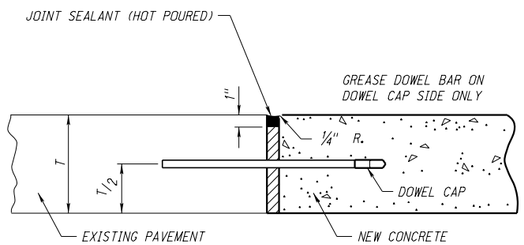


SECTION



DOWEL CAP

EXPANSION JOINT
(SUBSIDIARY)



NOTES:
DOWEL BARS SHALL BE DRILLED TO A DEPTH OF 8" INTO EXISTING PAVEMENT AND EPOXIED.

SECTION

NOTES:

THE CONTRACTOR MAY SUBSTITUTE OTHER DESIGNS FOR EXPANSION AND CONTRACTION JOINT SUPPORTS IN LIEU OF THE TYPE SHOWN WITH PRIOR WRITTEN APPROVAL BY THE ENGINEER.

DOWEL BARS SHALL BE A MINIMUM OF 17¾" IN LENGTH, CENTERED ON JOINTS AND BE SMOOTH BARS.

TIE BARS SHALL BE DEFORMED BARS.

FOR LOAD TRANSFER DEVICES AT EXPANSION JOINTS IN LANES OTHER THAN THE LANES SHOWN, MAINTAIN THE SPACING OF THE 1'-6" DOWEL BARS AT 1 FT. INTERVALS.

THE ENDS OF THE NO. 4 SPACER BARS SHALL NOT BE LESS THAN 3" FROM THE EDGES OF THE PAVEMENT OR THE LONGITUDINAL JOINT.

TIE, DOWEL & SPACER BARS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

KEY TYPE LONGITUDINAL JOINTS AND TRANSVERSE CONSTRUCTION JOINTS SHALL BE EDGED WITH ¼" R. AT TIME OF CONCRETE PLACEMENT.

CONCRETE PAVEMENT SHALL BE TINED UNLESS OTHERWISE SHOWN IN THE PLANS.

EXPANSION JOINTS SHALL BE INSTALLED AT LOCATIONS SHOWN IN THE PLANS.

PAVEMENT PLACED ADJACENT TO R.R. TRACKS REQUIRES 3-EXPANSION JOINTS SPACED AT APPROXIMATELY 49'-6" INTERVALS.

EXPANSION JOINTS SHALL NOT BE SKEWED.

T= PAVEMENT THICKNESS

* *THE DEPARTMENT REQUIRES THAT DOWEL BASKETS BE PLACED IN ALL CONTRACTION JOINTS WHICH ARE 6'-0" OR WIDER. THE DOWEL BASKETS SHALL BE PLACED TRANSVERSE TO THE DIRECTION OF THE PREDOMINANT TRAFFIC DIRECTION.*

REV. NO.	DATE	DESCRIPTION OF REVISION
R11	JUL 20	CHANGED TINING INFORMATION
R10	JAN 18	CHANGED DOWEL BAR LOCATION TABLE
R9	JUL 11	JOINT: EARLY SAW CUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 329-R11

8 TO 16 INCH CONCRETE PAVEMENT

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

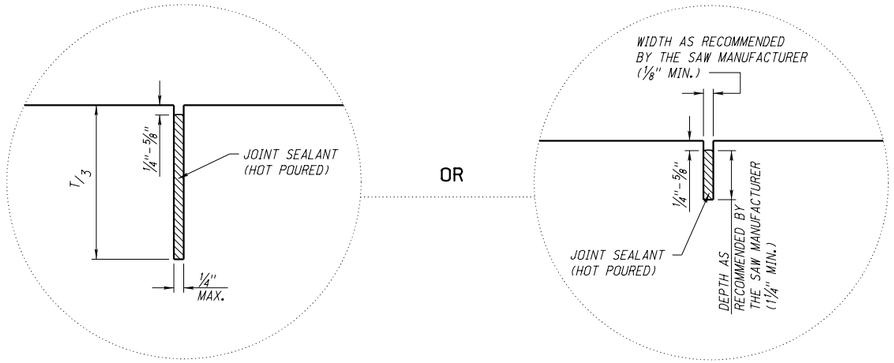
PROFESSIONAL CIVIL ENGINEER * MICK S. SYSLO E-10043 * STATE OF NEBRASKA

DATE

ORIGINAL: OCTOBER 25, 1994
DATE

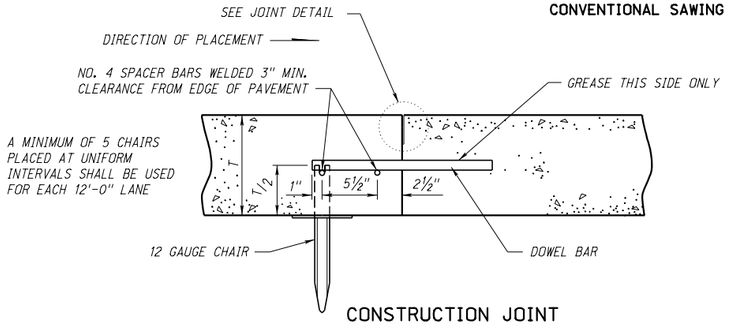
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ROADWAY DESIGN DIVISION
Computer: NDOTDESIGN34
Date: 29-JUN-2021 09:18
File: 329001.dgn



CONVENTIONAL SAWING

EARLY-SAW CUT

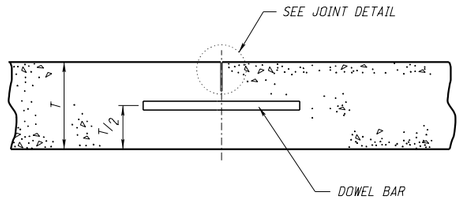


CONSTRUCTION JOINT

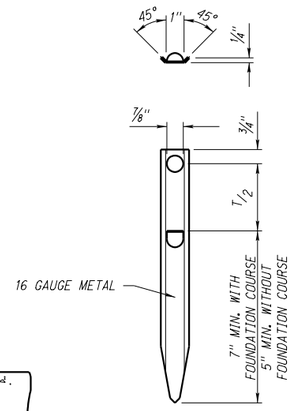
(BARS ARE SUBSIDIARY) TO PAVEMENT

JOINT DETAIL

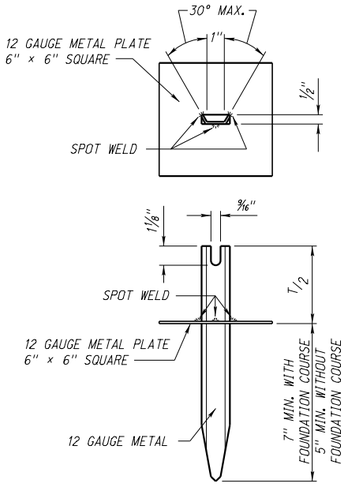
THE DOWEL BAR SPACING SHALL BE THE SAME AS SHOWN FOR THE EXPANSION JOINT. REFER TO DOWEL BAR LOCATION TABLE AND THE DOWEL BAR HEIGHT AND DIAMETER TABLE ON SHEET 1 OF 4.



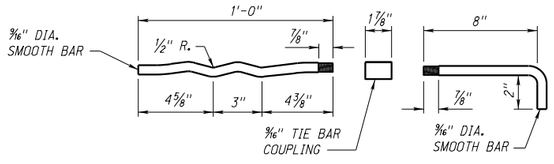
CONTRACTION JOINT



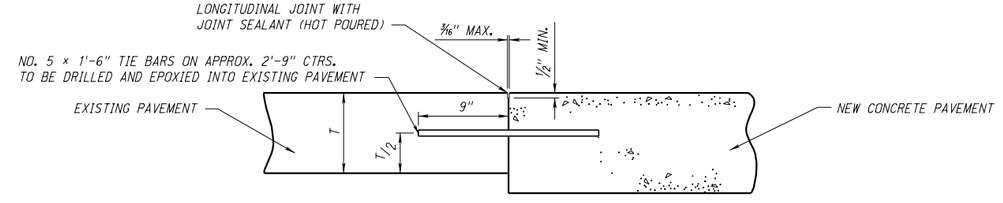
TIE BAR PIN



CHAIR

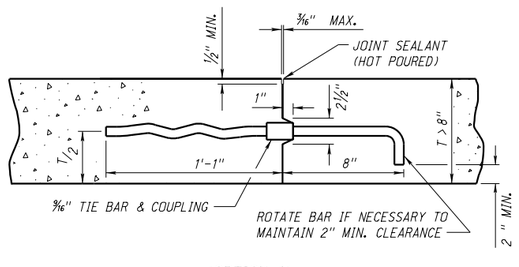


DETAILS OF "W" BAR



TIE BARS ARE TO BE INSTALLED WHERE NEW CONCRETE PAVEMENT IS PLACED ADJACENT TO EXISTING CONCRETE PAVEMENT

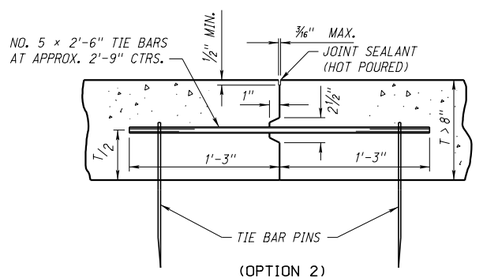
DETAILS OF TIE BAR



(OPTION 1)

KEY TYPE

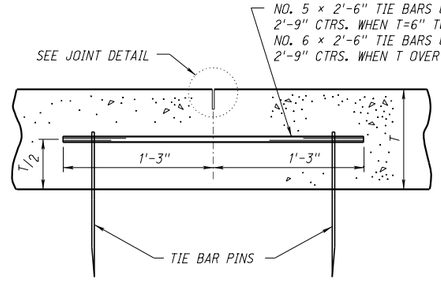
NO. 5 HOOK AND W-BARS AT APPROX. 2'-9" CTRS. OR 3/16" HOOK AND W-BARS AT APPROX. 2'-9" CTRS.



(OPTION 2)

KEY TYPE

KEY TYPE JOINT SHALL BE USED ON ALL LONGITUDINAL CONSTRUCTION JOINTS WHEN THE ADJACENT LANE IS NOT PLACED AT THE SAME TIME



SAWED

WHEN TWO ADJACENT LANES ARE PLACED AT THE SAME TIME, THE LONGITUDINAL JOINT COMMON TO THE LANES SHALL BE SAWED

LONGITUDINAL JOINTS

NOTE:
NO TIE BARS SHALL BE CLOSER THAN 1'-3" TO A TRANSVERSE JOINT. ALL LONGITUDINAL JOINTS BETWEEN LANES AND BETWEEN LANES AND SHOULDERS MUST BE TIED. MEDIAN SHOULD NOT BE TIED.

NOTE: T = PAVEMENT THICKNESS

REV. NO.	DATE	DESCRIPTION OF REVISION
R11	JUL 20	CHANGED TINING INFORMATION
R10	JAN 18	CHANGED DOWEL BAR LOCATION TABLE
R9	JUL 11	JOINT: EARLY SAW CUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 329-R11

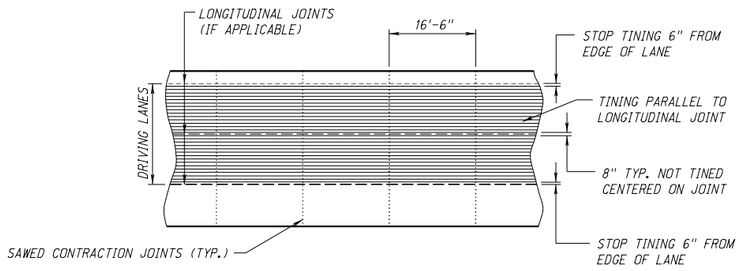
8 TO 16 INCH CONCRETE PAVEMENT

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

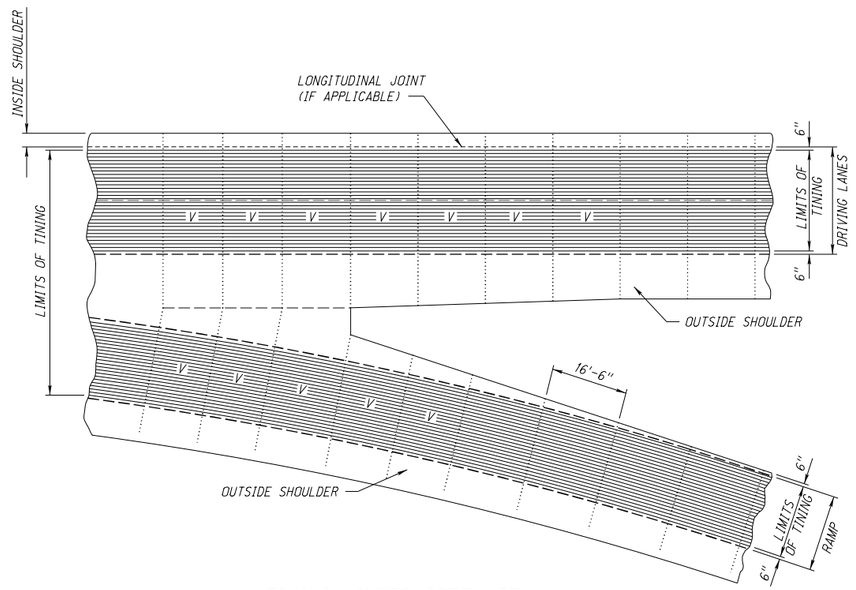
DATE

PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

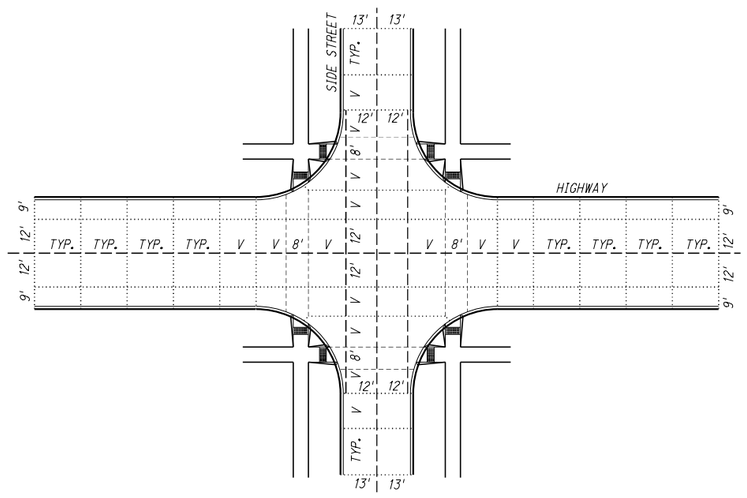
ORIGINAL: OCTOBER 25, 1994
DATE



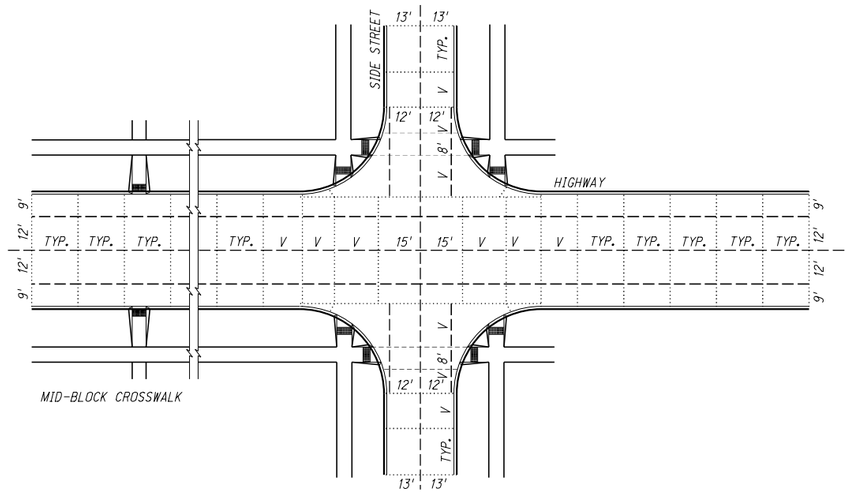
TINING WITH CONCRETE SHOULDER



TINING LIMITS GORE AREA



STOP OR YIELD CONTROL ON ALL FOUR LEGS



STOP OR YIELD CONTROL ON THE SIDE STREETS ONLY

NOTES:

TINING IS REQUIRED FOR PAVEMENT WITH POSTED SPEEDS GREATER THAN 40 MPH (INCLUDING TURN LANES).

16'-6" TRANSVERSE JOINT SPACING IS THE STANDARD JOINT SPACING REGARDLESS OF THE PAVEMENT THICKNESS.

V VARIES FROM 10'-0" TO MAX. 16'-6".

THE LONGITUDINAL JOINT BETWEEN THE SHOULDER AND THE 12'-0" DRIVING LANE IS NOT REQUIRED FOR SHOULDER WIDTHS OF 4'-0" OR LESS.

TRANSVERSE JOINTS FOR DOWELED CONCRETE PAVEMENT SHALL BE CONSTRUCTED PERPENDICULAR TO THE ROADWAY.

REV. NO.	DATE	DESCRIPTION OF REVISION
R11	JUL 20	CHANGED TINING INFORMATION
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R9	JUL 11	JOINT: EARLY SAW CUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 329-R11

8 TO 16 INCH CONCRETE PAVEMENT

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

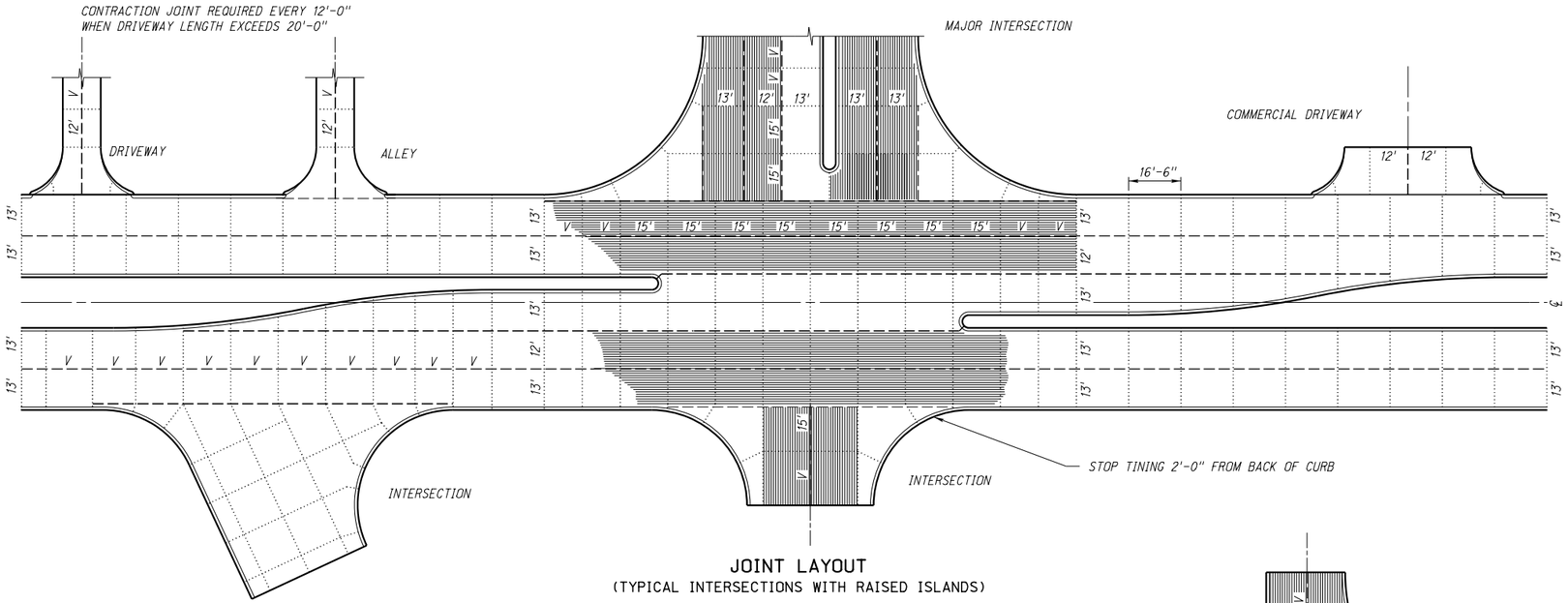
PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

DATE

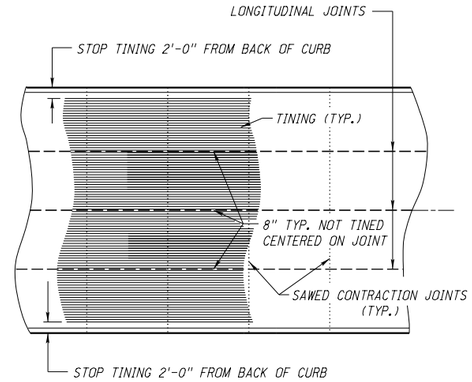
ORIGINAL:
OCTOBER 25, 1994
DATE

3
4

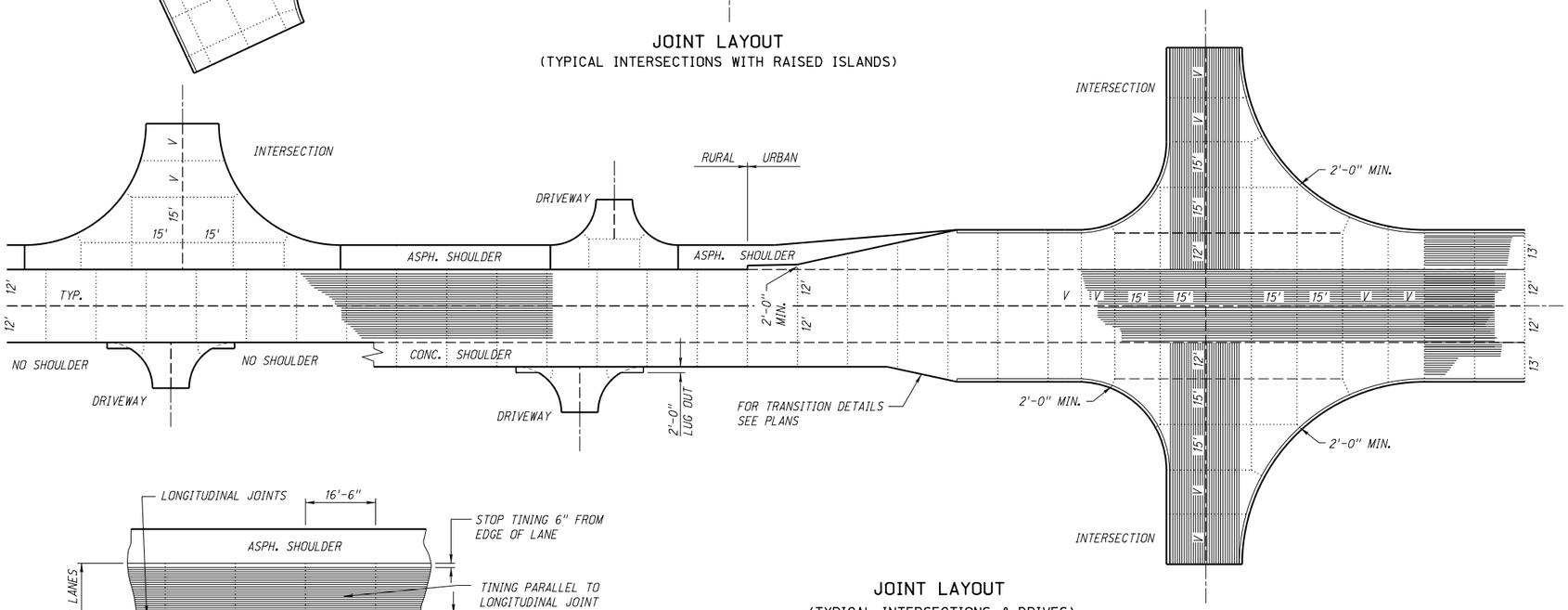
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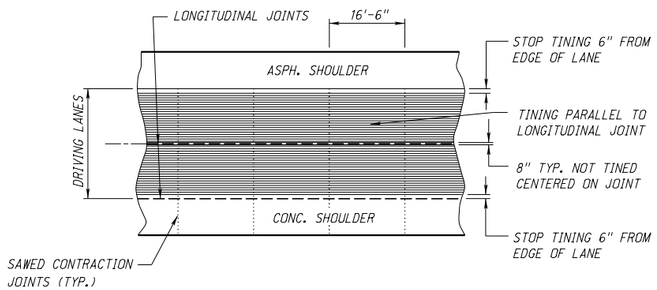
JOINT LAYOUT
(TYPICAL INTERSECTIONS WITH RAISED ISLANDS)



TINING LIMITS



JOINT LAYOUT
(TYPICAL INTERSECTIONS & DRIVES)



RURAL TINING LIMITS WITH SURFACED SHOULDERS

LEGEND

SAWED CONTRACTION JOINT

LONGITUDINAL JOINT

NOTES:

TINING IS REQUIRED FOR PAVEMENT WITH POSTED SPEEDS GREATER THAN 40 MPH (INCLUDING TURN LANES).

16'-6" TRANSVERSE JOINT SPACING IS THE STANDARD JOINT SPACING REGARDLESS OF THE PAVEMENT THICKNESS.

V VARIES FROM 10'-0" TO MAX. 16'-6".

VARIABLE SPACING IS USED AROUND INTERSECTIONS AND LARGE DRIVEWAYS WHICH IS TIED TO THE CONCRETE LANES OR SHOULDERS TO MATCH THE JOINTS.

REV. NO.	DATE	DESCRIPTION OF REVISION
R11	JUL 20	CHANGED TINING INFORMATION
R10	JAN 18	CHANGED DOWEL BAR LOCATION TABLE
R9	JUL 11	JOINT: EARLY SAW CUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 329-R11

8 TO 16 INCH CONCRETE PAVEMENT

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

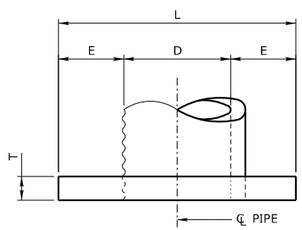
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ORIGINAL:
OCTOBER 25, 1994
DATE

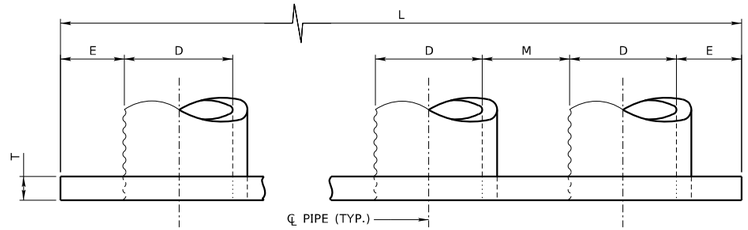
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File: 329001.dgn
Date: 29-JUN-2021 09:18
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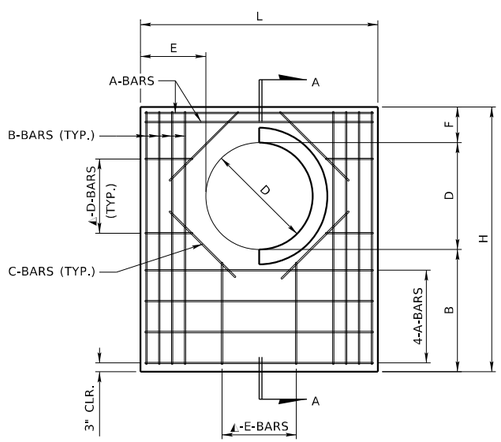
PIPE DIA. (D.)	NO. OF PIPES	DIMENSIONS							REINFORCING STEEL (ALL BARS ARE NO. 4 BARS)												◪ QUANTITIES		◑ ADDITIONAL (SEE NOTES)	
		M	T	E	F (MIN.)	B	H	L	A-BAR		B-BAR		C-BAR		◭-D-BAR		◭-E-BAR		◭-F-BAR		CONCRETE (CY)	REINFORCING STEEL (LB)	CONCRETE (CY)	REINFORCING STEEL (LB)
									NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH				
36"	1	--	8"	2'-7"	1'-1"	3'-0"	7'-1"	8'-2"	12	7'-10"	16	6'-9"	8	3'-0"	16	1'-11"	8	2'-4"	--	--	1.2	185	0.10	5
	2	5'-8"	8"	2'-7"	1'-1"	3'-0"	7'-1"	16'-10"	12	16'-6"	28	6'-9"	16	3'-0"	16	1'-11"	16	2'-4"	8	4'-8"	2.4	360	0.21	9
	3	5'-8"	8"	2'-7"	1'-1"	3'-0"	7'-1"	25'-6"	12	25'-2"	40	6'-9"	24	3'-0"	16	1'-11"	24	2'-4"	16	4'-8"	3.7	540	0.31	13
42"	1	--	8"	2'-11"	1'-2"	3'-0"	7'-8"	9'-4"	12	9'-0"	16	7'-4"	8	3'-6"	16	2'-2"	8	2'-3"	--	--	1.4	205	0.12	5
	2	5'-9"	8"	2'-11"	1'-2"	3'-0"	7'-8"	18'-7"	12	18'-3"	28	7'-4"	16	3'-6"	16	2'-2"	16	2'-3"	8	4'-8"	2.8	395	0.23	9
	3	5'-9"	8"	2'-11"	1'-2"	3'-0"	7'-8"	27'-10"	12	27'-6"	40	7'-4"	24	3'-6"	16	2'-2"	24	2'-3"	16	4'-8"	4.2	580	0.34	13
48"	1	--	8"	3'-2"	1'-2"	3'-0"	8'-2"	10'-4"	12	10'-0"	16	7'-10"	8	4'-0"	20	2'-5"	10	2'-3"	--	--	1.6	235	0.13	5
	2	5'-10"	8"	3'-2"	1'-2"	3'-0"	8'-2"	20'-2"	12	19'-10"	28	7'-10"	16	4'-0"	20	2'-5"	20	2'-3"	10	4'-8"	3.2	440	0.25	9
	3	5'-10"	8"	3'-2"	1'-2"	3'-0"	8'-2"	30'-0"	12	29'-8"	40	7'-10"	24	4'-0"	20	2'-5"	30	2'-3"	20	4'-8"	4.7	650	0.37	13
54"	1	--	8"	3'-6"	1'-3"	3'-0"	8'-9"	11'-6"	12	11'-2"	16	8'-5"	8	4'-6"	20	2'-8"	10	2'-2"	--	--	1.9	255	0.14	5
	2	5'-11"	8"	3'-6"	1'-3"	3'-0"	8'-9"	21'-11"	12	21'-7"	28	8'-5"	16	4'-6"	20	2'-8"	20	2'-2"	10	4'-8"	3.6	475	0.27	9
	3	5'-11"	8"	3'-6"	1'-3"	3'-0"	8'-9"	32'-4"	12	32'-0"	40	8'-5"	24	4'-6"	20	2'-8"	30	2'-2"	20	4'-8"	5.3	695	0.40	13
60"	1	--	8"	3'-9"	1'-3"	3'-0"	9'-3"	12'-6"	12	12'-2"	16	8'-11"	8	5'-0"	24	2'-11"	12	2'-2"	--	--	2.2	285	0.15	5
	2	6'-0"	8"	3'-9"	1'-3"	3'-0"	9'-3"	23'-6"	12	23'-2"	28	8'-11"	16	5'-0"	24	2'-11"	24	2'-2"	12	4'-8"	4.0	525	0.29	9
	3	6'-0"	8"	3'-9"	1'-3"	3'-0"	9'-3"	34'-6"	12	34'-2"	40	8'-11"	24	5'-0"	24	2'-11"	36	2'-2"	24	4'-8"	5.8	765	0.43	13



PLAN

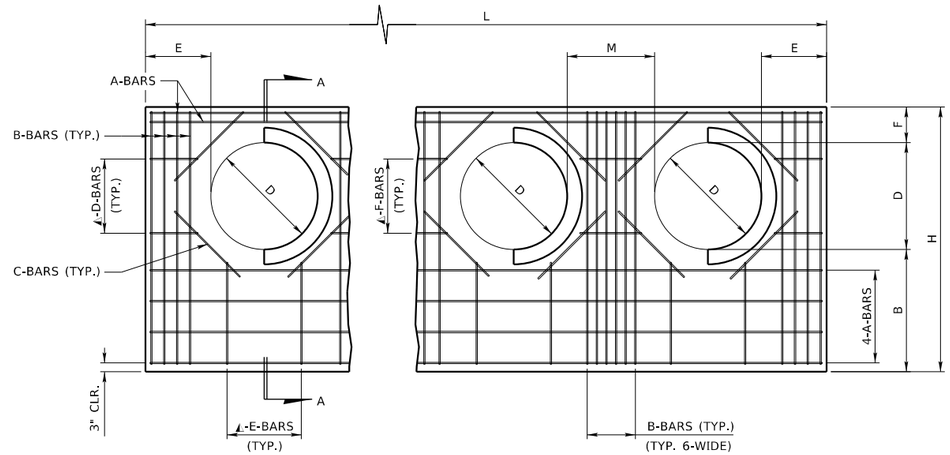


PLAN



ELEVATION

SINGLE PIPE HEADWALL



ELEVATION

MULTIPLE PIPE HEADWALL

NOTES

ALL CONCRETE USED SHALL BE CLASS 47B-3000 AND SHALL BE PAID FOR UNDER THE ITEM "CLASS 47B-3000 CONCRETE FOR HEADWALL".

ALL REINFORCING STEEL USED SHALL BE NO. 4 BARS, AND SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. DESIGNATION A615, GRADE 60, AND SHALL BE PAID FOR UNDER THE ITEM "REINFORCING STEEL FOR HEADWALL".

THE MINIMUM COVERING, MEASURED FROM THE FACE OF THE CONCRETE TO THE SURFACE OF ANY REINFORCING BAR, SHALL BE 2", EXCEPT AS SHOWN. THE MAXIMUM BAR SPACING SHALL BE 12".

FIELD BEND AND/OR CLIP REINFORCING STEEL TO MAINTAIN MINIMUM CLEARANCE.

WHEN CONCRETE PIPES ARE USED THE GROOVE OR BELL ENDS SHALL BE PLACED AT THE INLET OF THE CULVERT.

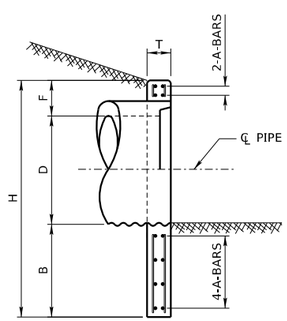
SPACING BETWEEN TWIN OR TRIPLE PIPES IS BASED ON A DISTANCE OF 5'-0" OUTSIDE OF PIPE TO OUTSIDE OF PIPE FOR CONCRETE PIPES. METAL PIPES WILL BE SPACED TO MATCH THE "M" DIMENSION.

◪ QUANTITIES SHOWN ARE FOR ONE HEADWALL.

◭ NUMBER OF BARS VARIES WITH SIZE OF PIPE.

HEADWALLS FOR PIPES 36"-60" REQUIRE A DOUBLE MAT OF REINFORCING STEEL AS SHOWN IN SECTION A-A.

◑ ADDITIONAL QUANTITIES TO BE ADDED IF THE HEIGHT OF THE HEADWALL MUST BE INCREASED TO MEET THE MINIMUM "F" DIMENSION DUE TO A VERTICAL SKEW OF THE CULVERT PIPE. AMOUNTS SHOWN ARE FOR A 6" INCREASE ONLY.



SECTION A-A

REV. NO.	DATE	DESCRIPTION OF REVISION

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 408

CONCRETE HEADWALL (FOR 36"-60" PIPES)

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

DATE

ORIGINAL: FEBRUARY 21, 2023

DATE

1
1

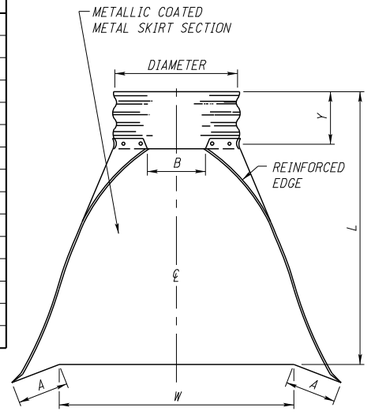
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DATE: 25-JUN-2024 10:05

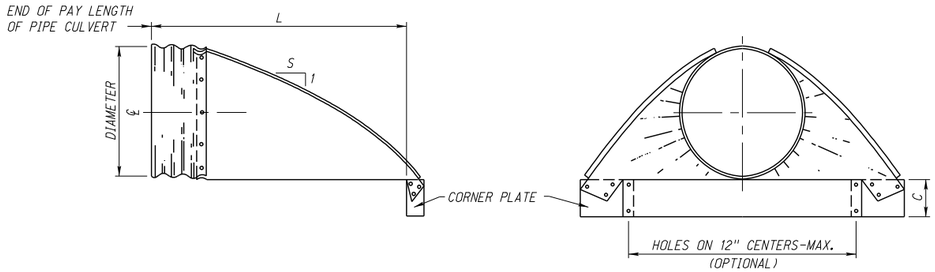
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ROADWAY DESIGN DIVISION

PIPE DIA.	GAUGE	NOMINAL DIMENSIONS						
		L ± 6"	W ± 2"	A MIN.	B MAX.	C MIN.	Y ± 4½"	S APPROX.
12"	16	6'-0⅞"	2'-0"	4¾"	6"	6"	4'-3⅜"	2½
15"	16	6'-1"	2'-6"	6"	8"	6"	3'-11"	2½
18"	16	6'-1"	3'-0"	7"	10"	6"	3'-8"	2½
21"	16	6'-1"	3'-8"	8¼"	1'-0"	6"	3'-1"	2½
24"	16	6'-1½"	4'-0"	9"	1'-1"	6"	2'-8½"	2½
30"	14	6'-1¾"	5'-0"	11"	1'-4"	6"	1'-10¾"	2½
36"	14	8'-1¾"	6'-0"	1'-2"	1'-7"	6"	3'-1¾"	2½
42"	12	8'-2"	7'-0"	1'-4"	1'-10"	6"	2'-5"	2½
48"	12	8'-2"	7'-6"	1'-6"	2'-3"	6"	1'-8"	2¼
54"	12	8'-4"	8'-6"	1'-6"	2'-6"	6"	1'-4"	2
60"	12	8'-3"	9'-6"	1'-6"	2'-9"	6"	1'-0"	1¾
66"	12	8'-3"	10'-0"	1'-6"	3'-0"	6"	1'-0"	1½
72"	12	8'-3"	10'-6"	1'-6"	3'-3"	6"	1'-0"	1⅓
78"	12	8'-3"	11'-0"	1'-6"	3'-6"	6"	1'-0"	1¼
84"	12	8'-3"	11'-6"	1'-6"	3'-9"	6"	1'-0"	1⅙

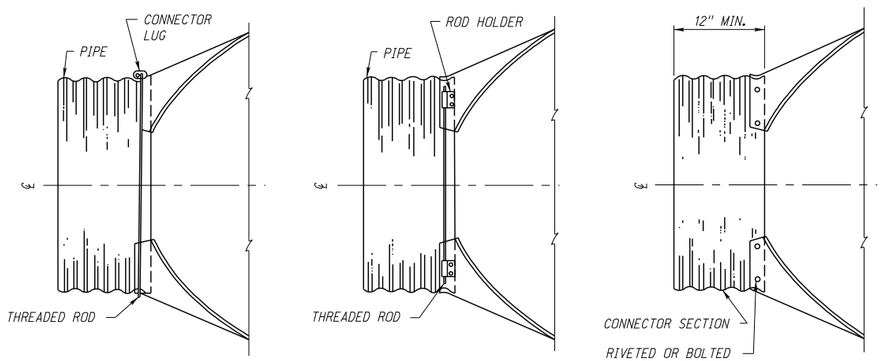


PLAN



SECTION ELEVATION

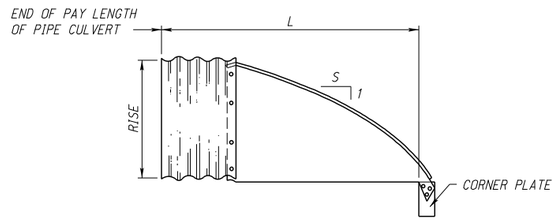
DETAILS OF METAL FLARED END SECTION
(FOR CORRUGATED METAL PIPE)



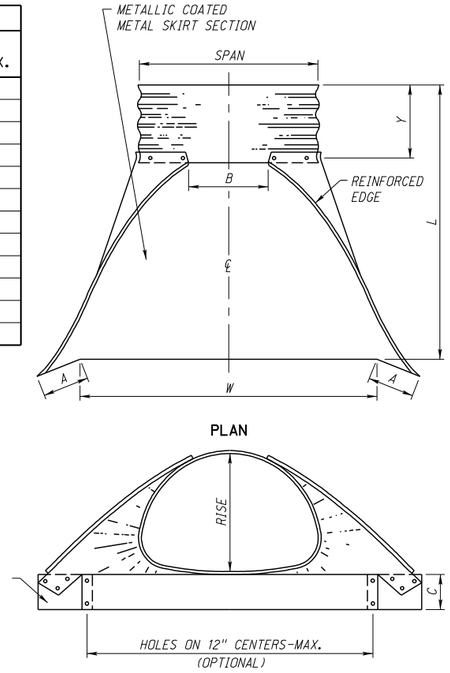
TYPICAL CONNECTIONS

FOR CORRUGATED METAL PIPE DIAMETERS OF 12" TO 24" INCLUSIVE AND CORRUGATED METAL PIPE-ARCHES WITH RISE OF 11" TO 18" INCLUSIVE, THE SKIRT SECTION MAY BE ATTACHED WITH A 1" WIDE, 12 GAUGE METAL CONNECTOR STRAP AND ½" × 6" BOLT AND NUT. THIS STRAP MAY BE USED ON PIPE WITH ANNULAR ENDS ONLY.

EQUIV. DIA.	SPAN	RISE	GAUGE	NOMINAL DIMENSIONS						
				L ± 6"	W MIN.	A MIN.	B MAX.	C MIN.	Y ± 4½"	S APPROX.
15"	17"	13"	16	6'-0"	2'-6"	4½"	9"	6"	4'-5"	2½
18"	21"	15"	16	6'-0"	3'-0"	5¼"	10"	6"	4'-1"	2½
21"	24"	18"	16	6'-0"	3'-6"	6¼"	11½"	6"	3'-8"	2½
24"	28"	20"	16	6'-0"	4'-0"	7"	1'-2"	6"	3'-4½"	2½
30"	35"	24"	14	8'-0"	5'-0"	8¾"	1'-4"	6"	4'-9½"	2½
36"	42"	29"	14	8'-0"	6'-3"	10¾"	1'-5½"	6"	4'-2"	2½
42"	49"	33"	12	8'-0"	7'-1"	1'-0¼"	1'-8"	6"	3'-7"	2½
48"	57"	38"	12	8'-0"	7'-6"	1'-2"	2'-3"	6"	2'-9"	2½
54"	64"	43"	12	8'-0"	8'-6"	1'-3¾"	2'-6"	6"	2'-2"	2¼
60"	71"	47"	12	8'-0"	9'-6"	1'-5¼"	2'-9"	6"	1'-7"	2¼
66"	77"	52"	12	8'-0"	10'-6"	1'-6"	3'-0"	6"	1'-7"	2
72"	83"	57"	12	8'-0"	11'-6"	1'-6"	3'-3"	6"	1'-7"	2



SECTION



PLAN ELEVATION

DETAILS OF METAL FLARED END SECTION
(FOR CORUGATED METAL PIPE-ARCH)

NOTES:

CONNECTOR STRAP, STIFFENER ANGLES AND MISCELLANEOUS HARDWARE SHALL BE METALLIC COATED.

THE "Y" LENGTH MAY BE FABRICATED AS PART OF THE CULVERT.

CONNECTOR SECTIONS AND CORNER PLATES FOR CORRUGATED METAL PIPE AND PIPE-ARCH FLARED END SECTIONS SHALL BE METALLIC COATED AND OF THE SAME GAUGE AS SKIRTS AND EACH SHALL BE METALLIC COATED.

SKIRT SECTION FOR CORRUGATED METAL PIPE DIA. OF 12" TO 24" INCLUSIVE SHALL BE MADE IN ONE PIECE.

SKIRT SECTION FOR CORRUGATED METAL PIPE-ARCHES WITH RISE OF 11" TO 22" INCLUSIVE SHALL BE MADE IN ONE PIECE.

SKIRT SECTION FOR CORRUGATED METAL PIPE DIA. OF 30" TO 54" INCLUSIVE AND CORRUGATED METAL PIPE-ARCHES WITH RISE OF 27" TO 40" INCLUSIVE MAY BE MADE FROM TWO SHEETS JOINED BY RIVETING OR BOLTING ON CENTERLINE.

SKIRT SECTION OF CORRUGATED METAL PIPE DIA. OF 60" AND LARGER, AND CORRUGATED METAL PIPE-ARCHES WITH RISE OF 44" AND LARGER SHALL BE MADE FROM THREE SHEETS JOINED BY RIVETING OR BOLTING AT EQUAL DISTANCES FROM CENTERLINE. THE CENTER PANEL SHALL BE FURNISHED IN 10 GAUGE MATERIAL AND THE WIDTH OF THE CENTER PANEL SHALL BE GREATER THAN 20% OF THE PIPE PERIPHERY.

MULTIPLE SHEET SKIRT SECTIONS SHALL HAVE 2" MIN. LAP SEAMS. BOLTS OR RIVETS SHALL BE ⅜" DIA. (MIN.) AND ON 6" CENTERS (MAX.).

TYPICAL CONNECTIONS SHOWN MAY BE USED FOR HELICAL CORRUGATED METAL PIPE.

FOR SKIRT SECTIONS OF 60" DIA. PIPE AND LARGER, AND CORRUGATED METAL PIPE-ARCHES WITH A RISE OF 49" AND LARGER, REINFORCED EDGES TO BE SUPPLEMENTED WTH STIFFENER ANGLES PLACED JUST BELOW THE REINFORCED EDGES ON THE OUTSIDE OF THE SKIRT SECTION. THE ANGLES WILL BE 2" × 2" × ¼". THE ANGLES TO BE ATTACHED BY ⅜" DIA. (MIN.) BOLTS AND NUTS AND ON 6" CENTERS (MAX.).

REV. NO.	DATE	DESCRIPTION OF REVISION
R4	JAN 18	NDOR BORDER TO NDOT BORDER
R3	AUG 99	CHANGED NOTES
R2	MAR 89	SPAN. RISE SIZES FOR C.M. PIPE-ARCH

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 410-R4

FLARED END SECTIONS FOR CULVERT PIPES

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

DATE

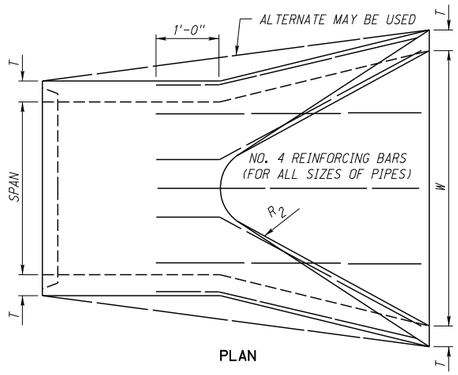
PROFESSIONAL CIVIL ENGINEER
MARK J. TRAYNOWICZ
E-8119
STATE OF NEBRASKA

ORIGINAL:
FEBRUARY 22, 1974
DATE

1
2

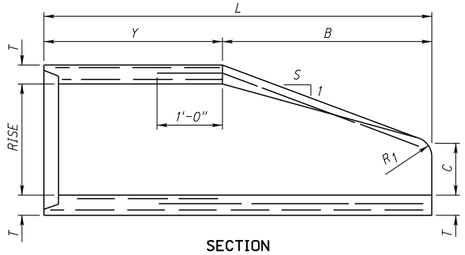
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ROADWAY DESIGN DIVISION

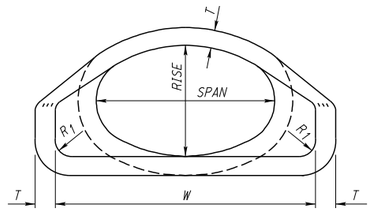


PLAN

EQUIV. DIA.	NOMINAL DIMENSIONS										
	SPAN	RISE	L ± 6"	B	Y ± 4½"	C	W ± 2"	R_1	R_2	S APPROX.	T MIN.
18"	23"	14"	6'-0"	2'-3"	3'-9"	8½"	3'-0"	3"	6"	2.3	2½"
24"	30"	19"	6'-0"	3'-3"	2'-9"	9"	4'-0"	3"	7"	2.9	3"
30"	38"	24"	6'-0"	4'-6"	1'-6"	10"	5'-0"	3"	9"	3	3½"
36"	45"	29"	8'-0"	5'-0"	3'-0"	11"	6'-0"	3"	1'-0"	2.7	4"
42"	53"	34"	8'-0"	5'-0"	3'-0"	1'-4"	6'-6"	6"	1'-1"	2.6	4½"
48"	60"	38"	8'-0"	5'-0"	3'-0"	1'-9"	7'-0"	6"	1'-2"	2.7	5"
54"	68"	43"	8'-0"	5'-0"	3'-0"	2'-1"	7'-6"	6"	1'-4"	2.5	5½"
60"	76"	48"	8'-0"	5'-0"	3'-0"	2'-6"	8'-0"	6"	1'-6"	2.5	6"

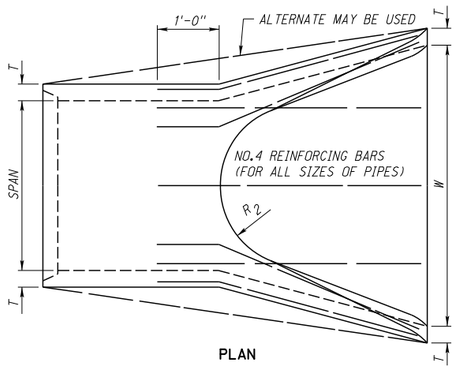


SECTION



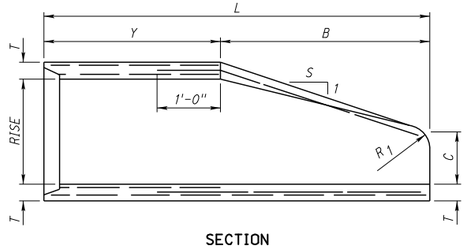
ELEVATION

DETAILS OF CONCRETE FLARED END SECTION
(FOR REINFORCED CONCRETE ELLIPTICAL PIPE)

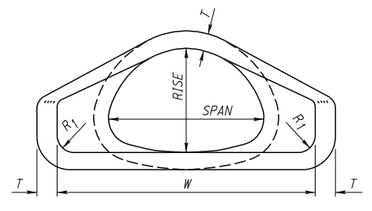


PLAN

EQUIV. DIA.	NOMINAL DIMENSIONS										
	SPAN	RISE	L ± 6"	B	Y ± 4½"	C	W ± 2"	R_1	R_2	S APPROX.	T MIN.
18"	22"	14"	6'-0"	2'-3"	3'-9"	7"	3'-0"	2"	1'-0"	2.2	2½"
24"	29"	18"	6'-0"	3'-3"	2'-9"	9"	4'-0"	3"	1'-2"	2.4	3"
30"	36"	23"	8'-0"	4'-0"	4'-0"	10"	5'-0"	3"	1'-3"	2.3	3½"
36"	44"	27"	8'-0"	5'-0"	3'-0"	11"	6'-0"	6"	1'-8"	2.4	4"
42"	51"	32"	8'-0"	5'-0"	3'-0"	1'-4"	6'-6"	6"	1'-10"	2.4	4½"
48"	59"	36"	8'-0"	5'-0"	3'-0"	1'-9"	7'-0"	6"	1'-10"	2.3	5"
54"	65"	40"	8'-0"	5'-0"	3'-0"	2'-0"	7'-6"	6"	2'-0"	2.1	5½"
60"	74"	45"	8'-0"	5'-0"	3'-0"	2'-3"	8'-0"	6"	1'-9"	2	6"
72"	88"	54"	8'-4"	6'-6"	1'-10"	2'-11"	10'-0"	6"	2'-0"	2	7"



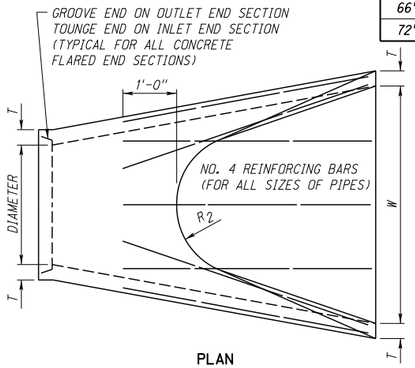
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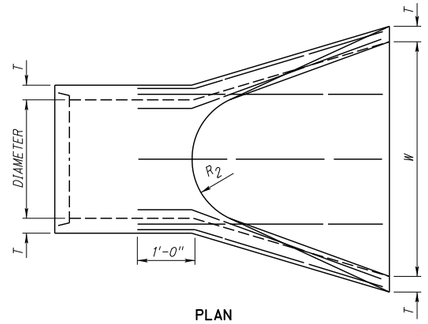
ELEVATION

DETAILS OF CONCRETE FLARED END SECTION
(FOR REINFORCED CONCRETE PIPE-ARCH)

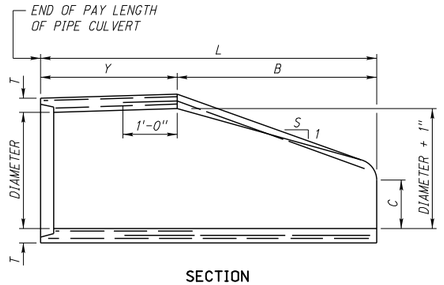
PIPE DIA.	NOMINAL DIMENSIONS								
	L ± 6"	B	Y ± 4½"	C	W ± 2"	R_1	R_2	S APPROX.	T MIN.
12"	6'-0⅞"	2'-0"	4'-0⅞"	4"	2'-0"	1'-0⅛"	9"	3	2"
15"	6'-1"	2'-3"	3'-10"	6"	2'-6"	1'-0½"	11"	3	2¼"
18"	6'-1"	2'-3"	3'-10"	9"	3'-0"	1'-3½"	1'-0"	3	2½"
24"	6'-1½'	3'-7½"	2'-6"	9½"	4'-0"	1'-4⅜6"	1'-2"	3	3"
30"	6'-1¾"	4'-6"	1'-7¾"	1'-0"	5'-0"	1'-6½"	1'-3"	3	3½"
36"	8'-1¾"	5'-3"	2'-10¾"	1'-3"	6'-0"	2'-0⅜6"	1'-8"	3	4"
42"	8'-2"	5'-3"	2'-11"	1'-9"	6'-6"	2'-3½"	1'-10"	3	4½"
48"	8'-2"	6'-0"	2'-2"	2'-0"	7'-0"	2'-4½"	1'-10"	3	5"
54"	8'-4"	5'-5"	2'-11"	2'-3"	7'-6"	2'-9⅛"	2'-0"	2.4	5½"
60"	8'-3"	5'-0"	3'-3"	2'-6"	8'-0"	3'-0⅛6"	2'-0"	2	6"
66"	8'-3"	6'-6"	1'-9"	2'-6"	9'-0"	3'-0⅛"	2'-0"	2	6½"
72"	8'-3"	6'-6"	1'-9"	2'-6"	9'-0"	3'-2⅛6"	2'-0"	2	7"



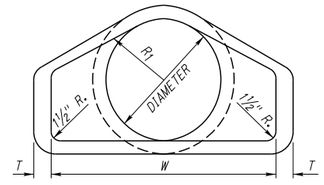
PLAN



PLAN



SECTION



ELEVATION

DETAILS OF CONCRETE FLARED END SECTION
(FOR REINFORCED CONCRETE PIPE)

NOTES

CONCRETE FOR FLARED END SECTIONS SHALL BE IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M170, M206, AND M207, FOR CLASS II PIPE.

REINFORCEMENT IN THE "Y" SECTION SHALL BE IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M170, M206, AND M207, FOR CLASS II PIPE.

IN ADDITION TO THE REINFORCING BARS SHOWN, REINFORCEMENT IN THE "B" SECTION SHALL HAVE A CROSS-SECTIONAL AREA EQUAL TO THAT OF ONE LAYER OF STEEL IN THE "Y" SECTION.

REV. NO.	DATE	DESCRIPTION OF REVISION
R4	JAN 18	NDOR BORDER TO NDOT BORDER
R3	AUG 99	CHANGED NOTES
R2	MAR 89	SPAN. RISE SIZES FOR C.M. PIPE-ARCH

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 410-R4

FLARED END SECTIONS FOR CULVERT PIPES

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MARK J. TRAYNOWICZ
E-8119
STATE OF NEBRASKA

DATE

ORIGINAL:
FEBRUARY 22, 1974
DATE

2
2

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Date: 29-JUN-2021 09:18
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ROADWAY DESIGN DIVISION
Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:18
File: 41100e02.dgn

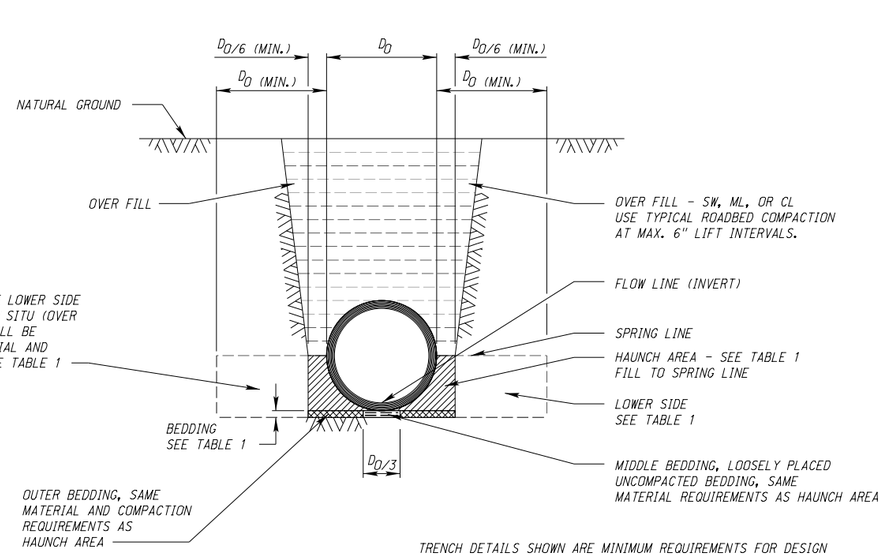
TABLE 1 - CONCRETE STANDARD INSTALLATIONS, SOILS AND MINIMUM COMPACTION REQUIREMENTS

INSTALLATION TYPE	BEDDING THICKNESS	HAUNCH AND OUTER BEDDING	LOWER SIDE
TYPE 1	$D_O/24$ MINIMUM, NOT LESS THAN 3" IF ROCK FOUNDATION, USE $D_O/12$ MINIMUM, NOT LESS THAN 6".	95% SW	90% SW, 95% ML, 100% CL, OR NATURAL SOILS OF EQUAL FIRMNESS
TYPE 2		90% SW OR 95% ML	85% SW, 90% ML, 95% CL, OR NATURAL SOILS OF EQUAL FIRMNESS
*TYPE 3		85% SW, 90% ML, OR 95% CL	85% SW, 90% ML, 95% CL, OR NATURAL SOILS OF EQUAL FIRMNESS

TABLE 1 NOTES:

** THE TYPE 3 INSTALLATION (SHADED) IN TABLE 4 IS THE NDOR MINIMUM STANDARD, USING EITHER A SHAPED TRENCH ACCORDING TO THE STANDARD SPECIFICATIONS, OR AT THE OPTION OF THE CONTRACTOR, THE BEDDING WITH COMPACTIONS AS SHOWN.*

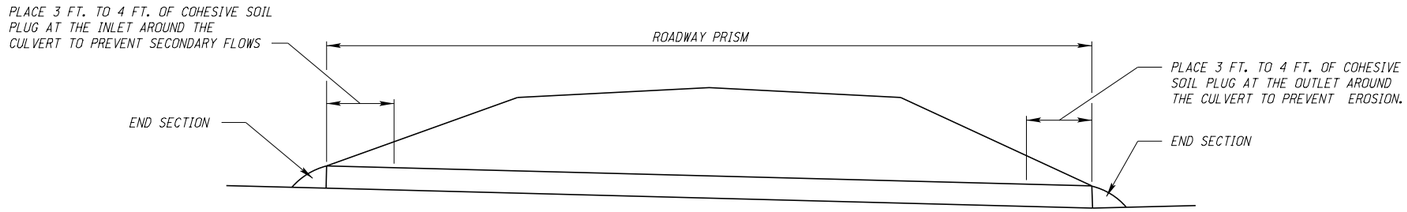
MAXIMUM FILL HEIGHTS FOR THE TYPE 1, 2, AND 3 INSTALLATIONS ARE SHOWN IN TABLE 4.



TRENCH DETAILS SHOWN ARE MINIMUM REQUIREMENTS FOR DESIGN AND CONSTRUCTION. PAYMENT FOR EXCAVATION IS BASED UPON THE GUIDELINES IN THE STANDARD SPECIFICATIONS.

TRENCHES SHALL BE EXCAVATED IN ACCORDANCE WITH APPROVED SAFETY PRACTICE.

TYPICAL TRENCH INSTALLATION



LIMITS OF BEDDING AND BACKFILL

EXCAVATION, BEDDING AND EMBANKMENT SEQUENCE:

TRENCH INSTALLATION:

(A) DETERMINE THE FLOW LINE AND TRENCH BOTTOM ELEVATIONS.

(B) DETERMINE THE SHAPE OF TRENCH. DECIDE IF SHORING IS NEEDED. CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE SAFETY OF ALL WORKERS, EQUIPMENT AND MATERIALS IN THE TRENCH.

(C) PLACE THE BEDDING MATERIAL (SEE CONCRETE - TABLE 1) LOOSELY.

(D) PLACE PIPE ON THE BEDDING AND COMPACT OUTER BEDDING, (SEE TABLE 1).

(E) PLACE AND COMPACT THE LOWER SIDE, HAUNCH AND OVERFILL MATERIAL AT 6 IN. INTERVALS.

EMBANKMENT INSTALLATION:

(A) DETERMINE THE FLOW LINE AND SPRING LINE ELEVATION.

(B) IF FLOW LINE IS ABOVE THE NATURAL GROUND, PLACE AN EMBANKMENT AT LEAST 3DO WIDE WITH 3:1 FORESLOPES OR FLATTER AT SPRING LINE ELEVATION, COMPACTED AT ROADBED REQUIRED COMPACTION.

(C) IF THE FLOW LINE IS BELOW THE NATURAL GROUND BUT THE SPRING LINE IS ABOVE THE NATURAL GROUND, PLACE THE EMBANKMENT SIMILAR TO THE ONE IN STEP B.

(D) EXCAVATE TO PROPER ELEVATION.

(E) PLACE BEDDING MATERIAL (SEE TABLE 1) LOOSELY.

(F) PLACE THE PIPE ON THE BEDDING MATERIAL AND COMPACT OUTER BEDDING MATERIAL (SEE CONCRETE - TABLE 1).

(G) PLACE AND COMPACT THE HAUNCH, LOWER SIDE AND OVERFILL MATERIAL AT 6 IN. INTERVALS.

NOTES FOR TRENCH INSTALLATIONS:

1. *COMPACTION AND SOIL SYMBOLS, I.E. 95% SW, REFER TO SW SOIL MATERIAL WITH MINIMUM STANDARD PROCTOR COMPACTION OF 95%.*
2. *THE TRENCH TOP ELEVATION SHALL BE NO LOWER THAN 1 FT. BELOW THE BOTTOM OF THE PAVEMENT BASE MATERIAL.*
3. *SOIL IN BEDDING AND HAUNCH ZONES SHALL BE COMPACTED TO AT LEAST THE SAME COMPACTION AS SPECIFIED FOR THE MAJORITY OF SOIL IN THE BACKFILL ZONES.*
4. *THE TRENCH WIDTH SHALL BE WIDER THAN SHOWN IF REQUIRED FOR ADEQUATE SPACE TO ATTAIN THE SPECIFIED COMPACTION IN THE HAUNCH AND BEDDING ZONES.*
5. *FOR TRENCH WALLS THAT ARE WITHIN 10 DEGREES OF VERTICAL, THE COMPACTION OR FIRMNESS OF THE SOIL IN THE TRENCH WALLS AND LOWER SIDE ZONE NEED NOT TO BE CONSIDERED.*
6. *FOR TRENCH WALLS WITH GREATER THAN 10 DEGREE SLOPES THAT CONSIST OF EMBANKMENT, THE LOWER SIDE SHALL BE COMPACTED TO AT LEAST THE SAME COMPACTION AS SPECIFIED FOR THE SOIL IN THE BACKFILL ZONE.*

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN. 18	NDOR BORDER TO NDOT BORDER
R1	OCT. 14	UP TO 60" PLASTIC ALLOWED IN ALL OF TABLE 1 - PLASTIC

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 411-R2

BEDDING AND BACKFILL REQUIREMENTS FOR CONCRETE PIPE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

DATE

ORIGINAL: JUNE 6, 2008
DATE

1/4

ROADWAY DESIGN DIVISION
Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:18
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TABLE 1 - CONCRETE STANDARD INSTALLATIONS, SOILS AND MINIMUM COMPACTION REQUIREMENTS

INSTALLATION TYPE	BEDDING THICKNESS	HAUNCH AND OUTER BEDDING	LOWER SIDE
TYPE 1	$D_O/24$ MINIMUM, NOT LESS THAN 3" IF ROCK FOUNDATION, USE $D_O/12$ MINIMUM, NOT LESS THAN 6".	95% SW	90% SW, 95% ML OR 100% CL
TYPE 2		90% SW OR 95% ML	85% SW, 90% ML OR 95% CL
*TYPE 3		85% SW, 90% ML, OR 95% CL	85% SW, 90% ML OR 95% CL

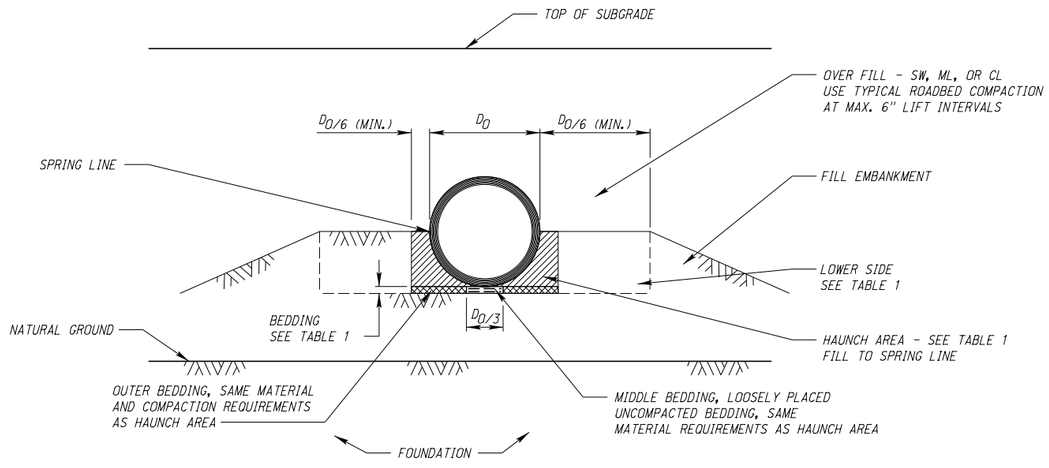
TABLE 1 NOTES:

** THE TYPE 3 INSTALLATION (SHADED) IN TABLE 4 IS THE NDOR MINIMUM STANDARD, USING EITHER A SHAPED TRENCH ACCORDING TO THE STANDARD SPECIFICATIONS, OR AT THE OPTION OF THE CONTRACTOR, THE BEDDING WITH COMPACTIONS AS SHOWN.*

MAXIMUM FILL HEIGHTS FOR THE TYPE 1, 2, AND 3 INSTALLATIONS ARE SHOWN IN TABLE 4.

TABLE 2 - CONCRETE PIPE DIMENSIONS

NOMINAL PIPE DIAMETER (INCHES)	STANDARD OUTSIDE PIPE DIAMETER, DO (SPAN)			
	ROUND PIPE	ARCH PIPE	H. ELLIP. PIPE	V. ELLIP. PIPE
15	19.5	22.5		
18	23	27	28.5	
21	26.5	31.5		
24	30	34.5	36.5	
27	33.5		41	
30	37	43.25	45.5	
36	44	51.75	54	38
42	51	60.13	63	44
48	58	68.5	71	49
54	65	76	80	55
60	72	85	89	61
66	79		97	67
72	86	102	106	73
78	93		114	79
84	100	118	123	85
90	107			
96	114			
102	121			
108	128			



TYPICAL EMBANKMENT INSTALLATION

TABLE 3 SOIL CLASSIFICATION FOR BEDDING & BACKFILL

ASTM SOIL GROUP SYMBOL D 2487	DESCRIPTION	PERCENTAGE PASSING SIEVE SIZES		
		1½ IN.	NO. 4	NO. 200
SW	WELL GRADED SANDS AND GRAVELLY-SANDS: LITTLE OR NO FINES. NON PLASTIC	100%	> 50% OF "COURSE FRACTION"	< 5%
ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY-FINE-SANDS, SILTS WITH SLIGHT PLASTICITY		100%	> 50%
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELY-CLAYS, SANDY-CLAYS, SILTY-CLAYS, LEAN CLAYS			

NOTES FOR EMBANKMENT INSTALLATIONS:

1. COMPACTION AND SOIL SYMBOLS, I.E. 95% SW, REFER TO SW SOIL MATERIAL WITH A MINIMUM STANDARD PROCTOR COMPACTION OF 95%.

2. SOIL IN THE OUTER BEDDING, HAUNCH, AND LOWER SIDE ZONES, EXCEPT WITHIN THE $D_O/3$ MIDDLE BEDDING, SHALL BE COMPACTED TO AT LEAST THE SAME COMPACTION AS THE MAJORITY OF THE SOIL IN THE OVERFILL ZONES.

3. SUBTRENCHES

3.1 A SUBTRENCH IS DEFINED AS A TRENCH WITH ITS TOP AT AN ELEVATION LOWER THAN 1 FT. BELOW THE BOTTOM OF THE PAVEMENT BASE MATERIAL.

3.2 THE MINIMUM WIDTH OF A SUBTRENCH SHALL BE 1.33DO, OR WIDER IF REQUIRED FOR ADEQUATE SPACE TO ATTAIN THE SPECIFIED COMPACTION IN THE HAUNCH AND BEDDING ZONES.

3.3 FOR SUBTRENCHES WITH WALLS OF NATURAL SOIL, ANY PORTION OF THE LOWER SIDE ZONE IN THE SUBTRENCH WALL SHALL BE AT LEAST AS FIRM AS AN EQUIVALENT SOIL PLACED TO THE COMPACTION REQUIREMENTS SPECIFIED FOR THE LOWER SIDE ZONE, AND AS FIRM AS THE MAJORITY OF SOIL IN THE OVERFILL ZONE, OR SHALL BE REMOVED AND REPLACED WITH SOIL COMPACTED TO THE SPECIFIED LEVEL.

GENERAL NOTES:

WHEN IN-SITU LATERAL SOIL RESISTANCE IS NEGLIGIBLE, E.G. PEAT, MUCK, OR HIGHLY EXPANSIVE SOIL, EMBEDMENT SHALL BE PLACED AND COMPACTED AT THE DIRECTION OF THE ENGINEER.

TO PROTECT THE PIPE AND BACKFILL DURING CONSTRUCTION, PROVIDE A MINIMUM OF 36" OF COMPACTED FILL MATERIAL OVER THE TOP OF THE PIPE BEFORE ALLOWING ANY HEAVY EQUIPMENT TO TRAVERSE OVER THE PIPE. EXTREMELY HEAVY EQUIPMENT MAY REQUIRE LARGER COVER AS DETERMINED BY THE CONTRACTOR.

THE PIPE VOLUME SHOULD NOT BE SUBTRACTED FROM THE VOLUME OF EXCAVATION.

THESE DESIGN STANDARDS ARE MINIMUM. IF A MORE RESTRICTIVE DESIGN IS REQUIRED BY THE ENGINEER OR CULVERT MANUFACTURER, THEN THESE STANDARDS SHALL BE MODIFIED. CHANGES TO PAY ITEM QUANTITIES DUE TO UNFORESEEN SITE CONDITIONS SHALL BE CALCULATED AND INCORPORATED INTO THE CONTRACT THRU A CHANGE ORDER.

BOTH ENDS OF THE PIPE SHALL BE SEALED WITH COHESIVE SOIL (AROUND THE PIPE EXTENDING 3 FT. TO 4 FT. FROM EACH END) TO PROTECT AGAINST INFILTRATION AND EROSION.

BEDDING AND BACKFILL MATERIAL IS NOT PAID FOR DIRECTLY, BUT IS SUBSIDIARY TO THE LINEAR FEET OF CULVERT.

BEDDING AND BACKFILL MATERIAL SHALL MEET ASTM D 2487 (SOIL GROUPS AS SHOWN IN TABLE 3).

PERCENT COMPACTION SHALL BE DETERMINED IN ACCORDANCE WITH NDOR STANDARD TEST METHOD T 99.

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN. 18	NDOR BORDER TO NDOT BORDER
R1	OCT. 14	UP TO 60" PLASTIC ALLOWED IN ALL OF TABLE 1 - PLASTIC

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 411-R2

BEDDING AND BACKFILL REQUIREMENTS FOR CONCRETE PIPE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

DATE

ORIGINAL: JUNE 6, 2008
DATE

2
4

ROADWAY DESIGN DIVISION

TABLE 1 – CONCRETE STANDARD INSTALLATIONS, SOILS AND MINIMUM COMPACTION REQUIREMENTS

INSTALLATION TYPE	BEDDING THICKNESS	HAUNCH AND OUTER BEDDING	LOWER SIDE
TYPE 1	$D_O/24$ MINIMUM, NOT LESS THAN 3" IF ROCK FOUNDATION,USE $D_O/12$ MINIMUM, NOT LESS THAN 6".	95% SW	90% SW, 95% ML OR 100% CL
TYPE 2		90% SW OR 95% ML	85% SW, 90% ML OR 95% CL
*TYPE 3		85% SW, 90% ML, OR 95% CL	85% SW, 90% ML OR 95% CL

NOTES:

** THE TYPE 3 INSTALLATION (SHADED) IN TABLE 4 IS THE NDOR MINIMUM STANDARD, USING EITHER A SHAPED TRENCH ACCORDING TO THE STANDARD SPECIFICATIONS, OR AT THE OPTION OF THE CONTRACTOR, THE BEDDING WITH COMPACTIONS AS SHOWN.*

MAXIMUM FILL HEIGHTS FOR THE TYPE 1, 2, AND 3 INSTALLATIONS ARE SHOWN IN TABLE 4.

INSTALLATION TYPE 2 AND TYPE 1 ARE IMPROVED METHODS IN ORDER TO SUPPORT HIGHER FILL HEIGHTS USING CLASS III, IV, AND V CIRCULAR CONCRETE PIPE. INSTALLATION TYPE I WILL PROVIDE THE BEST IN-SITU PERFORMANCE USING GREATER COMPACTION WITH GRANULAR BEDDING AND BACKFILL. THE CONTRACTOR WILL CHOOSE THE INSTALLATION TYPE AND CLASS OF PIPE. ACTUAL PROJECT FILL HEIGHTS MUST BE KNOWN IN ORDER TO USE TABLE 4.

ROUND EQUIVALENT, NON-CIRCULAR PIPE SUCH AS ARCH OR ELLIPTICAL PIPE, MAY BE SELECTED, PROVIDED SUCH PIPE ARE DESIGNED AND MANUFACTURED TO THE SAME D-LOADS AND ULTIMATE STRENGTHS (SEE TABLE 5) AS THE SELECTED CIRCULAR PIPE FROM THE FILL HEIGHT TABLE.

TABLE 4 MAXIMUM FILL HEIGHTS (FEET) FOR STANDARD DESIGN (AASHTO M 170) ROUND CONCRETE PIPE

	INSTALLATION TYPE 3* (NDOR STANDARD)			INSTALLATION TYPE 2			INSTALLATION TYPE 1		
PIPE SIZE (IN.)	CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V
15	12	15	21	15	19	26	23	28	40
18	12	17	24	16	22	30	24	32	45
21	13	19	26	16	24	32	25	37	48
24	13	19	26	17	24	33	25	32	45
27	13	17	26	17	21	34	23	26	51
30	12	14	25	15	17	32	20	21	49
36	10	16	24	13	21	31	20	31	47
42	10	15	23	13	19	29	20	29	44
48	10	14	22	13	18	29	20	28	43
54	10	14		13	17		20	27	
60	9	14		12	18		19	28	
66	9	14		12	18		19	28	
72	9	14		12	18		19	28	
78	9			12			19		
84	9			12			19		
90	9			12			20		
96	9			12			19		
102	10			13			20		
108	10			14			22		

TABLE 4 NOTES:

AASHTO M 170 SPECIFICATIONS ARE MODIFIED AS FOLLOWS:

ONLY SINGLE INNER CAGE, CIRCULAR REINFORCING IS ALLOWED FOR CLASS III, 15", 18", 21", AND 24" ROUND RCP AS SHOWN:

PIPE SIZE (IN.)	CLASS	MINIMUM CIRCUMFERENTIAL REINFORCING ($IN.^2$/FT. OF PIPE WALL)
15	III	0.08
18	III	0.10
21	III	0.12
24	III	0.14

APPLICABLE SPECIFICATIONS:

AASHTO M 170---ROUND RCP
AASHTO M 206---ARCH RCP
AASHTO M 207---ELLIPTICAL RCP

GENERAL NOTES:

FILL HEIGHTS SHOWN IN TABLE 4 WERE DEVELOPED USING ASCE STANDARDS FOR DIRECT DESIGN OF BURIED PRECAST CONCRETE PIPE, MANUFACTURED IN ACCORDANCE WITH AASHTO M 170 SPECIFICATION REQUIREMENTS (SEE TABLE 4 FOOTNOTE FOR EXCEPTIONS). FILL HEIGHTS SHOWN APPLY ONLY TO ROUND PIPE (UNDER FULL FLOW CONDITIONS), USED UNDER RIGID AND FLEXIBLE PAVEMENT, WITH SOIL OVERFILL WEIGHING 120 POUNDS PER CUBIC FOOT. UNDER SPECIAL CIRCUMSTANCES (WHERE PAVEMENT IS NOT USED AND LIVE LOAD BECOMES CRITICAL, OR DIFFERENT SOIL DENSITY IS ENCOUNTERED, OR THE ONE FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE PAVEMENT TO THE TOP OF THE PIPE CANNOT BE MAINTAINED) THESE FILL HEIGHTS MAY NEED TO BE MODIFIED. DEEPER FILL HEIGHTS MAY BE USED BY SUBMITTING A SPECIAL STANDARD INSTALLATION DIRECT DESIGN (SIDD) FOR NDOR APPROVAL.

CONCRETE PIPE DESIGNS THAT ARE NOT SHOWN IN APPLICABLE AASHTO SPECIFICATIONS WILL BE CONSIDERED SPECIAL DESIGNS THAT MUST BE SUBMITTED TO NDOR FOR APPROVAL.

TABLE 5 D-LOADS FOR CONCRETE PIPE

PIPE CLASS	III	IV	V
D-LOAD TO PRODUCE A 0.01-IN. CRACK	1350	2000	3000
D-LOAD TO PRODUCE THE ULTIMATE LOAD	2000	3000	3750

NOTES:

LOAD ON PIPE IN POUNDS PER LINEAR FOOT = D-LOAD X INSIDE SPAN IN FEET D-LOAD = TEST LOAD EXPRESSED IN POUNDS-FORCE PER LINEAR FOOT PER FOOT OF DIAMETER

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN. 18	NDOR BORDER TO NDOT BORDER
R1	OCT. 14	UP TO 60" PLASTIC ALLOWED IN ALL OF TABLE 1 - PLASTIC

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 411-R2

BEDDING AND BACKFILL REQUIREMENTS FOR CONCRETE PIPE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

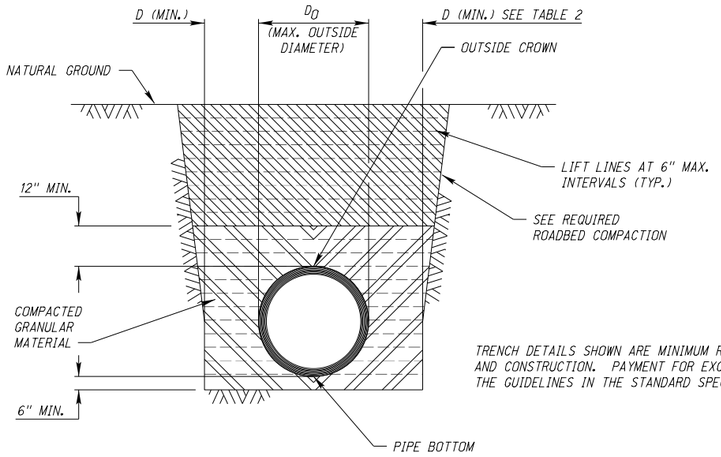
PROFESSIONAL CIVIL ENGINEER * MICK S. SYSLO E-10043 * STATE OF NEBRASKA

DATE

ORIGINAL: JUNE 6, 2008
DATE

File: 41100e02.dgn Date: 29-JUN-2021 09:18 Computer: NDOTDESIGN134

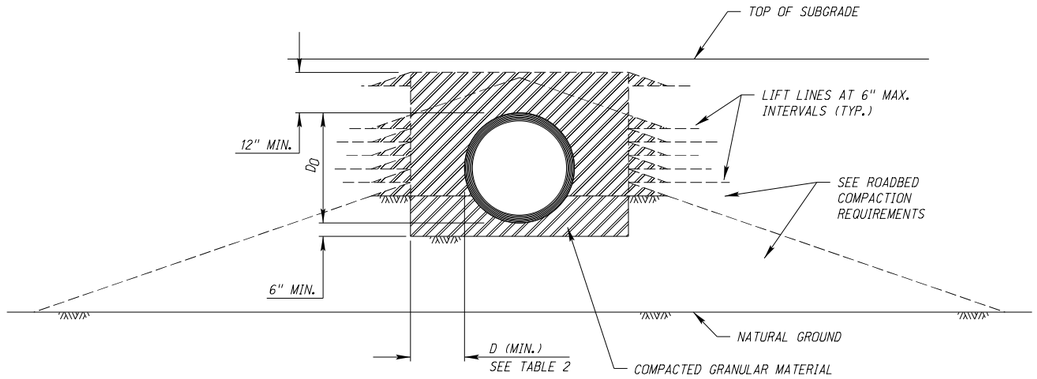
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TRENCH DETAILS SHOWN ARE MINIMUM REQUIREMENTS FOR DESIGN AND CONSTRUCTION. PAYMENT FOR EXCAVATION IS BASED UPON THE GUIDELINES IN THE STANDARD SPECIFICATIONS.

TRENCHES SHALL BE EXCAVATED IN ACCORDANCE WITH APPROVED SAFETY PRACTICE.

TYPICAL TRENCH INSTALLATION



TYPICAL EMBANKMENT INSTALLATION

TABLE 1 - PLASTIC
SOIL CLASSIFICATION FOR GRANULAR FILL MATERIAL

SOIL GROUP SYMBOL D 2487	DESCRIPTION	% PASSING SIEVE SIZES		
		1½ IN.	NO. 4	NO. 200
GW	WELL GRADED GRAVEL AND GRAVEL-SAND MIXTURES; LITTLE OR NO FINES.	100%	< 50% OF COARSE FRACTION	< 5%
GP	POORLY GRADED GRAVEL AND GRAVEL-SAND MIXTURES; LITTLE OR NO FINES.			
SW	WELL GRADED SAND AND GRAVEL-SANDS; LITTLE OR NO FINES.		> 50% OF COARSE FRACTION	
SP	POORLY GRADED SAND AND GRAVEL-SANDS; LITTLE OR NO FINES.			
E.G. GW-GC SP-SM	SAND AND GRAVELS WHICH ARE BORDER LINE BETWEEN CLEAN AND WITH FINES.	100%	VARIES	5% TO 12%
GM	SILTY GRAVEL, GRAVEL-SAND-SILT MIXTURES.	100%	< 50% OF COARSE FRACTION	12% TO 50%
GC	CLAYEY-GRAVEL, GRAVEL-SAND-CLAY MIXTURES.			
SM	SILTY SANDS, SAND-SILT MIXTURES.		> 50% OF COARSE FRACTION	

TABLE 2 - PLASTIC
MINIMUM D (INCHES)

NOMINAL PIPE DIAMETER (INCHES)	TRENCH INSTALLATION		EMBANKMENT INSTALLATION	
	METAL PIPE	PLASTIC PIPE	METAL PIPE	PLASTIC PIPE
15	11	11	15	15
18	12	12	18	18
24	13	13	24	24
30	15	15	24	24
36	17	17	24	24
42	24	24	24	24
48	24	24	24	24
54	24	24	24	24
60	24	24	24	24
66	24		24	
72	24		24	
78	24		24	
84	24		24	

NOTES:

INSTALLATIONS AS SHOWN ARE REQUIRED UNDER ALL SURFACED ROADWAYS. BEDDING AND BACKFILL FOR DRIVE PIPE OR OTHER PIPE OUTSIDE THE ROADWAY PRISM (OR BACK OF CURB-LINE FOR URBAN PROJECTS) MAY BE INSTALLED USING SUITABLE EXISTING SOIL, PLACED AND COMPACTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

WHERE IN-SITU LATERAL SOIL RESISTANCE IS NEGLIGIBLE E.G. PEAT, MUCK, OR HIGHLY EXPANSIVE SOIL, EMBEDMENT SHALL BE PLACED AND COMPACTED AT THE DIRECTION OF THE ENGINEER.

TO PROTECT THE PIPE AND BACKFILL DURING CONSTRUCTION, PROVIDE A MINIMUM OF 36" OF COMPACTED FILL MATERIAL OVER THE TOP OF THE PIPE BEFORE ALLOWING ANY HEAVY EQUIPMENT TO TRAVERSE OVER THE PIPE. EXTREMELY HEAVY EQUIPMENT MAY REQUIRE LARGER COVER AS DETERMINED BY THE CONTRACTOR.

PIPE VOLUME SHOULD NOT BE SUBTRACTED FROM THE VOLUME OF EXCAVATION.

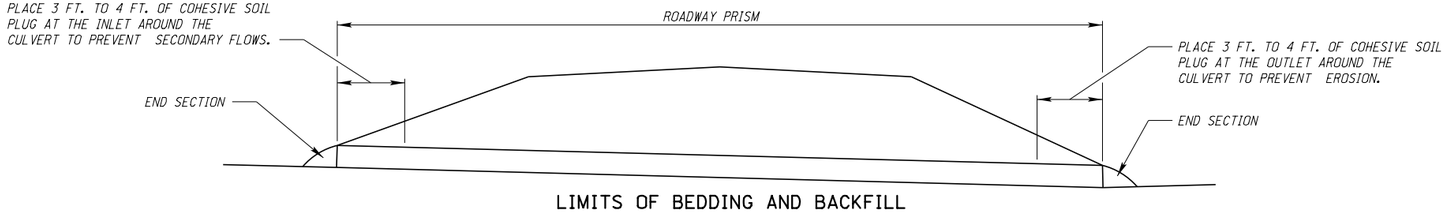
THESE DESIGN STANDARDS ARE MINIMUM. IF A MORE RESTRICTIVE DESIGN IS REQUIRED BY THE ENGINEER OR THE CULVERT MANUFACTURER, THEN THESE STANDARDS SHALL BE MODIFIED. CHANGES TO PAY ITEM QUANTITIES DUE TO UNFORESEEN SITE CONDITIONS SHALL BE CALCULATED AND INCORPORATED INTO THE CONTRACT BY A CHANGE ORDER.

EXPOSED ENDS OF THE PIPE SHALL BE SEALED WITH COHESIVE SOIL (AROUND THE PIPE EXTENDING 3 FT. TO 4 FT. FROM EACH END) TO PROTECT AGAINST INFILTRATION AND EROSION.

GRANULAR FILL MATERIAL IS NOT PAID FOR DIRECTLY, BUT IS SUBSIDIARY TO THE LINEAR FEET OF CULVERT.

GRANULAR MATERIAL SHALL MEET ASTM D 2487 (SOIL GROUP AS SHOWN IN TABLE 1). MATERIAL SHALL BE COMPACTED TO AT LEAST 90% PROCTOR TEST DENSITY.

PERCENT COMPACTION SHALL BE DETERMINED IN ACCORDANCE WITH NDOR STANDARD TEST METHOD T 99.



LIMITS OF BEDDING AND BACKFILL

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN. 18	NDOR BORDER TO NDOT BORDER
R1	OCT. 14	UP TO 60" PLASTIC ALLOWED IN ALL OF TABLE 1 - PLASTIC

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 411-R2

BEDDING AND BACKFILL REQUIREMENTS FOR MCCMP, PCCMP, & PLASTIC PIPE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

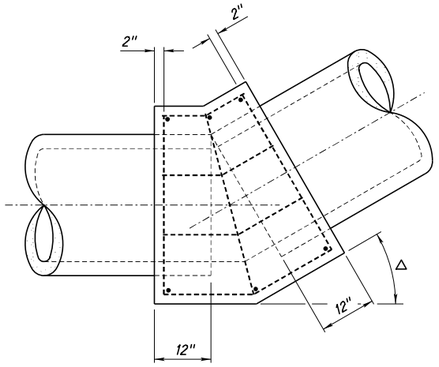
PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

DATE

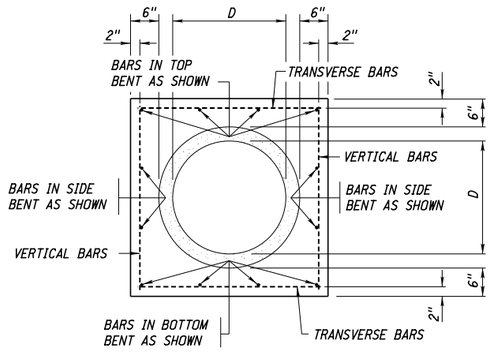
ORIGINAL: JUNE 6, 2008
DATE

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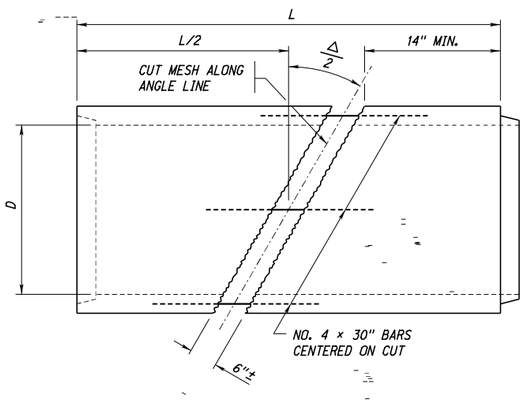


SIDE ELEVATION

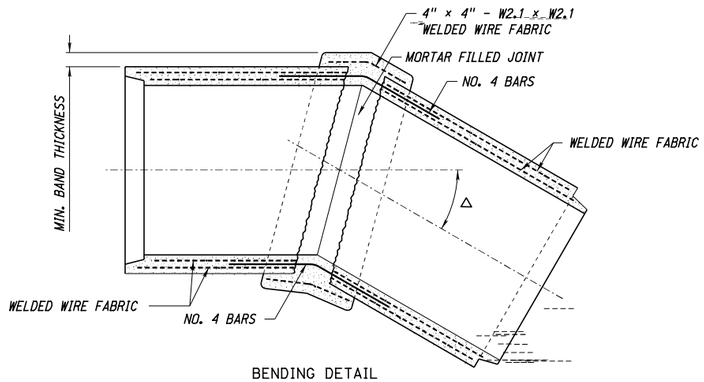


END ELEVATION

DETAILS OF COLLARS

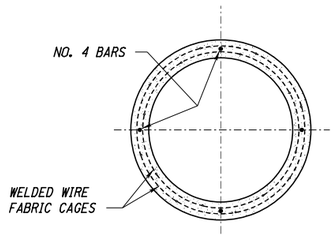


CUTTING DETAIL

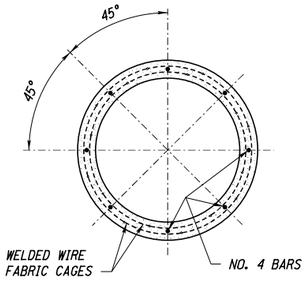


BENDING DETAIL

DETAILS OF CONCRETE ELBOWS



12" THROUGH 24"
PIPE DIAMETERS



OVER 24" PIPE DIAMETER

BAR LOCATION DETAILS

DATA FOR PRECAST ELBOWS			
SIZE OF PIPE "D"	MINIMUM BAND THICKNESS	Δ MAXIMUM	
		L-6'	L-7½'
12"	1"	90°	90°
15"	1"	90°	90°
18"	1"	90°	90°
21"	1"	90°	90°
24"	1⅛"	90°	90°
27"	1⅛"	90°	90°
30"	1¼"	90°	90°
36"	1⅜"	81°	90°
42"	1½"	73°	90°
48"	1¾"	66°	88°
54"	2"	60°	81°
60"	2"	55°	75°

SCHEDULE OF BARS FOR COLLAR					
SIZE OF PIPE "D"	BAR SIZE	NUMBER OF BARS			
		TRANS-VERT	TOP	ONE SIDE	BOTTOM
12"	NO. 4	12	4	2	4
15"	NO. 4	12	4	2	4
18"	NO. 4	12	4	2	4
21"	NO. 4	12	4	2	4
24"	NO. 4	12	4	2	4
27"	NO. 4	12	4	2	5
30"	NO. 4	12	4	2	5
36"	NO. 4	12	4	2	5
42"	NO. 4	12	5	3	6
48"	NO. 4	12	5	3	6
54"	NO. 4	12	5	3	6
60"	NO. 4	12	5	3	6

DATA FOR COLLARS			
SIZE OF PIPE "D"	Δ	CONCRETE (CU. YDS.)	REINF. STEEL (LBS.)
12"	0°	0.30	32
	15°	0.33	33
	30°	0.36	36
	45°	0.39	37
15"	0°	0.36	35
	15°	0.40	36
	30°	0.43	38
	45°	0.47	40
18"	0°	0.42	38
	15°	0.49	41
	30°	0.56	44
	45°	0.64	46
21"	0°	0.47	40
	15°	0.55	42
	30°	0.64	46
	45°	0.74	48
24"	0°	0.53	43
	15°	0.63	45
	30°	0.74	49
	45°	0.86	51
27"	0°	0.57	45
	15°	0.70	48
	30°	0.84	52
	45°	0.99	55
30"	0°	0.63	49
	15°	0.79	53
	30°	0.96	57
	45°	1.14	61
36"	0°	0.77	53
	15°	1.01	58
	30°	1.26	63
	45°	1.53	68
42"	0°	0.96	65
	15°	1.32	72
	30°	1.69	80
	45°	2.09	91
48"	0°	1.16	68
	15°	1.66	77
	30°	2.19	86
	45°	2.75	95
54"	0°	1.34	75
	15°	2.01	84
	30°	2.70	95
	45°	3.44	106
60"	0°	1.54	77
	15°	2.39	89
	30°	3.28	100
	45°	4.23	113

NOTES:

THE DIMENSIONS FOR CONCRETE PIPE SHOWN ON THIS PLAN ARE FOR CLASS III REINFORCED CONCRETE PIPE, AASHTO DESIGNATION M170, WALL "B".

ALL QUANTITIES ARE BASED ON DIMENSIONS SHOWN ON THIS PLAN. NO ADJUSTMENTS WILL BE MADE IN THESE QUANTITIES IF OTHER STRENGTH STANDARD PIPE IS FURNISHED IN ACCORDANCE WITH THE SPECIFICATIONS OR IF COLLARS ARE USED ON PIPE OTHER THAN CONCRETE.

WHEN A CONCRETE COLLAR, CONNECTING EXISTING AND NEW CONCRETE PIPE, IS CONSTRUCTED WITH A BEND, IT SHALL BE CONSIDERED AS A COLLAR NOT AN ELBOW.

ALL REINFORCING STEEL USED SHALL CONFORM TO THE REQUIREMENTS OF THE ASTM DESIGNATIONS A615/A615M, GRADE 60. ALL BAR DESIGNATIONS ARE IN CUSTOMARY U.S. UNITS.

ALL CONCRETE USED SHALL BE CLASS 47B-3000.

FOR A SINGLE LINE OF REINFORCING WIRE MESH, TIE REINFORCING BARS ON THE OUTSIDE OF THE CAGE.

FOR A DOUBLE LINE OF REINFORCING WIRE MESH, TIE REINFORCING WIRE MESH ON THE INSIDE OF THE OUTSIDE CAGE.

REINFORCING BARS SHALL BE LAPPED WHERE THE BEND IS MADE.

REINFORCING WIRE MESH SHALL BE LAPPED AND TIED WHERE THE BEND IS MADE.

WELDED WIRE FABRIC OR EQUAL SHALL BE LAPPED 12" AT SPLICES.

THE ORIENTATION OF THE PIPE SHALL BE MARKED WHEN CASTING TO ASSURE ADEQUATE REINFORCING BAR EMBEDMENT AND PROPER ALIGNMENT WHEN CUTTING AND ROTATING.

ALL PIPE DIMENSIONS SHOWN ARE NOMINAL.

REV. NO.	DATE	DESCRIPTION OF REVISION
R5	JAN 18	NDOR BORDER TO NDOT BORDER
R4	JAN 07	REMOVED REFERENCE TO CONC. AX-3000
R3	AUG 99	COMPUTER FILE/CHANGES

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 425-R5

COLLARS AND ELBOWS FOR CONCRETE PIPE

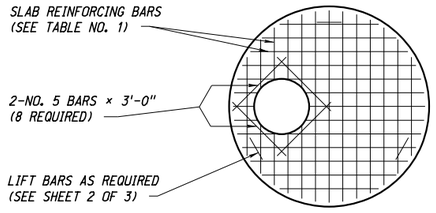
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MARK J. TRAYNOWICZ
E-8119
STATE OF NEBRASKA

DATE

ORIGINAL:
FEBRUARY 22, 1974
DATE

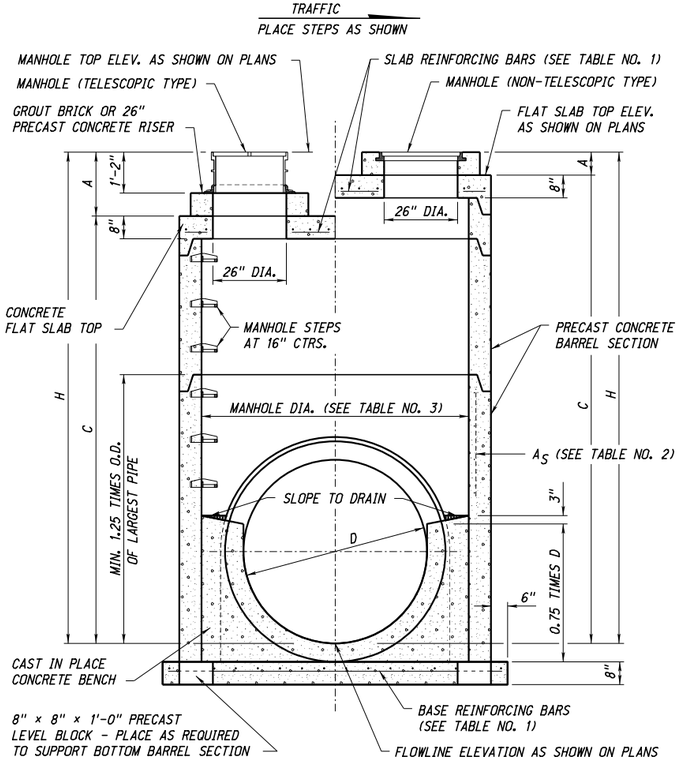
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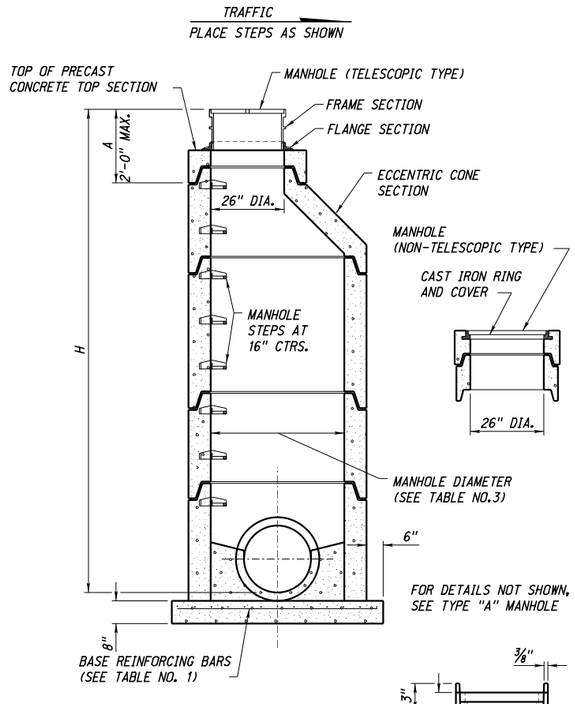
FLAT SLAB BASE

TABLE NO. 1	
BASE AND TOP SLAB FOR ROUND MANHOLE	
MANHOLE DIAMETER	SLAB REINFORCING BAR SIZE AND SPACING
48" - 60"	NO. 4 AT 6" CTRS.
66" & 72"	NO. 5 AT 7½" CTRS.
88" & 96"	NO. 5 AT 6½" CTRS.
120"	NO. 5 AT 5½" CTRS.

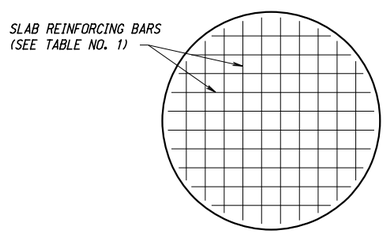
TABLE NO. 2	
CIRCUMFERENTIAL REINFORCEMENT PER FOOT OF BARREL	
DIAMETER BARREL SECTION	AREA OF STEEL A_S (SQ. IN./FT.)
84"	0.37
96"	0.47
120"	0.70



TYPE "A"

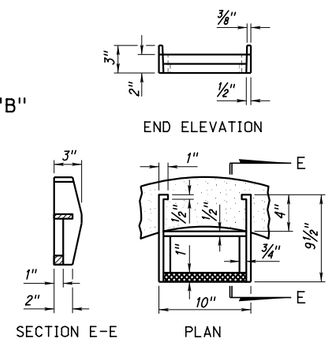


TYPE "B"

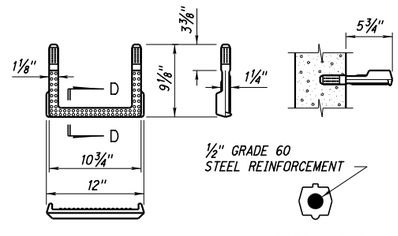


TYPE "A" AND "B" BASE

TABLE NO. 3	
MANHOLE SIZE BASED ON LARGEST PIPE INTO MANHOLE	
LARGEST PIPE DIAMETER	MINIMUM MANHOLE DIAMETER
24" OR LESS	48"
30"	54"
36"	60"
42"	66"
48"	72"
54"	84"
66"	96"
84"	120"



STEPS AT 16" CTRS.
DETAILS OF CAST IRON STEP



STEPS AT 16" CTRS.
DETAILS OF POLYPROPYLENE ENCAPSULATED STEEL ROD STEP
(ALTERNATE DESIGN)

NOTES

DIMENSION "A" SHALL BE THE DIFFERENCE BETWEEN THE MANHOLE TOP ELEVATION AND THE FLAT TOP ELEVATION FOR TYPE "A" MANHOLE. DIMENSION "A" SHALL BE THE DIFFERENCE BETWEEN THE TOP MANHOLE ELEVATION AND THE TOP OF THE ECCENTRIC TRANSITION SECTION FOR TYPE "B" MANHOLE. THE MIN. DIMENSION "A" SHALL BE 9" UNDER PAVEMENT AND 1'-4" OUTSIDE THE PAVEMENT. DIMENSION "A" SHALL NOT EXCEED 2'-0". WHEN RECONSTRUCTING OR ADJUSTING TO GRADE AN EXISTING MANHOLE, TYPE "A" OR "B", DIMENSION "A" MAY BE INCREASED TO 5'-0" MAX., IF THE RECONSTRUCTION WOULD REQUIRE DIMENSION "A" TO BE IN EXCESS OF 5'-0", THEN THE CONE SECTION OF THE FLAT SLAB TOP MUST BE RAISED AND THE 2'-0" MAX. DIMENSION "A" WILL AGAIN APPLY.

DIMENSION "C" SHALL BE THE DIFFERENCE BETWEEN THE FLOWLINE ELEVATION SHOWN ON THE PLANS AND THE FLAT SLAB TOP ELEVATION WHEN SHOWN ON THE PLANS. ONE OR MORE PRECAST CONCRETE BARREL SECTIONS MAY BE PROVIDED TO OBTAIN THE REQUIRED HEIGHT. THE CONTRACTOR MAY PROVIDE ANY COMBINATION OF STANDARD LENGTH PRECAST CONCRETE SECTIONS THAT WILL EQUAL OR EXCEED DIMENSION "C". IF ADDITIONAL LENGTH IS PROVIDED, THE LEVEL BLOCKS SHALL BE SET AT THE PROPER ELEVATION BELOW THE FLOWLINE SO THAT THE FLAT SLAB TOP ELEVATION SHOWN ON THE PLANS WILL BE OBTAINED. ALL ADDITIONAL MATERIAL OR WORK REQUIRED SHALL BE AT THE CONTRACTOR'S EXPENSE.

DIMENSION "H" SHALL BE THE DIFFERENCE BETWEEN THE FLOWLINE ELEVATION SHOWN ON THE PLANS AND THE MANHOLE TOP ELEVATION SHOWN ON THE PLANS.

THE FURNISHING AND PLACING OF MANHOLE STEPS AND LIFT BARS SHALL BE SUBSIDIARY TO THE MANHOLE.

MATCH TOP INSIDE SURFACES OF THE PIPES COMING INTO THE MANHOLE WHENEVER POSSIBLE. THE MANHOLE BENCH SHALL COME UP TO ¾ THE DIA. OF THE LARGEST PIPE AND SLOPE UP 3" TO THE SIDE. CONTOUR THE BENCH TO DRAIN.

THE MIN. CLEARANCE OF REINFORCING STEEL SHALL BE 2".

BARREL DIA. SHOWN ON THE PLAN ARE THE MIN. DIA. THAT MAY BE USED AT EACH LOCATION. THESE DIA. ARE BASED ON CENTER BARREL SECTIONS WHICH ARE USUALLY AVAILABLE FROM THE FABRICATOR. THE CONTRACTOR MAY PROVIDE BARREL SECTIONS OF LARGER DIA. THAN SHOWN ON THE PLAN. NO ADDITIONAL PAYMENT SHALL BE MADE FOR BARREL SECTIONS OF A LARGER DIA. THAN SHOWN ON THE PLANS.

EACH SECTION SHALL BE SET IN A FRESH BED OF MORTAR AND POINTED UP INSIDE AND OUT, OR A COLD FORMED JOINT MATERIAL CONFORMING TO FEDERAL SPECIFICATIONS SS-S-00210.

THE CONTRACTOR MAY, AT HIS OPTION, CAST-IN-PLACE THE FIRST SECTION OF THE MANHOLE WHEN THE STANDARD KNOCKOUTS ARE NOT AVAILABLE. THE CONCRETE WALL THICKNESS AND REINFORCING STEEL AREA SHALL BE AS SHOWN FOR THE RESPECTIVE "H" DIMENSION IN CHART NO. 1 FOR MANHOLE TYPE "C". THE MIN. LS AND SS DIMENSION SHALL BE OF SUFFICIENT DIMENSION TO ACCOMMODATE PIPES ENTERING THE RESPECTIVE WALL. THE TOP OF THE CAST-IN-PLACE SECTION SHALL BE FORMED TO THE SAME DIA. AS THE RESPECTIVE PRECAST SECTION.

UNLESS SPECIFIED IN THE PLANS, THE CONTRACTOR MAY DETERMINE THE TYPE MANHOLE TO BE CONSTRUCTED.

THE CONTRACTOR MAY, AT HIS OPTION, USE TRANSITION SECTIONS TO REDUCE THE BARREL SIZE OF THE MANHOLE. DIMENSION "A" CANNOT EXCEED 2'-0" ON THE 26" DIA. RISER SECTION.

WHEN USING BRICK FOR THE FINAL ADJUSTMENT OF THE FLANGE SECTION, A DOUBLE ROW OF BRICK PLASTERED ½" THICK INSIDE AND OUT SHALL BE USED. THE BRICK SHALL CONFORM TO REQUIREMENTS OF ASTM C32.

PRECAST MANHOLE SECTIONS MAY BE SET WITH EITHER THE TONGUE END UP OR THE GROOVE END UP.

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN 18	NDOR BORDER TO NDOT BORDER
R1	NOV 98	MULTIPLE REVISIONS

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 435-R2

MANHOLE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

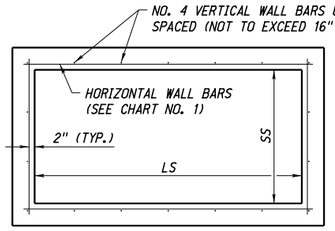
PROFESSIONAL CIVIL ENGINEER
MARK J. TRAYNOWICZ
E-8119
STATE OF NEBRASKA

DATE

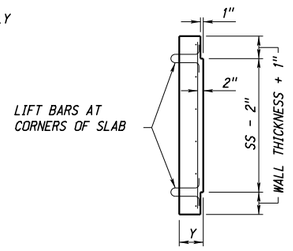
ORIGINAL:
APRIL 4, 1988
DATE

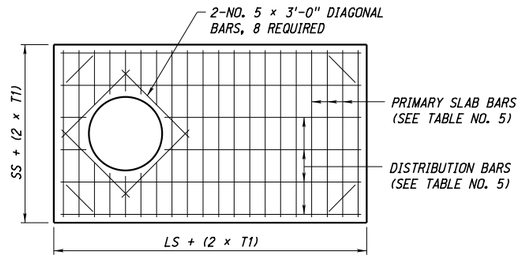
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ROADWAY DESIGN DIVISION



SECTION A-A





TOP SLAB

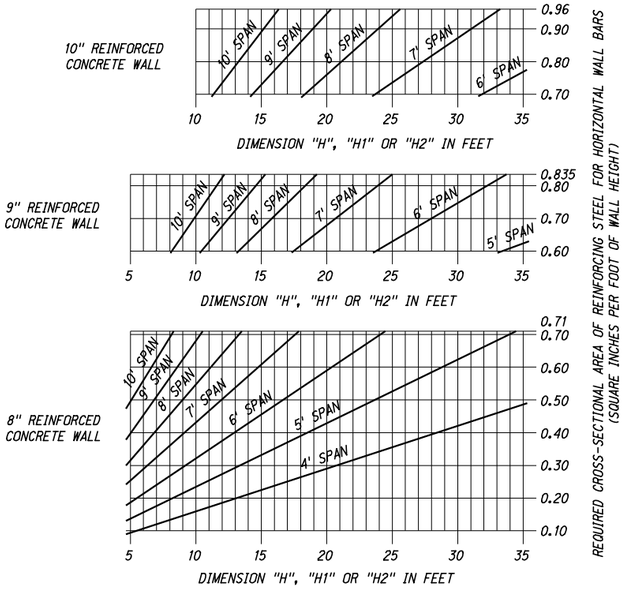


CHART NO. 1

NOTES

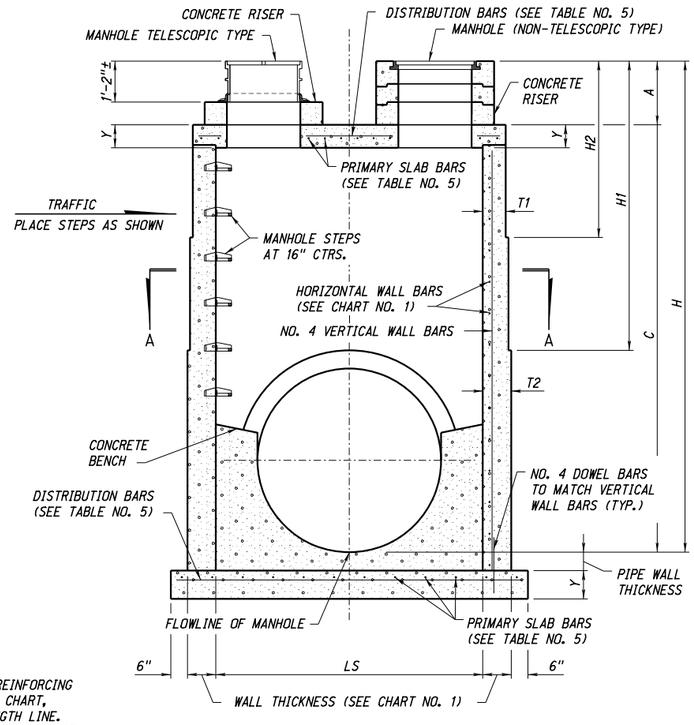
CHART NO. 1 SHALL BE USED TO DETERMINE THE WALL THICKNESS AND THE AMOUNT OF HORIZONTAL REINFORCING STEEL REQUIRED FOR A PARTICULAR VALUE OF "H" AND A LONG SPAN DIMENSION "LS". TO USE THE CHART, LOCATE THE POINT OF INTERSECTION OF A VERTICAL "H" DIMENSION LINE WITH A SLOPING SPAN LENGTH LINE. FROM THIS POINT OF INTERSECTION, DRAW A HORIZONTAL LINE TO THE RIGHT TO FIND THE REQUIRED AMOUNT OF HORIZONTAL REINFORCING STEEL PER FOOT OF WALL HEIGHT. THE REQUIRED WALL THICKNESS WILL BE FOUND AT THE LEFT OF THE PARTICULAR CHART SECTION.

EXAMPLE 1: GIVEN A MANHOLE WITH H = 13 FEET AND LONG SPAN LS = 6 FEET. FROM THE CHART FIND THAT A 8" THICK WALL WITH 0.40 SQ. IN./FT. OF REINFORCING STEEL IS REQUIRED. THE HORIZONTAL BARS MAY BE NO. 4 AT 6" SPACING OR NO. 5 AT 9" SPACING. (SEE TABLE NO. 4)

EXAMPLE 2: GIVEN A MANHOLE WITH H = 19 FEET AND LONG SPAN LS = 7.5 FEET. NOTE THAT THE CENTER SECTION OF THE CHART MUST BE USED WHICH INDICATES THAT A 9" THICK WALL IS REQUIRED. ON THE VERTICAL LINE REPRESENTING H = 19 FEET, FIND A POINT MIDWAY BETWEEN THE 7-FOOT AND 8-FOOT SPAN LENGTH LINES. THE REQUIRED AMOUNT OF HORIZONTAL REINFORCING STEEL WOULD THEN BE READ AS 0.73 SQ. IN./FT., WHICH COULD BE PROVIDED BY USING NO. 5 BARS AT 5" SPACING OR NO. 6 BARS AT 7" SPACING. (SEE TABLE NO. 4)

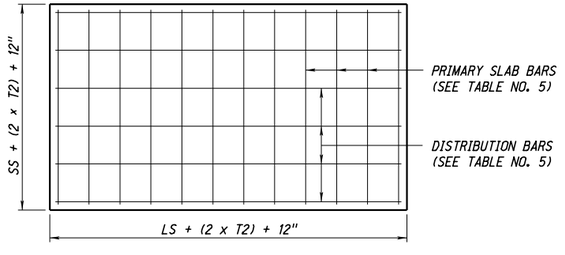
THE WALL THICKNESS AND THE AMOUNT OF HORIZONTAL REINFORCING AS DETERMINED FROM THE CHART SHALL BE USED FOR ALL FOUR WALLS IN A PARTICULAR LIFT OR POUR. THE SAME WALL DESIGN MAY BE USED THROUGHOUT THE HEIGHT OF THE MANHOLE, OR A DIFFERENT WALL DESIGN FOR THE NEXT LIFT MAY BE DETERMINED BY REENTERING THE CHART WITH THE VALUES OF "H1" AND "LS" WALL DESIGN FOR ADDITIONAL LIFTS WOULD BE HANDLED IN THE SAME MANNER.

WHEN DESIGNING A MANHOLE FROM CHART NO. 1, THE MINIMUM VALUE OF "H" SHALL BE 5 FEET (FOR DESIGN PURPOSES ONLY). THE MINIMUM HORIZONTAL REINFORCING SHALL BE NO. 4 BARS AT 12" CENTERS AND THE MINIMUM WALL THICKNESS SHALL BE 8".



FOR DEFINITIONS OF DIMENSIONS "A", "C" AND "H", SEE SHEET 1 OF 3.

TYPE "C"



BASE

TABLE NO. 4

CROSS SECTIONAL AREAS IN SQUARE INCHES OF BARS IN WALL SECTIONS ONE FOOT HIGH

SPACING	BAR SIZE		
	NO. 4	NO. 5	NO. 6
5"	0.46	0.74	1.06
5½"	0.44	0.68	0.96
6"	0.40	0.62	0.88
6½"	0.37	0.57	0.81
7"	0.34	0.53	0.75
7½"	0.32	0.50	0.70
8'	0.30	0.47	0.66
8½"	0.28	0.44	0.62
9"	0.27	0.41	0.59
9½"	0.25	0.39	0.56
10"	0.24	0.37	0.53
10½"	0.23	0.35	0.50
11"	0.22	0.34	0.48
11½"	0.21	0.32	0.46
12"	0.20	0.31	0.44

TABLE NO. 5

BASE AND TOP SLAB FOR RECTANGULAR MANHOLE

SHORT SPAN DIMENSION "SS"	SLAB THICKNESS "Y"	PRIMARY SLAB REINFORCING BAR SIZE & SPACING	DISTRIBUTION REINFORCING BAR SIZE & SPACING
2'-6" TO 4'-11"	8½"	NO. 5 AT 5½" CTRS.	NO. 5 AT 11" CTRS.
5'-0" TO 5'-11"	9"	NO. 5 AT 5" CTRS.	NO. 5 AT 10" CTRS.
6'-0" TO 6'-11"	9½"	NO. 5 AT 4½" CTRS.	NO. 5 AT 9" CTRS.
7'-0" TO 7'-11"	10"	NO. 6 AT 5½" CTRS.	NO. 6 AT 11" CTRS.
8'-0" TO 8'-11"	11"	NO. 6 AT 5½" CTRS.	NO. 6 AT 11" CTRS.
9'-0" TO 10'-0"	12"	NO. 6 AT 5" CTRS.	NO. 6 AT 10" CTRS.

NOTES

FOR TYPE "C" MANHOLE, THE MAX. VALUES OF "H" SHALL BE:
MAX. H = 17 FEET WHEN LS = 10 FEET
MAX. H = 21 FEET WHEN LS = 9 FEET
MAX. H = 26 FEET WHEN LS = 8 FEET
MAX. H = 34 FEET WHEN LS = 7 FEET
MAX. H = 35 FEET WHEN LS = 6 FEET

THE LONGER CLEAR SPAN "LS" OF THE WALLS, AS SEEN IN A HORIZONTAL SECTION, SHALL BE USED TO FIND A WALL DESIGN FROM CHART NO. 1.

THE SHORTER CLEAR SPAN "SS" SHALL BE USED TO FIND A BASE AND TOP SLAB DESIGN FROM THE TABLE NO. 5.

THE MIN. COVERING, MEASURED FROM THE FACE OF THE CONCRETE TO THE SURFACE OF A REINFORCING BAR, SHALL BE 2" EXCEPT AS SHOWN.

THE FURNISHING AND PLACING OF MANHOLE STEPS SHALL BE SUBSIDIARY TO THE MANHOLE.

THE TOP SLAB MAY BE CAST-IN-PLACE OR PRECAST, BUT IF IT IS PRECAST, IT SHALL BE SET IN A FRESH BED OF MORTAR AND POINTED UP INSIDE AND OUT.

FOR RISER AND BENCH DETAILS NOT SHOWN, SEE SHEET 1 OF 3.

THE MIN. "LS" AND "SS" DIMENSION SHALL BE 2'-6" FOR MANHOLES WITH "H" LESS THAN 6 FEET AND SHALL BE 4'-0" FOR MANHOLES WITH "H" GREATER THAN 6 FEET. WHEN "LS" AND "SS" DIMENSIONS ARE NOT SPECIFIED ON THE PLANS, THE DIMENSIONS SHALL BE OF SUFFICIENT DIMENSION TO ACCOMMODATE PIPES ENTERING THE RESPECTIVE WALL. A MIN. OF 6" SHALL BE MAINTAINED BETWEEN THE INSIDE CORNER OF THE MANHOLE AND THE OUTER SHELL OF AN ENTERING PIPE, AND BETWEEN OUTER SHELLS OF PIPE ENTERING THE SAME WALL.

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN 18	NDOR BORDER TO NDOT BORDER
R1	NOV 98	MULTIPLE REVISIONS

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 435-R2

MANHOLE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

DATE

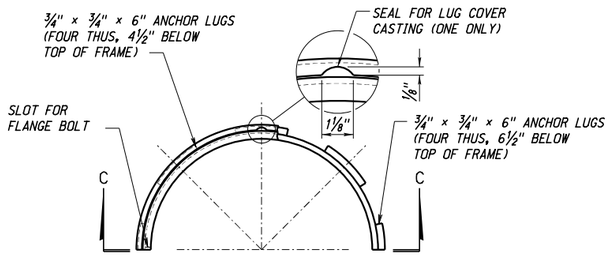
PROFESSIONAL CIVIL ENGINEER
MARK J. TRAYNOWICZ
E-8119
STATE OF NEBRASKA

ORIGINAL:
APRIL 4, 1988
DATE

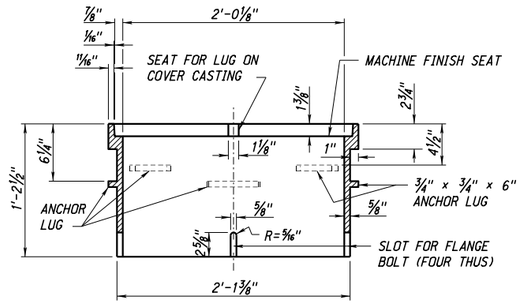
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ROADWAY DESIGN DIVISION
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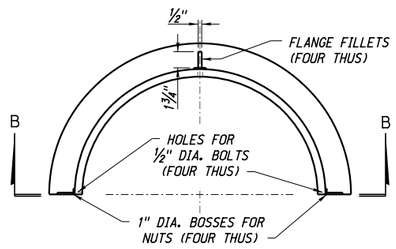
HALF TOP VIEW



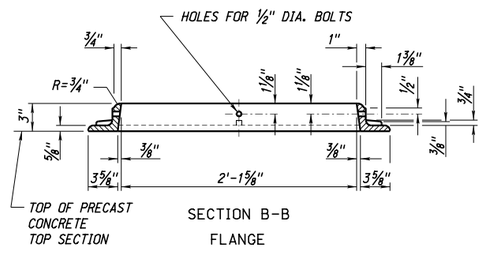
SECTION C-C

FRAME

DURING PAVEMENT CONSTRUCTION, FRAME CASTING TO BE TEMPORARILY HELD IN POSITION BY BOLTING TO FLANGE CASTING. BOLTS TO BE REMOVED AFTER CONCRETE HAS HARDENED.



HALF TOP VIEW

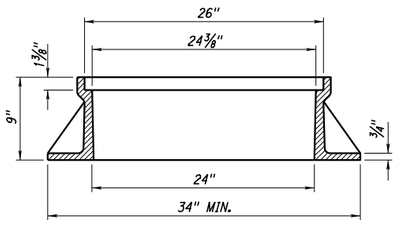


SECTION B-B

FLANGE

TYPE I
DETAILS OF FRAME AND FLANGE

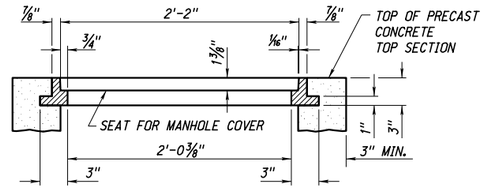
TELESCOPIC TYPE (CAST IRON)



SECTION

TYPE II
DETAILS OF FRAME

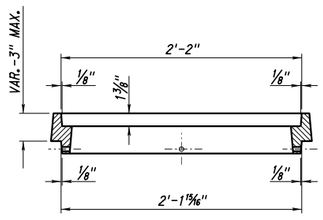
NON-TELESCOPIC TYPE (CAST IRON)



SECTION

TYPE III
DETAILS OF RING

NON-TELESCOPIC TYPE (CAST IRON)



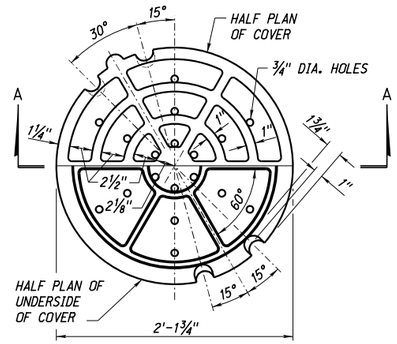
SECTION

ADJUSTING RINGS MAY BE USED IN ORDER TO OBTAIN THE REQUIRED ELEVATION OF EITHER NEW OR EXISTING MANHOLES. THE RINGS ARE SUBSIDIARY TO BUILD MANHOLE, ADJUST MANHOLE TO GRADE OR RECONSTRUCT MANHOLE.

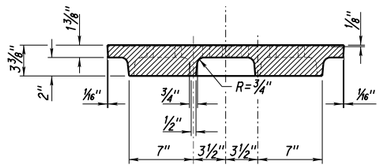
THE ADJUSTING RINGS SHALL BE HELD RIGIDLY TO THE FRAME AND TO EACH OTHER BY USE OF FOUR SET SCREWS IN THE BEARING LEG OF THE RING. ADJUSTING RINGS MAY BE USED TO A MAXIMUM HEIGHT OF 12 INCHES.

THE CONTRACTOR SHALL INSPECT THE CONDITION AND VERIFY THE DIMENSIONS OF EXISTING MANHOLE PRIOR TO USING ADJUSTING RINGS.

DETAILS OF ADJUSTING RING



HALF PLAN



SECTION A-A

DETAILS OF COVER

(CAST IRON)

WEIGHTS

(CAST IRON)

TYPE A COVER	225 POUNDS
TYPE B COVER	230 POUNDS
FRAME (TYPE I)	260 POUNDS
FLANGE (TYPE I)	95 POUNDS
FRAME (TYPE II)	275 POUNDS
RING FOR COVER (TYPE III)	120 POUNDS

NOTES

TYPE I AND II ASSEMBLIES NORMALLY USED IN PAVEMENT.

TYPE III ASSEMBLY IS NORMALLY USED OUTSIDE OF PAVEMENT.

FOR TYPE A COVER (STORM SEWER), USE DETAILS AS SHOWN.

FOR TYPE B COVER (SANITARY SEWER), OMIT ¾" DIA. HOLES IN COVER.

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R1	NOV 98	MULTIPLE REVISIONS

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 435-R2

MANHOLE

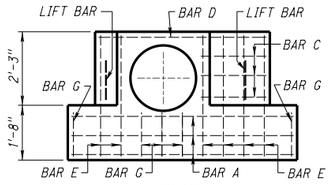
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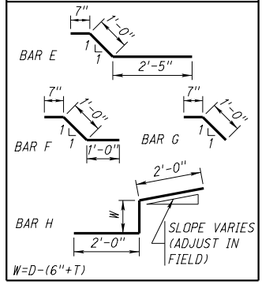
3/3

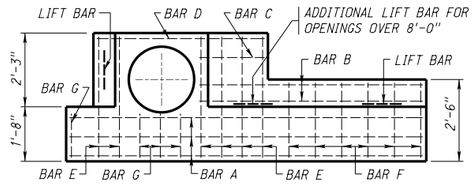


PLAN

INLET COVER

REINFORCING BAR BENDING DIAGRAM FOR CURB INLET



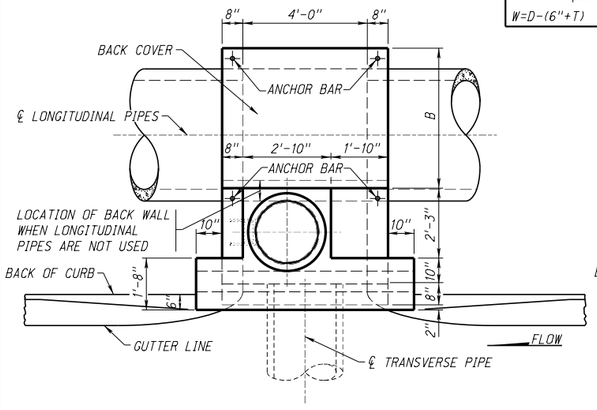


PLAN

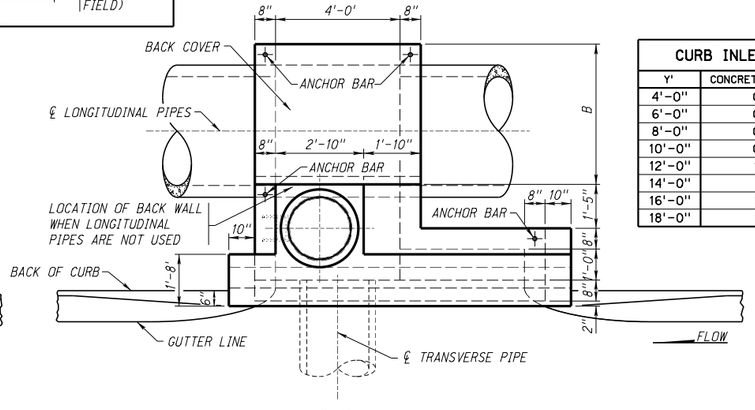
INLET COVER

REINFORCING BAR SCHEDULE FOR CURB INLETS (INCLUDES COVER)

BAR	SIZE	SHAPE	Y = 4'-0"		Y = 6'-0"		Y = 8'-0"		Y = 10'-0"		Y = 12'-0"		Y = 14'-0"		Y = 16'-0"		Y = 18'-0"	
			NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
A	8	STR.	3	6'-9"	3	8'-9"	3	10'-9"	3	12'-9"	3	14'-9"	3	16'-9"	3	18'-9"	3	20'-9"
B	6	STR.	--	--	2	4'-10	2	6'-10"	2	8'-10"	2	10'-10"	2	12'-10"	2	14'-10"	2	16'-10"
C	6	STR.	3	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"
D	6	STR.	1	5'-1"	1	5'-1"	1	5'-1"	1	5'-1"	1	5'-1"	1	5'-1"	1	5'-1"	1	5'-1"
E	5	BENT	6	4'-0"	6	4'-0"	6	4'-0"	6	4'-0"	6	4'-0"	6	4'-0"	6	4'-0"	6	4'-0"
F	5	BENT	--	2'-7"	3	2'-7"	6	2'-7"	8	2'-7"	11	2'-7'	13	2'-7"	16	2'-7"	18	2'-7"
G	5	BENT	5	1'-7"	4	1'-7"	4	1'-7"	4	1'-7"	4	1'-7"	4	1'-7"	4	1'-7"	4	1'-7"
H	4	BENT	--	--	10	W+4'-0"	10	W+4'-0"	10	W+4'-0"	10	W+4'-0"	10	W+4'-0"	10	W+4'-0"	10	W+4'-0"
J	4	STR.	--	--	--	--	--	--	--	--	--	--	2	2'-2"	2	2'-2"	2	2'-2"
K	4	STR.	--	--	--	--	--	--	--	--	--	--	4	1'-9"	4	1'-9"	4	1'-9"
LIFT	4	BENT	VAR.	2'-6"	VAR.	2'-6"	VAR.	2'-6"	VAR.	2'-6"	VAR.	2'-6"	VAR.	2'-6"	VAR.	2'-6"	VAR.	2'-6"
M	4	STR.	VAR.	5'-1"	VAR.	5'-1"	VAR.	5'-1"	VAR.	5'-1'	VAR.	5'-1"	VAR.	5'-1"	VAR.	5'-1"	VAR.	5'-1"
N	4	STR.	8	B-3	8	B-3	8	B-3	8	B-3	8	B-3	8	B-3	8	B-3	8	B-3



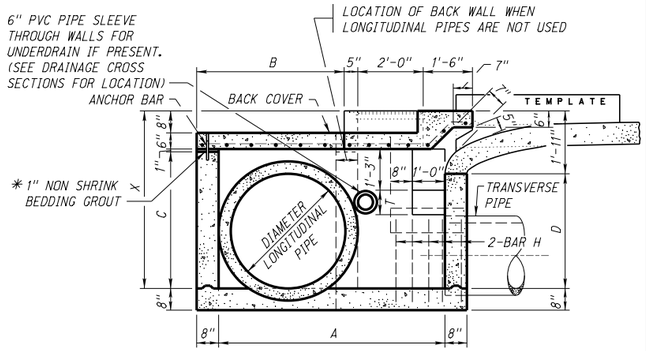
PLAN



PLAN

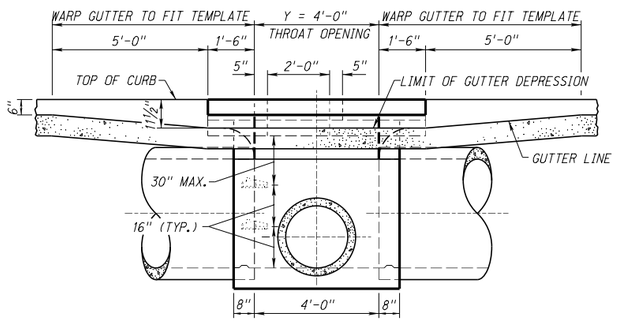
CURB INLET COVER QUANTITIES

Y'	CONCRETE (CU.YDS.)	REINFORCING (LB.)
4'-0"	0.62	46
6'-0"	0.72	58
8'-0"	0.82	71
10'-0"	0.92	83
12'-0"	1.02	95
14'-0"	1.12	112
16'-0"	1.22	122
18'-0"	1.32	136

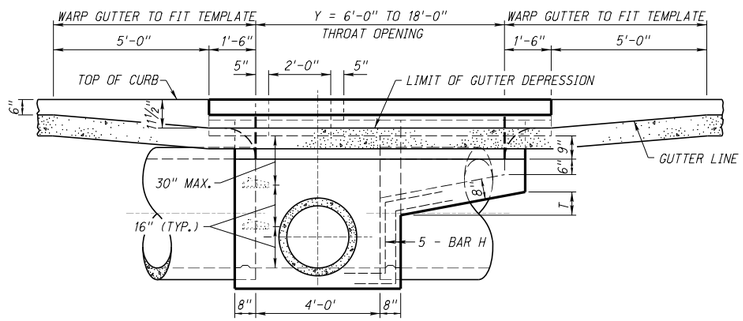


TYPICAL SECTION OF INLETS

* GROUT SHALL BE FINISHED SUCH THAT THE TOP ELEVATION OF THE INLET LID, WHEN INSTALLED, MATCHES THE FINISHED SHOULDER SLOPE OF THE ROADWAY CROSS-SECTIONS.



FRONT ELEVATION



FRONT ELEVATION

CURB INLETS

DATA FOR CURB INLETS (INCLUDES INLET COVER)

DIA. OF LONGIT. PIPE	DIMENSIONS					QUANTITIES															NO. OF M BARS	ADDITIONAL QUANTITIES PER ONE FOOT INCREASE OF DIMENSION "X"	
						CONCRETE, CU. YDS. ③							REINFORCING STEEL, LBS.									CONCRETE CU. YDS.	REINF. STEEL LBS. ④
	X ① (MIN.)	A ②	B	C	D	Y=4'	Y=6'	Y=8'	Y=10'	Y=12'	Y=14'	Y=16'	Y=18'	Y=4'	Y=6'	Y=8'	Y=10'	Y=12'	Y=14'	Y=16'	Y=18'			
--	3'-11"	2'-8"	--	2'-8"	2'-0"	2.08	2.43	2.79	3.15	3.51	4.06	4.46	4.85	113	175	202	231	259	289	316	344	NONE	0.383	6.7
12"	2'-11"	4'-0"	1'-7"	1'-8"	1'-0"	2.14	2.51	2.86	3.21	3.56	3.95	4.30	4.65	133	186	216	245	274	310	340	364	3	0.459	6.7
15"	3'-2"	4'-4"	1'-11"	1'-11"	1'-3"	2.37	2.71	3.07	3.43	3.79	4.21	4.57	4.94	136	193	221	250	277	312	342	370	3	0.473	6.7
18"	3'-5"	4'-7"	2'-2"	2'-2"	1'-6"	2.60	2.95	3.30	3.67	4.03	4.44	4.80	5.16	141	200	228	257	284	318	349	376	4	0.490	6.7
21"	3'-8"	4'-11"	2'-6"	2'-5"	1'-9"	2.83	3.19	3.53	3.90	4.26	4.68	5.04	5.40	144	203	231	260	287	322	351	379	4	0.504	6.7
24"	3'-11"	5'-2"	2'-9"	2'-8"	2'-0"	3.06	3.41	3.76	4.12	4.49	5.04	5.43	5.83	148	210	238	267	294	324	352	379	5	0.518	6.7
27"	4'-2"	5'-6"	3'-1"	2'-11"	2'-3"	3.31	3.66	4.01	4.37	4.74	5.29	5.68	6.08	150	213	241	270	297	327	354	382	5	0.532	6.7
30"	4'-5"	5'-9"	3'-4"	3'-2"	2'-6"	3.54	3.89	4.25	4.61	4.97	5.52	5.92	6.32	151	217	244	273	301	331	358	385	5	0.547	6.7
36"	4'-11"	6'-4"	3'-11"	3'-8"	3'-0"	4.06	4.41	4.77	5.13	5.49	6.04	6.44	6.83	158	226	254	283	310	340	368	395	6	0.576	6.7
42"	5'-5"	6'-11"	4'-6"	4'-2"	3'-6"	4.60	4.95	5.31	5.67	6.03	6.58	6.98	7.38	164	236	264	293	320	350	378	405	7	0.605	6.7
48"	5'-11"	7'-6"	5'-1"	4'-8"	4'-0"	5.18	5.53	5.89	6.25	6.61	7.16	7.56	7.95	171	246	274	303	330	360	387	415	8	0.634	6.7
54"	6'-5"	8'-1"	5'-8"	5'-2"	4'-6"	5.78	6.13	6.49	6.85	7.21	7.76	8.16	8.56	174	253	280	309	337	367	394	421	8	0.663	6.7
60"	6'-11"	8'-8"	6'-3"	5'-8"	5'-0"	6.41	6.76	7.12	7.48	7.84	8.39	8.79	9.19	180	262	290	319	346	376	404	431	9	0.691	6.7
66"	7'-5"	9'-3"	6'-10"	6'-2"	5'-6"	7.07	7.42	7.78	8.14	8.50	9.05	9.45	9.85	187	272	300	329	356	386	414	441	10	0.720	6.7

T = 9" EXCEPT FOR THE FOLLOWING:
T = 6" FOR 6'-0" TO 18'-0" OPENINGS WHEN X = 2'-11" THRU 3'-1"
T = 1'-6" FOR 14'-0" TO 18'-0" OPENINGS WHEN X = 3'-11" THRU 7'-5"

① "X" SHALL NOT EXCEED 7'-6".

② "A" SHALL NOT EXCEED 10'-0".

③ NO DEDUCTIONS WILL BE MADE FOR PIPE OPENINGS.

④ NOT APPLICABLE WHERE Y = 4'-0".

DIAMETER OF PIPE AND MINIMUM "X" IN THIS INLET DATA TABLE ARE BASED ON THE LONGITUDINAL PIPE. DEPTH OF THE INLET MAY BE GOVERNED BY THE TRANSVERSE PIPE (MINIMUM "D" = TRANSVERSE PIPE DIAMETER PLUS 9").

NOTES:

THE MINIMUM COVERING, MEASURED FROM THE FACE OF CONCRETE TO THE SURFACE OF ANY REINFORCING BAR, SHALL BE 1½".

THE QUANTITIES OF CONCRETE AND STEEL FOR CURB INLET INCLUDES THAT PORTION OF CONCRETE AND STEEL BELOW AND BACK OF THE CURB SECTION AS SHOWN ON THIS PLAN.

THE CONCRETE COVERS MAY BE CAST IN PLACE OR PRECAST.

THE CAST IRON COVERS, FRAMES SHALL BE GREY IRON CONFORMING TO THE SPECIFICATIONS. CAST IRON STEPS SHALL BE INSTALLED IN CURB INLETS AND JUNCTION BOXES WHEN THE "X" DIMENSION IS 4'-6" OR GREATER. THE FURNISHING AND PLACING OF CAST IRON STEPS SHALL BE SUBSIDIARY TO THE ITEM FOR WHICH DIRECT PAYMENT IS MADE.

THE GUTTER DEPRESSION TEMPLATE SHALL BE USED THROUGHOUT THE THROAT OPENING.

CLASS OF CONCRETE AND MINIMUM COMPRESSIVE STRENGTH AND TYPE OF STEEL FOR REINFORCING BARS SHALL CONFORM TO THE NDOT "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION."

THE INLET COVER SHALL BE IMPRINTED "NO DUMPING" SEE SHEET 2 OF 2.

REV. NO.	DATE	DESCRIPTION OF REVISION
R12	JUL 20	ADDED UNDERDRAIN NOTE & TABLE
R11	JAN 18	NDOR BORDER TO NDOT BORDER
R10	DEC 16	CHANGED TABLE INFORMATION

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 443-R12

CURB INLETS AND JUNCTION BOX

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

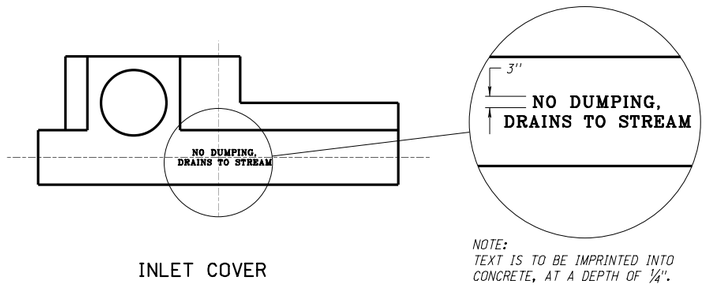
DATE

ORIGINAL: FEBRUARY 22, 1974
DATE

1
2

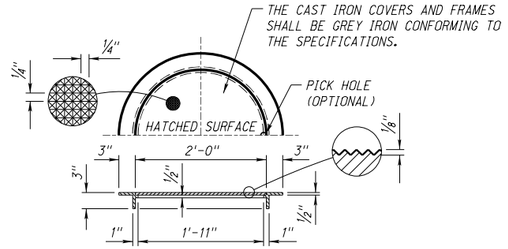
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Date: 29-JUN-2021 09:18
File: 443006r2.dgn

ROADWAY DESIGN DIVISION
Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:18
File: 44300e12.dgn



INLET COVER

NOTE:
TEXT IS TO BE IMPRINTED INTO CONCRETE, AT A DEPTH OF ¼".

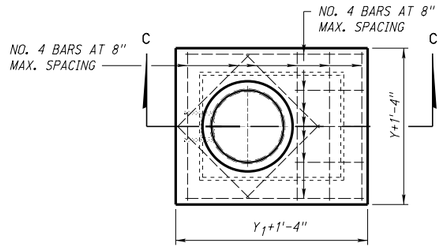


TOTAL WEIGHT = 125 LBS.

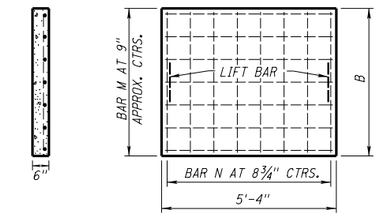
CAST IRON COVER AND FRAME
FOR JUNCTION BOX AND CURB INLET

QUANTITIES FOR JUNCTION BOX			
SIZE Y × Y 1	X = 2'-6"		ADDITIONAL QUANTITIES OF CONCRETE (CU. YDS.) PER ONE FOOT INCREASE OF DIMENSIONS "X" ✱✱
	CONCRETE CU. YDS. ✱	REINFORC. STEEL LBS.	
2'-0" × 2'-0"	0.94	15	0.26
2'-0" × 2'-6"	1.06	18	0.27
2'-0" × 3'-0"	1.18	23	0.31
2'-6" × 2'-6"	1.20	19	0.31
2'-6" × 3'-0"	1.33	22	0.34
3'-0" × 3'-0"	1.47	29	0.36
3'-0" × 3'-6"	1.61	30	0.39
3'-0" × 4'-0"	1.76	34	0.41

✱ NO DEDUCTIONS WILL BE MADE FOR PIPE OPENINGS
✱✱ DIMENSION "X" SHALL NOT EXCEED 5'-6"

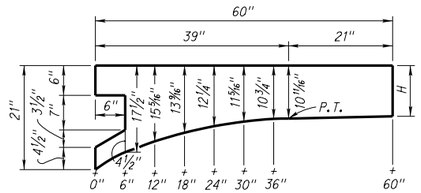


PLAN



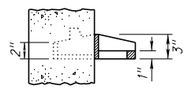
SECTION PLAN

BACK COVER

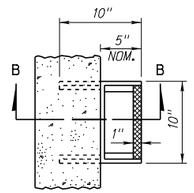


PAVING CROSS SLOPE (FT/FT)	0.01	0.02	0.03	0.04	0.05	0.06
H	10 7⁄16"	10¼"	10⅛"	9⅞"	9⅝"	9⅜"

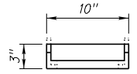
GUTTER DEPRESSION TEMPLATE



SECTION B-B



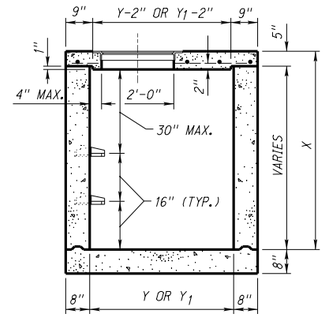
PLAN



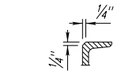
FRONT ELEVATION

STEPS TO BE PLACED AT 16" CENTERS

CAST IRON STEPS

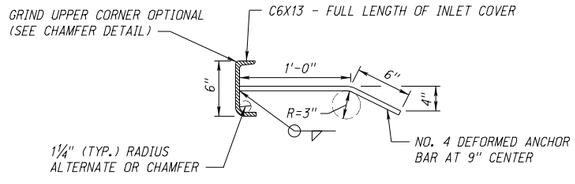


SECTION C-C
JUNCTION BOX
(NOT FOR USE UNDER TRAFFIC)



CHAMFER DETAIL

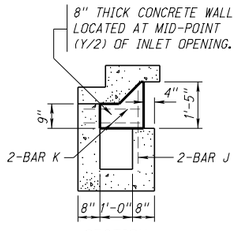
STRUCTURAL STEEL FOR FACE ARMOR	
THROAT OPENING	WEIGHT (LBS.)
4'-0"	100
6'-0"	129
8'-0"	157
10'-0"	186
12'-0"	215
14'-0"	243
16'-0"	272



FACE ARMOR

NOTE:

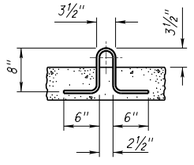
THE COMPLETED FACE ARMOR/ANCHOR BAR ASSEMBLY SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153.



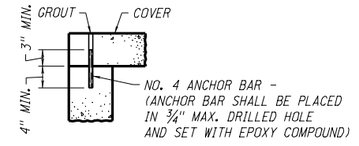
SECTION

FOR 14'-0", 16'-0" & 18'-0" INLET OPENINGS

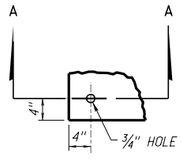
MID-POINT
COVER SUPPORT



LIFT BAR



SECTION A-A



PLAN

ANCHOR BAR

REV. NO.	DATE	DESCRIPTION OF REVISION
R12	JUL 20	ADDED UNDERDRAIN NOTE & TABLE
R11	JAN 18	NDOR BORDER TO NDOT BORDER
R10	DEC 16	CHANGED TABLE INFORMATION

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 443-R12

CURB INLETS AND JUNCTION BOX

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

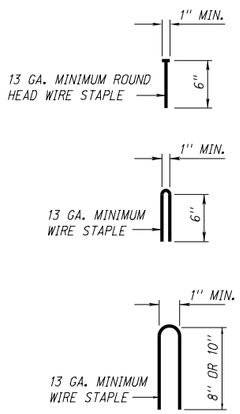
DATE

PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

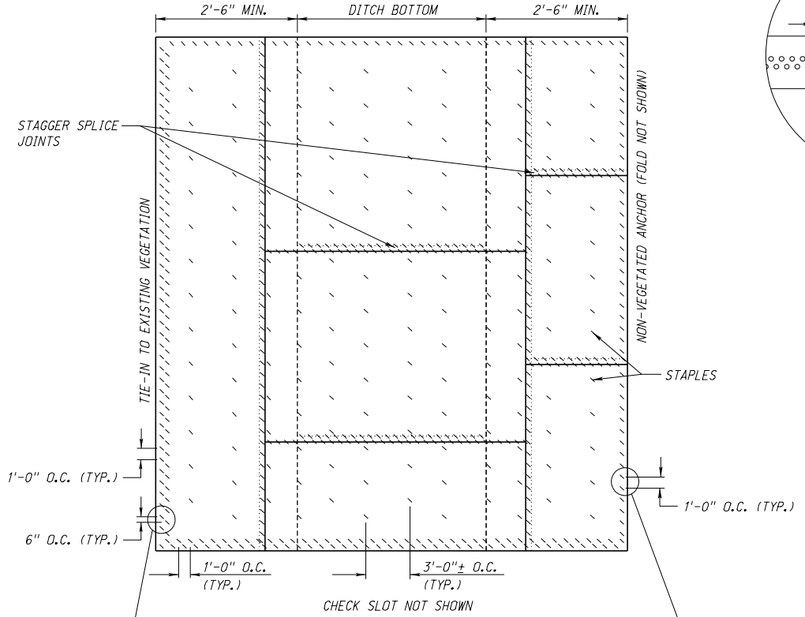
ORIGINAL:
FEBRUARY 22, 1974
DATE

2
2

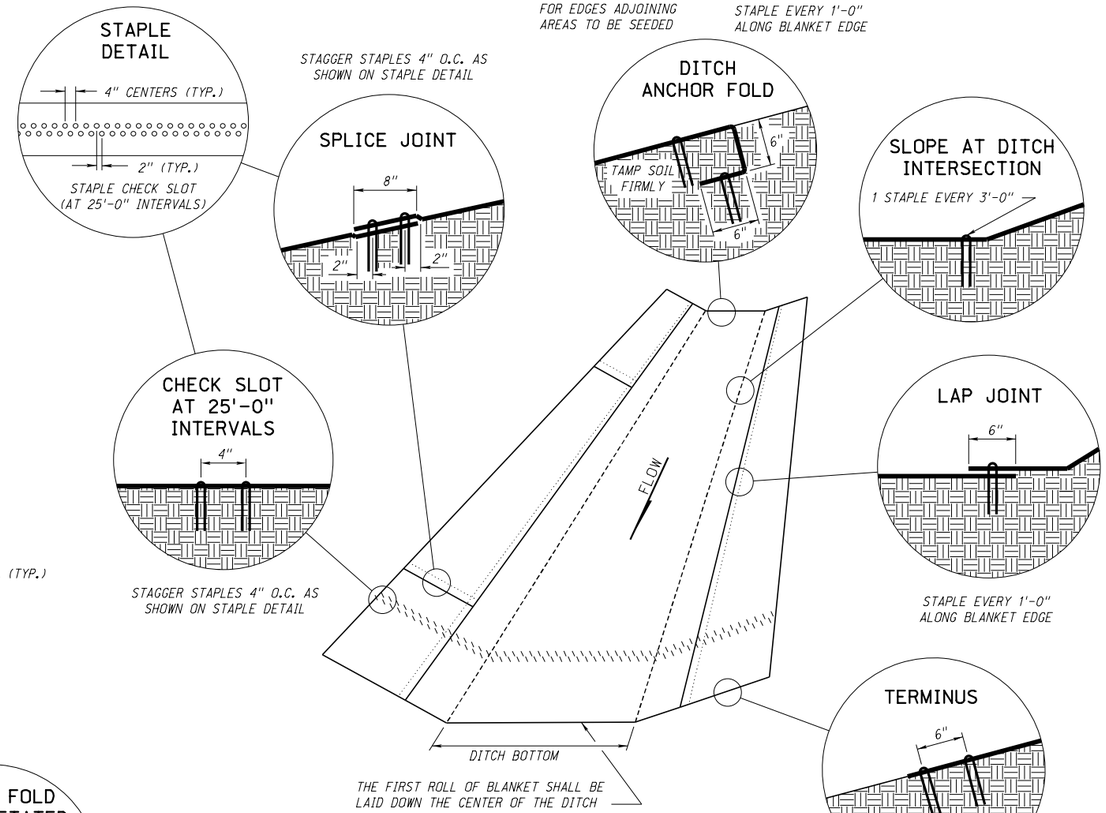
ROADWAY DESIGN DIVISION
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Date: 29-JUN-2021 09:20
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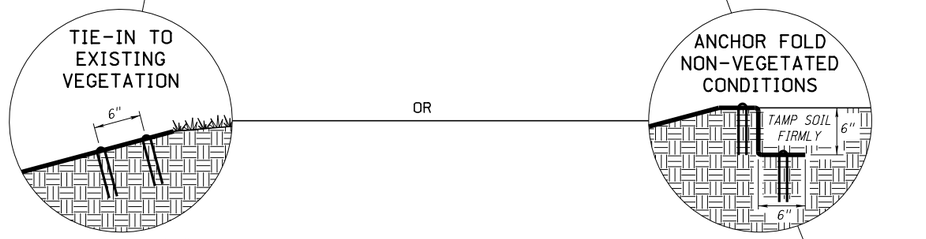
WIRE STAPLE DETAIL

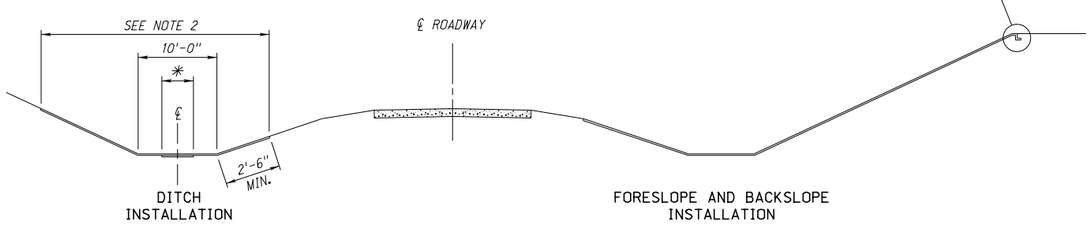


PLAN VIEW STAPLING DIAGRAM



TYPICAL EROSION CONTROL BLANKET INSTALLATION





TYPICAL CROSS-SECTION

* THE FIRST ROLL OF BLANKET SHALL BE LAID DOWN THE CENTER OF THE DITCH

NOTES:

1. THIS PLAN IS APPLICABLE FOR THE FOLLOWING: EROSION CONTROL CLASS 1B, 1C, 1D, 1E, 1F, 2A, 2B & 2C.
2. SOIL RETENTION BLANKET SHALL BE LAID A MINIMUM OF 2'-6" UP THE BACKSLOPE AND FORESLOPE.
3. CHECK SLOTS ARE PLACED PERPENDICULAR TO DITCH CENTER LINE ON 25'-0" INTERVALS.
4. THE MANUFACTURERS' RECOMMENDED STAPLING PATTERNS SHALL GOVERN OVER THE PLANS.

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	APR 14	UPDATE INSTALLATION METHOD
R5	OCT 07	EROSION CONTROL AT SPLASH BASIN

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 501-R7

EROSION CONTROL

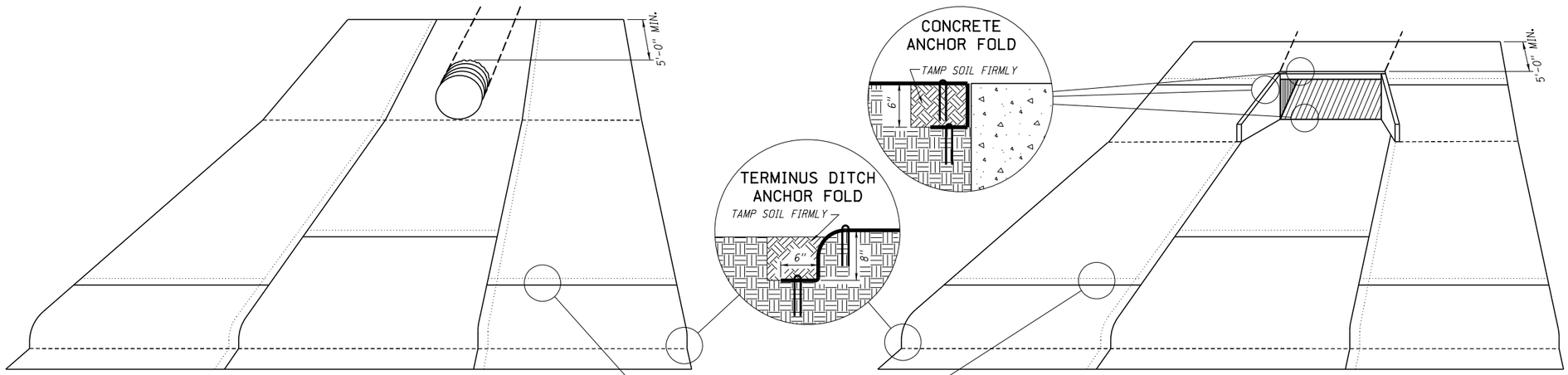
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

DATE

PROFESSIONAL CIVIL ENGINEER
BRANDIE S. NEEMANN
E-11829
STATE OF NEBRASKA

ORIGINAL: NOVEMBER 1973
DATE

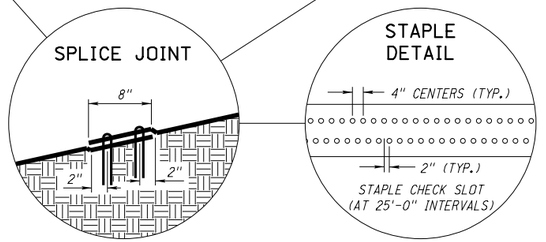
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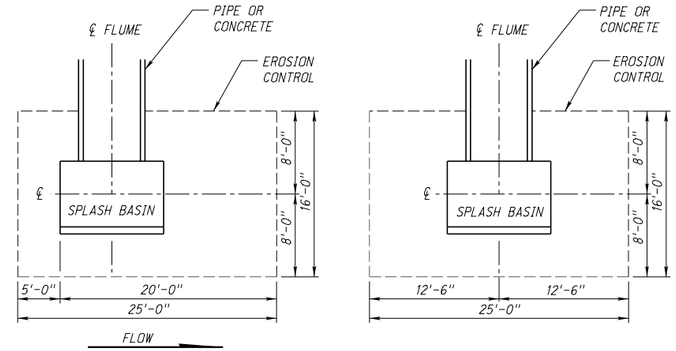


TYPICAL INSTALLATION AT PIPE CULVERT

(SHOWING STRAIGHT PIPE)

TYPICAL INSTALLATION AT BOX CULVERT

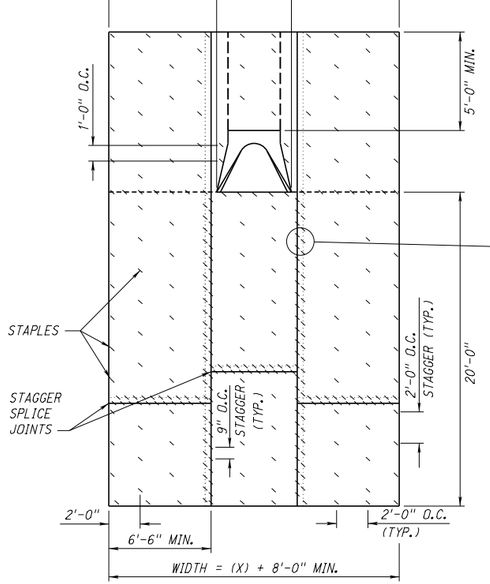




NOTE:
OFFSET EROSION CONTROL PLACEMENT ALONG THE DRAINAGE PATH

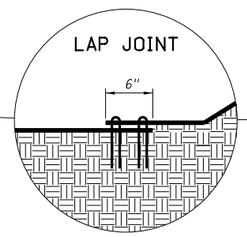
NOTE:
CENTER EROSION CONTROL ON FLUME WHERE THERE IS NO DEFINED DRAINAGE PATH

EROSION CONTROL BLANKET PLACEMENT AT SPLASH BASIN

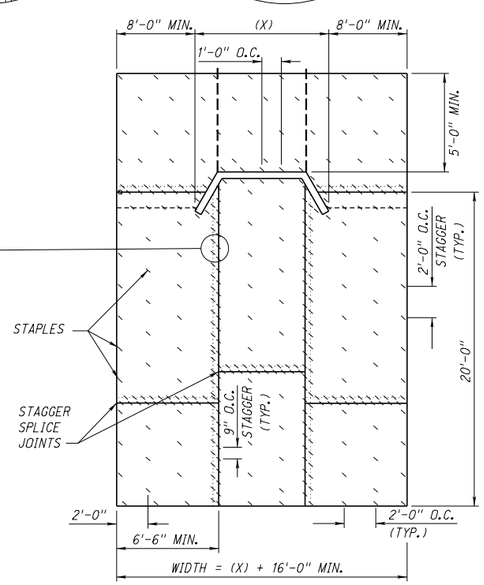


PLAN VIEW STAPLING DIAGRAM

(X) IS EQUAL TO THE OUTSIDE WIDTH OF THE FLARED END SECTION



STAGGER STAPLES EVERY 1'-0" O.C. WITHIN 20'-0" OF PIPE



PLAN VIEW STAPLING DIAGRAM

(X) IS EQUAL TO THE OUTSIDE WIDTH OF THE WING WALLS

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
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R5	OCT 07	EROSION CONTROL AT SPLASH BASIN

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 501-R7

EROSION CONTROL

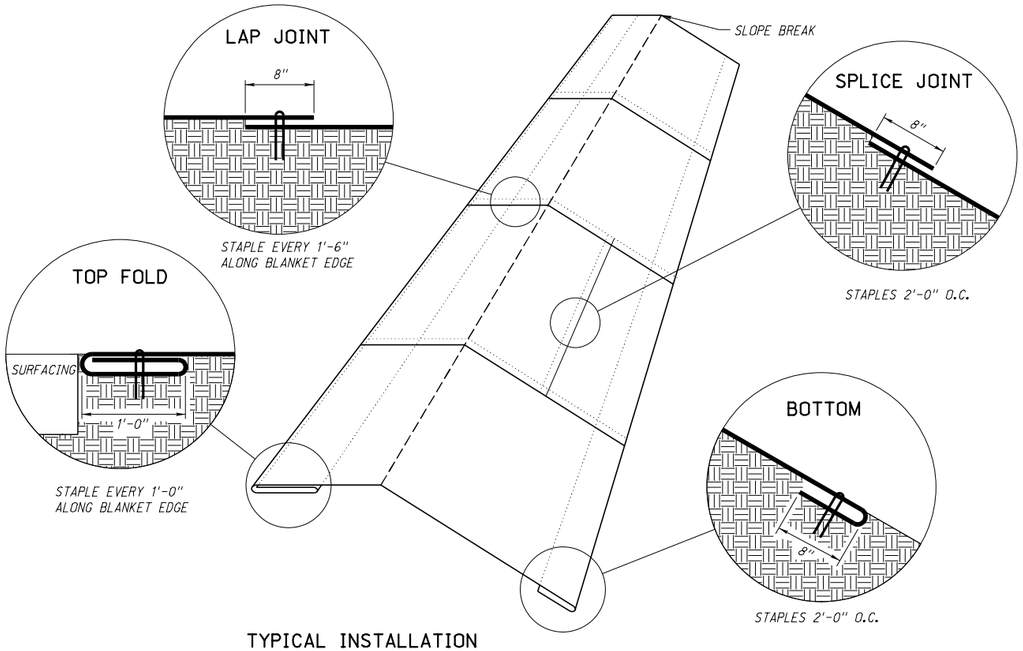
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
BRANDIE S. NEEMANN
E-11829
STATE OF NEBRASKA

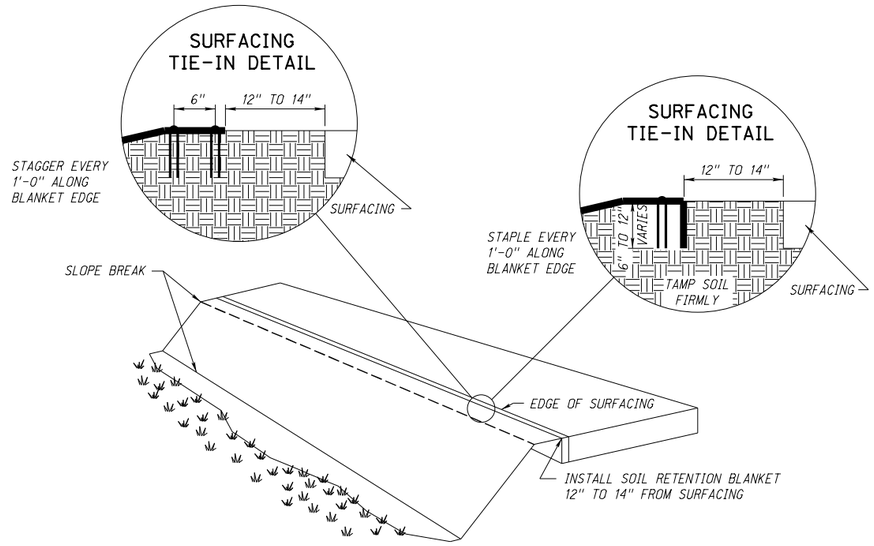
DATE

ORIGINAL:
NOVEMBER 1973
DATE

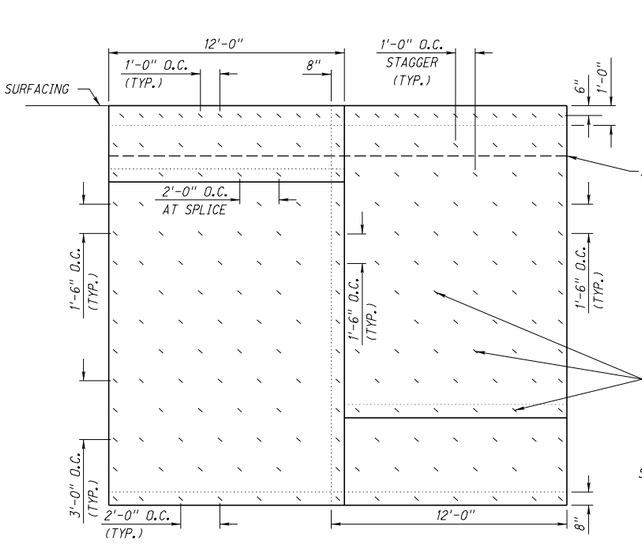
ROADWAY DESIGN DIVISION



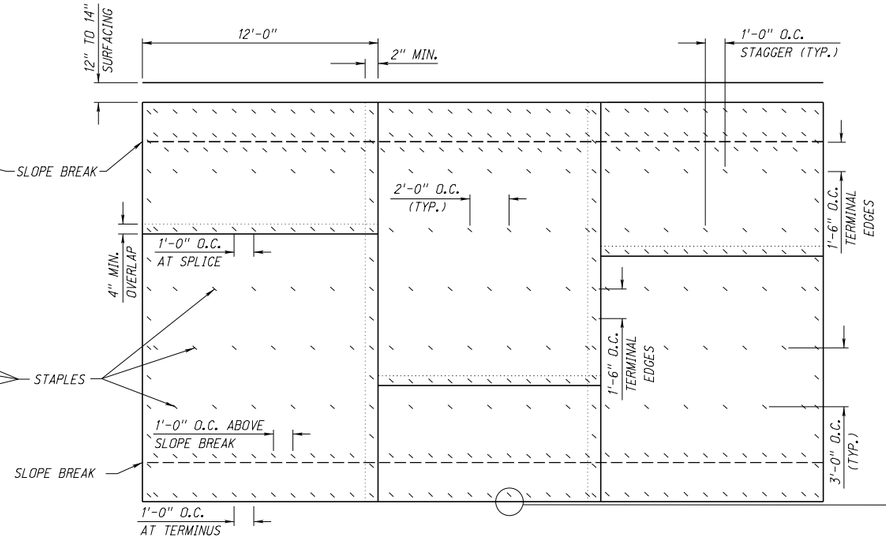
TYPICAL INSTALLATION
CLASS 1A (SLOPE PROTECTION, SAND)



SURFACING INSTALLATION

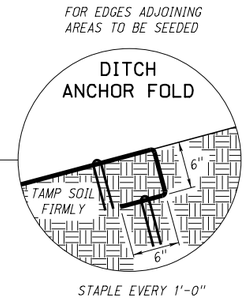


PLAN VIEW STAPLING DIAGRAM FOR
CLASS 1A (SLOPE PROTECTION, SAND)



TERMINATE BLANKET AT THE TOE OF SLOPE OR AT UNDISTURBED VEGETATION

PLAN VIEW STAPLING DIAGRAM FOR
CLASS 1B, 1C, 1D, 1E, 1F, 2A, 2B, & 2C



NOTES:

1. THE MANUFACTURERS' RECOMMENDED STAPLING PATTERNS SHALL GOVERN OVER THE PLANS.
2. SURFACING INSTALLATION IS APPLICABLE FOR ASPHALT, CONCRETE, OR BEVELLED EDGE.

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	APR 14	UPDATE INSTALLATION METHOD
R5	OCT 07	EROSION CONTROL AT SPLASH BASIN

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 501-R7

EROSION CONTROL

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

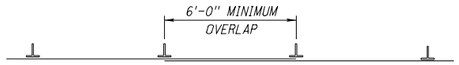
PROFESSIONAL CIVIL ENGINEER
BRANDIE S. NEEMANN
E-11829
STATE OF NEBRASKA

DATE

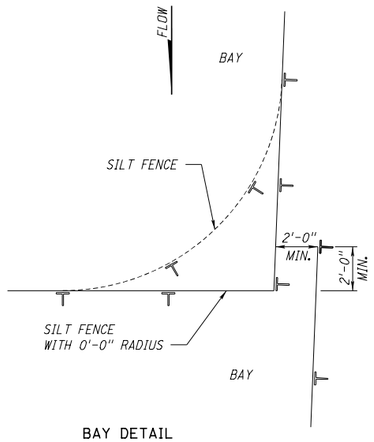
ORIGINAL:
NOVEMBER 1973
DATE

File: 501000607.dgn Date: 29-JUN-2021 09:20 Computer: NDOTDESIGN134

ROADWAY DESIGN DIVISION
Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:20
File: 50200e02.dgn

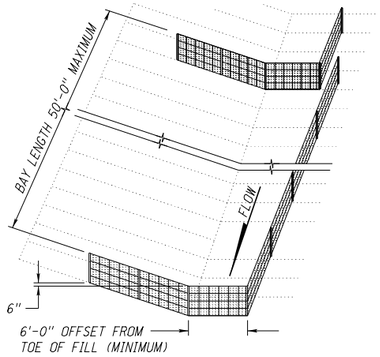


SILT FENCE SPLICE

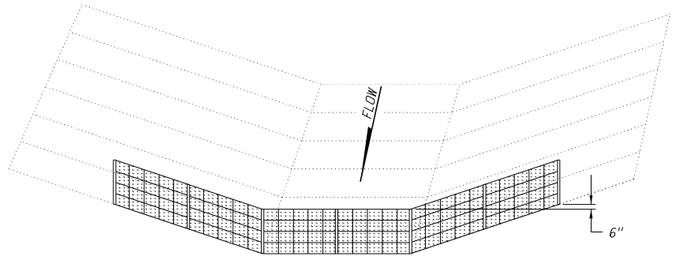


BAY DETAIL

NOTE:
SILT FENCE AT CORNERS SHALL HAVE A RADIUS OF 0'-0" MINIMUM TO 10'-0" MAXIMUM

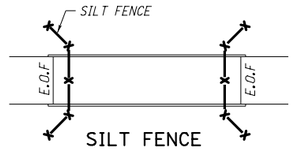


SILT FENCE BAYS

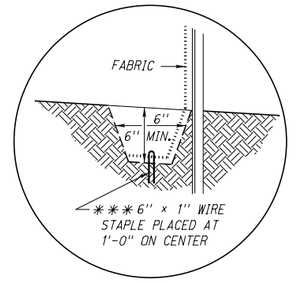


HIGH POROSITY SILT FENCE
(ACROSS DITCH)

NOTE:
POST SPACING 6'-0" MAXIMUM MULTIPLE BAYS MAY BE USED

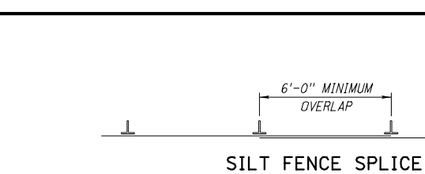


SILT FENCE
(UNDER BRIDGE)

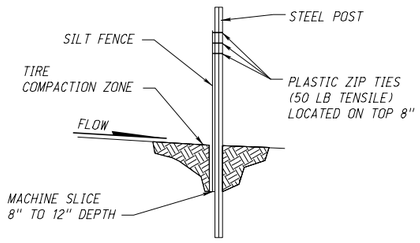


TRENCH DETAIL

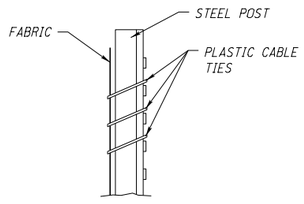
*** SILT FENCE MAY ALSO BE INSTALLED WITH A SILT FENCE PLOW. NO STAPLING IS REQUIRED WHEN THE SILT FENCE PLOW IS USED.



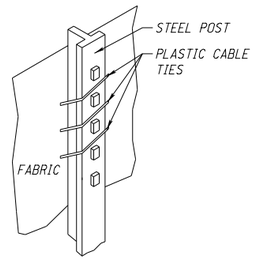
OPTION ONE (PREFERED)
SILT FENCE
(6'-0" OFFSET FROM TOE OF FILL)



SILT FENCE MACHINE SLICED



PROFILE VIEW
ATTACHMENT TO POST



BACK VIEW
ATTACHMENT TO POST

NOTES:

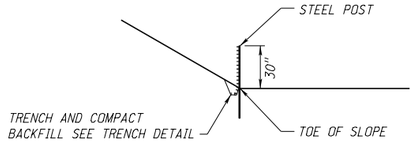
SILT FENCE SHOULD BE 30" ABOVE GRADE (MAY VARY)

SILT FENCE MINIMUM ROLL WIDTH:
LOW POROSITY = 42"
HIGH POROSITY = 42"
LOW PROFILE = 36"
COIR SILT FENCE = 36"

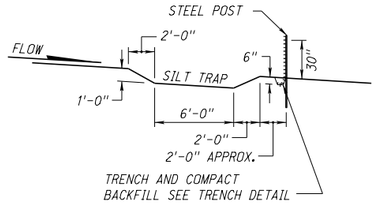
STEEL STUDDED "T" LINE POSTS 5'-6" LENGTH; 6'-0" MAXIMUM SPACING.

FOR EACH STEEL STUDDED "T" LINE POST, 3 PLASTIC CABLE TIES ARE REQUIRED.

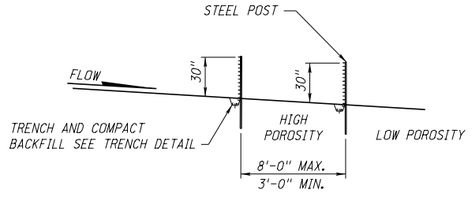
2" x 2" x 6'-0" NOMINAL WOOD STAKES SPACING, 6'-0" MAXIMUM ON CENTER DRIVEN UNTIL FIRM.



OPTION TWO (WITH LIMITED R.O.W.)
SILT FENCE
(AT TOE OF FILL)



HIGH POROSITY SILT
FENCE WITH SILT TRAP
(ACROSS DITCH)



SILT FENCE
(ACROSS DITCH)

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN 18	NDOR BORDER TO NDOT BORDER
R1	APR 14	STEEL POST INSTALLATION

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 502-R2

SILT FENCE DETAILS

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

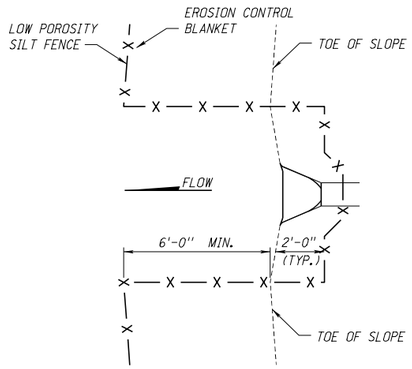
PROFESSIONAL CIVIL ENGINEER
BRANDIE S. NEEMANN
E-11829
STATE OF NEBRASKA

DATE

ORIGINAL:
DECEMBER 2006
DATE

1
2

ROADWAY DESIGN DIVISION



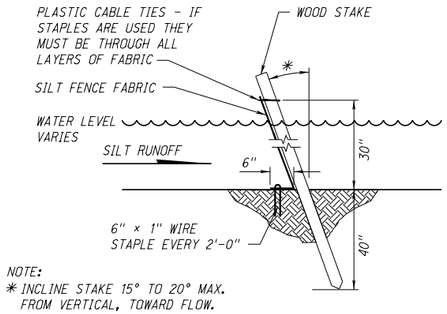
SILT FENCE OUTLET PROTECTION

NOTES:

1. SILT FENCE SHOULD BE BROUGHT FLUSH WITH WING WALLS ON BOX CULVERTS IF IT CAN NOT BE INSTALLED ABOVE THE BOX CULVERT.

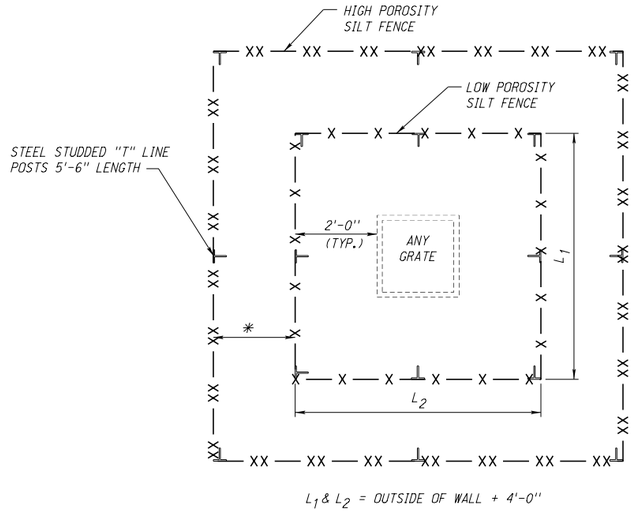
2. IF APPLICABLE, SILT FENCE AROUND THE CULVERT SHOULD BE ADJUSTED TO ALLOW FOR THE INSTALLATION OF EROSION CONTROL AS SHOWN IN STANDARD PLAN 501.

3. SILT CHECKS MAY USED IN PLACE OF SILT FENCE ABOVE THE OPENING OF A CULVERT, AS SHOWN IN SPECIAL PLAN C.



NOTE:
✳ INCLINE STAKE 15° TO 20° MAX. FROM VERTICAL, TOWARD FLOW.

SILT FENCE
(WET & BELOW WATER INSTALLATION)

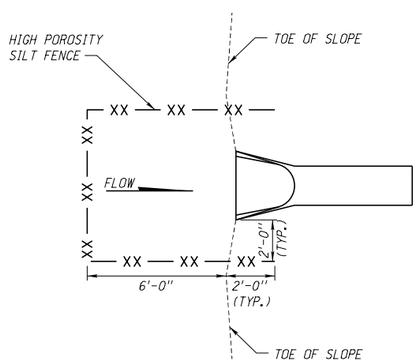


L_1 & L_2 = OUTSIDE OF WALL + 4'-0"

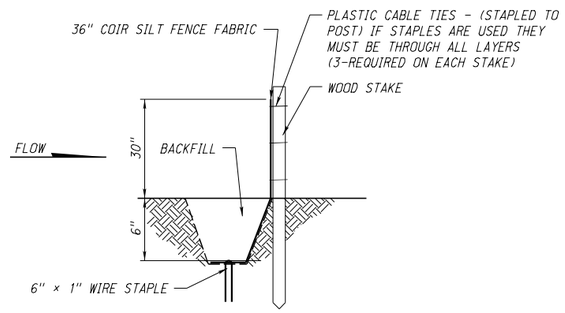
PLAN VIEW

SILT FENCE FOR GRATE, AREA, MEDIAN INLETS OR JUNCTION BOXES

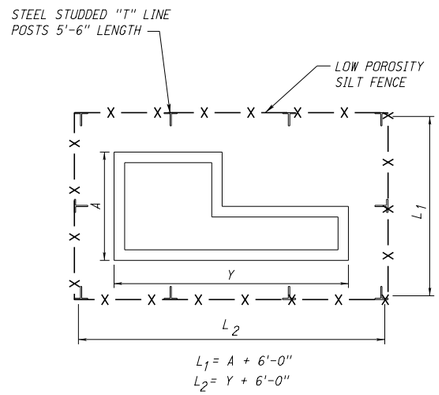
✳ 3'-0" IF POSSIBLE (MAY VARY)



SILT FENCE INLET PROTECTION



COIR SILT FENCE - ON WOOD POSTS - DRY INSTALLATION



L_1 = A + 6'-0"
L_2 = Y + 6'-0"

PLAN VIEW

SILT FENCE CURB INLET

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN 18	NDOR BORDER TO NDOT BORDER
R1	APR 14	STEEL POST INSTALLATION

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 502-R2

SILT FENCE DETAILS

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

DATE

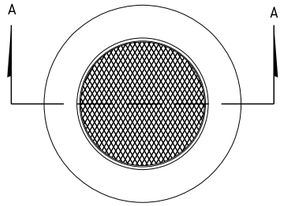
PROFESSIONAL CIVIL ENGINEER
BRANDIE S. NEEMANN
E-11829
STATE OF NEBRASKA

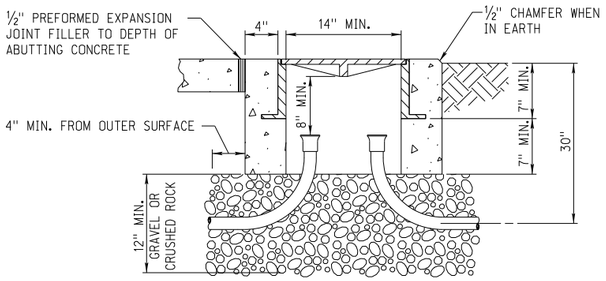
ORIGINAL:
DECEMBER 2006
DATE

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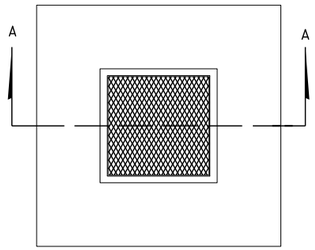
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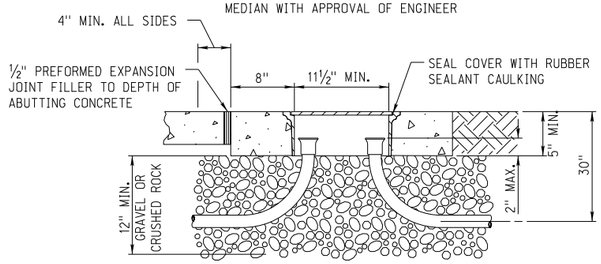


SECTION A-A

PULL BOX, TYPE PB-1

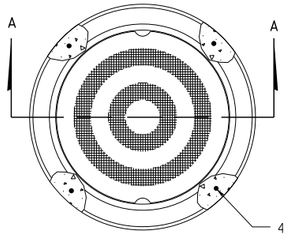


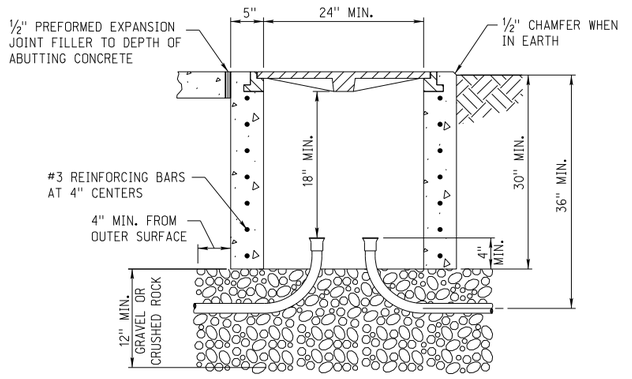
BOX MAY BE CAST IN SIDEWALK OR MEDIAN WITH APPROVAL OF ENGINEER



SECTION A-A

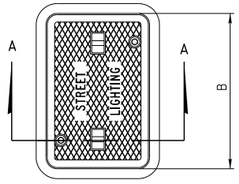
PULL BOX, TYPE PB-4

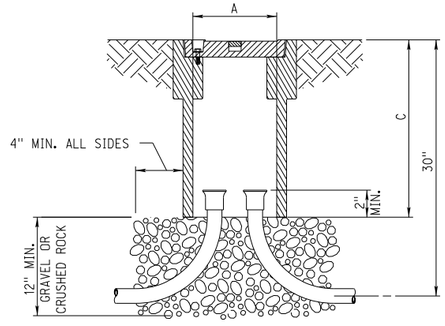




SECTION A-A

PULL BOX, TYPE PB-2





SECTION A-A

APPROXIMATE DIMENSIONS			
TYPE	A	B	C
PB-5	13"	24"	18"
PB-6	17"	30"	18"

PULL BOX, TYPE PB-5 & PB-6

NOTES:

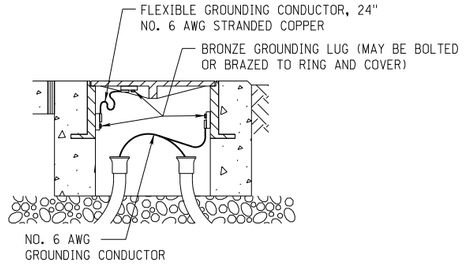
1. ACCESS DUCTS, BENDS AND/OR SWEEPS, ARE SUBSIDIARY TO THE ITEM "PULL BOX, TYPE PB-∗".
2. FILL MATERIAL SHALL BE GRAVEL OR CRUSHED ROCK COMPOSED OF CLEAN, DURABLE AND UNCOATED PARTICLES. FILL MATERIAL SHALL EXTEND A MINIMUM OF 4 INCHES BEYOND THE OUTER WALL OF THE ENCLOSURE. CRUSHED LIMESTONE SHALL NOT BE USED.
3. PROLONGED EXPOSURE OF THE PULL BOX AND COVER TO SUNLIGHT, COMMON ICE MELTING CHEMICALS OR FERTILIZERS SHALL NOT CAUSE SIGNIFICANT DAMAGE TO THE PULL BOX OR COVER, OR IMPAIR IT'S FUNCTION.
4. CONDUIT ENDS IN PULL BOX SHALL BE FITTED WITH BELL OR FLARED ENDS.

TYPE PB-1, PB-2 AND PB-4

5. CONCRETE SHALL BE CLASS 47B-3000.
6. PULL BOXES WHICH ARE INTENDED FOR INSTALLATION IN SURFACED AREAS, SUCH AS SIDEWALKS OR SURFACED MEDIANS, SHALL HAVE A LIP OR FLANGED EDGE FRAMING THE COVER OPENING TO PROVIDE A FLUSH, FRAMED SEPARATION BETWEEN THE SURFACING MATERIAL AND THE EDGES OF THE COVER.
7. PULL BOX COVERS SHALL BE EMBOSSED WITH AN ANTI-SLIP SURFACE PATTERN, AND SHALL FIT SUFFICIENTLY TIGHT TO PREVENT ENTRANCE OF RUN-OFF WATER.
8. SEATING SURFACES OF FRAME AND COVER SHALL BE MACHINED TO FIT. FRAME AND COVER TO BE CAST IRON.
9. PULL BOXES TYPE PB-1 AND TYPE PB-2, SHALL BE CAPABLE OF SUPPORTING VEHICULAR TRAFFIC IN ACCORDANCE WITH AASHTO SPECIFICATIONS H-20 LOADING.
10. PULL BOX TYPE PB-4 SHALL BE CAPABLE OF SUPPORTING LIGHT VEHICULAR TRAFFIC IN ACCORDANCE WITH AASHTO SPECIFICATION H-10 LOADING.

TYPE PB-5 AND PB-6

11. TYPE PB-5 AND PB-6 PULL BOXES ARE IN GROUND, GRADE LEVEL ENCLOSURES INTENDED TO BE INSTALLED BEHIND CURBS OR AT DISTANCES OFF OF THE ROADWAY WHERE NO DELIBERATE VEHICULAR TRAFFIC IS ANTICIPATED AND ONLY AN OCCASIONAL HEAVY VEHICLE WILL BE ENCOUNTERED.
12. THE PULL BOX ILLUSTRATIONS SHOWN ARE TYPICAL OF COMMERCIALLY AVAILABLE UNITS AND ARE NOT INTENDED TO LIMIT DESIGN. PULL BOXES OF EQUAL OR GREATER VOLUME HAVING TAPERED SIDES OR CIRCULAR OR SQUARE PLAN SECTION ARE ALSO ACCEPTABLE. A MINIMUM PULL BOX DEPTH OF 18 INCHES MUST BE MAINTAINED.
13. THE TYPE PB-5 AND PB-6 PULL BOX ENCLOSURES (BOX AND COVER) SHALL BE NON-METALLIC AND GREEN OR GRAY IN COLOR.
14. PULL BOX COVERS SHALL BE OF HEAVY-DUTY CONSTRUCTION TO WITHSTAND THE STRUCTURAL REQUIREMENTS OF THE SPECIFICATIONS. COVERS SHALL FIT SUFFICIENTLY TIGHT TO PREVENT THE ENTRANCE OF RUN-OFF WATER. COVERS SHALL BE EMBOSSED WITH AN ANTI-SLIP SURFACE, THE MANUFACTURER'S NAME AND THE LOGO "STREET LIGHTING". COVERS SHALL BE HELD SECURELY IN PLACE BY TWO OR MORE 3/8" (MIN. DIA.) STAINLESS STEEL HEX HEAD BOLTS WITH FLAT WASHER. BOLTS SHALL BE HELD CAPTIVE TO THE COVER. ALL COVERS SHALL BE EQUIPPED WITH A RECESSED "LIFT PIN" AND HAVE A MINIMUM 0.50 COEFFICIENT OF FRICTION SKID RESISTANT SURFACE.
15. EACH PB-5 AND PB-6 PULL BOX ASSEMBLY (BOX WITH HEAVY-DUTY COVER SECURELY ATTACHED) SHALL CONFORM TO ALL TEST PROVISIONS AND REQUIREMENTS FOR TIER 15 APPLICATIONS AS OUTLINED IN THE LATEST ISSUE OF THE ANSI/SCTE 77 STANDARD TITLED "SPECIFICATION FOR UNDER GROUND ENCLOSURE INTEGRITY". INDEPENDENT THIRD-PARTY TEST REPORTS TOGETHER WITH CERTIFICATION THAT ALL TEST PROVISIONS OF THE LATEST ISSUE OF THE ANSI/SCTE 77 STANDARD HAVE BEEN MET WILL BE REQUIRED FOR EACH TYPE OF PULL BOX BEING FURNISHED. ALL TEST REPORTS SHALL BE DATED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER AND SHALL BEAR THE LETTERHEAD OF THE TESTING AGENCY.
16. THE INDEPENDENT TEST REPORTS SHALL BE CERTIFIED AS TO BEING REPRESENTATIVE OF THE RESULTS THAT WOULD BE OBTAINED BY SIMILARLY TESTING PULL BOXES OF LIKE KIND THAT THE MANUFACTURER WILL BE FURNISHING TO STATE OF NEBRASKA HIGHWAY PROJECTS. THE CERTIFICATION SHALL BE EXECUTED AND SIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE PULL BOX MANUFACTURER AND SHALL BEAR THE MANUFACTURER'S LETTERHEAD. A NEW TEST REPORT AND CERTIFICATION FOR EACH TYPE PULL BOX BEING FURNISHED WILL BE REQUIRED EVERY FIVE YEARS.
17. THE TEST REPORTS AND CERTIFICATIONS, IF FOUND ACCEPTABLE, WILL BE PLACED ON FILE IN THE ROADWAY DESIGN DIVISION OF THE NEBRASKA DEPARTMENT OF ROADS IN LINCOLN, NEBRASKA AND THE PULL BOX MANUFACTURER'S NAME AND PART NUMBER WILL BE ADDED TO THE NEBRASKA DEPARTMENT OF ROADS "APPROVED PRODUCTS LIST."
18. AFTER ACCEPTENCE BY THE STATE, THE PULL BOX MANUFACTURER SHALL MAKE NO CHANGES IN DIMENSIONS, MANUFACTURING PROCESS OR MATERIAL WITHOUT SUBMITTING NEW TEST REPORTS FOR APPROVAL.



GROUNDING CONNECTIONS FOR METAL FRAME AND COVER

REV. NO.	DATE	DESCRIPTION OF REVISION
R8	JAN 18	NDOR BORDER TO NDOT BORDER
R7	DEC 16	ADD 8" GAP TO PB-1 & NOTES 2,4,6,17
R6	JAN 10	WIDTH OF DRAINABLE BASE & NOTE 12

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 914-R8

PULL BOX DETAIL

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

DATE

ORIGINAL: JULY 2, 1981
DATE

1/1

CHANNELIZATION DEVICES

THE FUNCTION OF CHANNELIZATION DEVICES IS TO WARN ROAD USERS OF CONDITIONS CREATED BY WORK ACTIVITIES IN OR NEAR THE TRAVELED WAY, TO PROTECT WORKERS IN THE TEMPORARY TRAFFIC CONTROL ZONE, AND TO GUIDE DRIVERS AND PEDESTRIANS SAFELY. CHANNELIZING DEVICES INCLUDE BUT ARE NOT LIMITED TO CONES, TUBULAR POSTS, VERTICAL PANELS, DRUMS, BARRICADES, TRAFFIC LANE DIVIDERS, TEMPORARY RAISED ISLANDS, AND BARRIERS.

DEVICES USED FOR CHANNELIZATION SHOULD PROVIDE FOR SMOOTH AND GRADUAL TRAFFIC MOVEMENT FROM ONE LANE TO ANOTHER, ONTO A BYPASS OR DETOUR, OR TO REDUCE THE WIDTH OF THE TRAVELED WAY. THEY MAY ALSO BE USED TO SEPARATE TRAFFIC FROM THE WORK SPACE, PAVEMENT DROP-OFFS, PEDESTRIAN PATHS, OR OPPOSING DIRECTIONS OF TRAFFIC.

CHANNELIZING DEVICES SHALL MEET THE CRASHWORTHY PERFORMANCE CRITERIA CONTAINED IN THE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH). THEY SHOULD BE CONSTRUCTED AND BALLASTED TO PERFORM IN A PREDICTABLE MANNER WHEN INADVERTENTLY STRUCK BY A VEHICLE. IF STRUCK, THE DEVICE SHOULD YIELD OR BREAK AWAY, FRAGMENTS OR OTHER DEBRIS FROM THE DEVICE SHOULD NOT PENETRATE THE PASSENGER COMPARTMENT OF THE VEHICLE OR BE A POTENTIAL HAZARD TO WORKERS OR PEDESTRIANS IN THE IMMEDIATE AREA.

SPACING OF CHANNELIZING DEVICES SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO THE SPEED WHEN USED FOR THE TAPER CHANNELIZATION, AND A DISTANCE IN FEET OF TWICE THE SPEED WHEN USED FOR TANGENT CHANNELIZATION.

SPACING OF CHANNELIZATION DEVICES

SPEED (MPH) S	SPACING OF DEVICES (FEET)	
	TAPER	TANGENT
25	25	50
35	35	70
45	45	90
55	55	110
60	60	120
65	65	130
75	75	150

WARNING LIGHTS MAY BE ADDED TO CHANNELIZING DEVICES IN AREAS WITH FREQUENT FOG, SNOW, OR SEVERE ROADWAY CURVATURE, OR WHERE VISUAL DISTRACTIONS ARE PRESENT, EXCEPT FOR THE SEQUENTIAL FLASHING WARNING LIGHTS, WARNING LIGHTS PLACED ON CHANNELIZING DEVICES USED IN A SERIES TO CHANNELIZE ROAD USERS SHALL BE STEADY-BURN.

THE RETROREFLECTIVE MATERIAL USED ON CHANNELIZING DEVICES SHALL HAVE A SMOOTH, SEALED OUTER SURFACE, MEETING THE REQUIREMENTS OF THE ASTM SPECIFICATION D4956, FOR TYPE IV SHEETING OR TYPE V REBOUNDABLE SHEETING (OR GREATER).

COEFFICIENT OF RETROREFLECTION ($CD/LUX/M^2$)

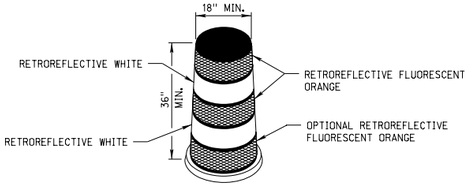
WHITE	ORANGE	RED	YELLOW
250	100	45	170

THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) "QUALITY GUIDELINES FOR WORK ZONE TRAFFIC CONTROL DEVICES" SHALL BE USED AS A VISUAL GUIDE FOR DETERMINING IF A TRAFFIC CONTROL DEVICE/OR SIGN IS ACCEPTABLE, MARGINAL OR UNACCEPTABLE.

THE NAME AND TELEPHONE NUMBER OF THE AGENCY, CONTRACTOR, OR SUPPLIER MAY BE SHOWN ON THE CHANNELIZING DEVICE BACK OR SUPPORT, BUT NOT ON THE DEVICE FACE. THE LETTERS AND NUMBERS SHALL BE A NON-REFLECTIVE COLOR AND NOT OVER 15 SQUARE INCHES IN TOTAL AREA.

PARTICULAR ATTENTION SHOULD BE GIVEN TO MAINTAINING THE CHANNELIZING DEVICES TO KEEP THEM CLEAN, VISIBLE, AND PROPERLY POSITIONED. DEVICES SHALL BE REPLACED THAT ARE DAMAGED AND/OR HAVE LOST A SIGNIFICANT AMOUNT OF THEIR RETROREFLECTIVITY AND EFFECTIVENESS.

REFLECTORIZED PLASTIC DRUMS



DESIGN

REFLECTORIZED PLASTIC DRUMS USED FOR TRAFFIC WARNING OR CHANNELIZATION SHALL BE CONSTRUCTED OF LIGHTWEIGHT, FLEXIBLE, AND DEFORMABLE MATERIALS AND BE A MINIMUM OF 36 INCHES IN HEIGHT AND HAVE A MINIMUM WIDTH OF AT LEAST A 18 INCHES, REGARDLESS OF ORIENTATION. THE PREDOMINANT COLOR OF THE DRUM SHALL BE ORANGE. METAL DRUMS SHALL NOT BE USED. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL, SHALL BE CIRCUMFERENTIAL, AND SHALL DISPLAY FOUR 6 INCH WIDE BANDS OF RETROREFLECTIVE SHEETING, ALTERNATING FLUORESCENT ORANGE-WHITE-FLUORESCENT ORANGE-WHITE, DRUMS SHALL HAVE CLOSED TOPS THAT WILL NOT ALLOW COLLECTION OF CONSTRUCTION OR OTHER DEBRIS.

APPLICATION

DRUMS ARE MOST COMMONLY USED TO CHANNELIZE OR DELINEATE TRAFFIC FLOW BUT MAY ALSO BE USED INDIVIDUALLY OR IN GROUPS TO MARK SPECIFIC LOCATIONS. DRUMS ARE HIGHLY VISIBLE AND HAVE GOOD TARGET VALUE; THEY GIVE THE APPEARANCE OF BEING FORMIDABLE OBSTACLES AND, THEREFORE, COMMAND THE RESPECT OF ROAD USERS.

BALLAST SHALL NOT BE PLACED ON TOP OF THE DRUM. DRUMS SHOULD NOT BE WEIGHTED WITH SAND, WATER, OR ANY MATERIAL.

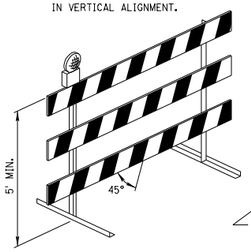
BARRICADES

BARRICADE TYPE	TYPE II	TYPE III
WIDTH OF RAIL ✳	8 INCHES MIN. - 12 INCHES MAX.	8 INCHES MIN. - 12 INCHES MAX.
LENGTH OF RAIL	36 INCHES	8 FEET ✳✳
WIDTH OF STRIPES	6 INCHES	6 INCHES
HEIGHT	36 INCHES	5 FEET
REFLECTIVE SHEETING	TYPE IV	TYPE IV
NUMBER OF REFLECTORIZED RAIL FACES	4 (TWO EACH DIRECTION)	6 (THREE EACH DIRECTION)

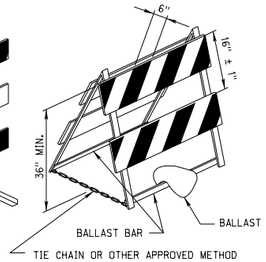
✳NOMINAL DIMENSIONS ARE PERMISSIBLE WHEN CONSTRUCTED FROM LUMBER.
✳✳WHEN LATERAL SPACE IS LIMITED, SOME TYPE III BARRICADES WITH A 4 FOOT LENGTH OF RAIL, MAY BE ALLOWED WHEN APPROVED BY THE ENGINEER.

TYPE III BARRICADE

TYPICAL MOUNTING OF FLASHING WARNING LIGHTS. LIGHTS SHALL ALWAYS BE IN VERTICAL ALIGNMENT.



TYPE II BARRICADE



BALLAST SHALL NOT BE PLACED OVER ANY REFLECTIVE DEVICE

DESIGN

A BARRICADE IS A PORTABLE OR FIXED DEVICE HAVING TWO OR THREE RAILS WITH APPROPRIATE MARKINGS. IT IS USED TO CONTROL ROAD USERS BY CLOSING, RESTRICTING, OR DELINEATING ALL OR A PORTION OF THE RIGHT-OF-WAY.

BARRICADES SHALL BE ONE OF TWO TYPES; TYPE II OR TYPE III.

STRIPES ON BARRICADE RAILS SHALL BE ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION ROAD USERS ARE TO PASS. THE STRIPES SHALL BE 6 INCHES WIDE. THE MINIMUM RAIL LENGTH FOR A TYPE II BARRICADE IS 36 INCHES.

WHERE BARRICADES EXTEND ENTIRELY ACROSS A ROADWAY, THE STRIPES SHOULD SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH ROAD USERS MUST TURN. WHERE BOTH RIGHT AND LEFT TURNS ARE PROVIDED, THE STRIPES MAY SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE OR BARRICADES. WHERE NO TURNS ARE INTENDED, THE STRIPES SHOULD SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES.

BARRICADE RAILS SHOULD BE SUPPORTED IN A MANNER THAT WILL ALLOW THEM TO BE SEEN BY THE ROAD USER, AND IN A MANNER THAT PROVIDES A STABLE SUPPORT THAT IS NOT EASILY BLOWN OVER OR DISPLACED.

ON HIGH-SPEED ROADWAYS OR IN OTHER SITUATIONS WHERE BARRICADES MAY BE SUSCEPTIBLE TO OVERTURNING IN THE WIND, SANDBAGS SHOULD BE USED FOR BALLASTING. SANDBAGS MAY BE PLACED ON LOWER PARTS OF THE FRAME OR STAYS TO PROVIDE THE REQUIRED BALLAST BUT SHALL NOT BE PLACED ON TOP OF ANY STRIPED RAIL. BARRICADES SHALL NOT BE BALLASTED BY HEAVY OBJECTS SUCH AS ROCKS OR CHUNKS OF CONCRETE.

THE BARRICADE OWNERS NAME, NOT TO EXCEED 15 SQUARE INCHES SHALL BE SHOWN ON THE BARRICADE BACK OR SUPPORT BUT NOT ON ITS FACE.

✳✳ WHEN LATERAL SPACE IS LIMITED, SOME TYPE III BARRICADES WITH A 4 FOOT LENGTH OF RAIL, MAY BE ALLOWED WHEN APPROVED BY THE ENGINEER.

APPLICATION

TYPE II BARRICADES ARE INTENDED FOR USE IN SITUATIONS WHERE TRAFFIC IS MAINTAINED THROUGH THE TEMPORARY TRAFFIC CONTROL ZONE. THEY MAY BE USED INDIVIDUALLY OR IN GROUPS TO MARK A SPECIFIC CONDITION, OR THEY MAY BE USED IN A SERIES FOR CHANNELIZING TRAFFIC. ON THE INTERSTATE, FREEWAY AND EXPRESSWAY SYSTEM, TYPE II BARRICADES SHALL NOT BE USED FOR CHANNELIZATION.

TYPE III BARRICADES USED AT A ROAD CLOSURE MAY EXTEND COMPLETELY ACROSS A ROADWAY FROM CURB TO CURB. WHERE PROVISION IS MADE FOR ACCESS OF AUTHORIZED EQUIPMENT AND VEHICLES, THE RESPONSIBILITY FOR THE TYPE III BARRICADES SHOULD BE ASSIGNED TO A PERSON WHO SHALL PROVIDE PROPER CLOSURE AT THE END OF EACH WORK DAY.

WHEN A HIGHWAY IS LEGALLY CLOSED BUT ACCESS MUST STILL BE ALLOWED FOR LOCAL TRAFFIC, THE TYPE III BARRICADES MAY NOT BE EXTENDED COMPLETELY ACROSS A ROADWAY. A SIGN WITH THE APPROPRIATE LEGEND CONCERNING PERMISSIBLE USE BY LOCAL TRAFFIC SHALL BE MOUNTED.

NORMALLY PERMANENT SIGNS MOUNTED ON BARRICADES SHALL BE ERECTED ABOVE THE BARRICADE. THE SIGNS "ROAD CLOSED", OR "ROAD WORK AHEAD", FOR EXAMPLE CAN EFFECTIVELY BE MOUNTED ABOVE THE BARRICADE THAT CLOSES THE ROADWAY. TYPE III BARRICADES SHALL BE SUPPLEMENTED WITH A LIGHTING DEVICE UNLESS SPECIFICALLY OMITTED BY THE ENGINEER. DETOUR ARROW AND LARGE WARNING ARROW SIGNS SHOULD BE PLACED ON THE FACE OF BARRICADE.

CONES



DESIGN

CONES SHALL BE PREDOMINANTLY ORANGE, FLOURESCENT RED-ORANGE, OR FLOURESCENT YELLOW/ORANGE. NOT LESS THAN 28 INCHES IN HEIGHT, AND SHALL BE MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING VEHICLES ON IMPACT. CONES WHEN ALLOWED ON THE INTERSTATE, FREEWAY OR EXPRESSWAY SYSTEM SHALL BE A MINIMUM OF 36 INCHES IN HEIGHT.

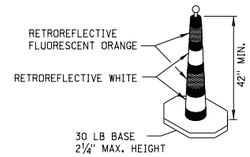
FOR NIGHTTIME USE, CONES SHALL BE RETROREFLECTIVE OR EQUIPPED WITH LIGHTING DEVICES FOR MAXIMUM VISIBILITY. RETROREFLECTION OF 28 INCH OR 36 INCH CONES SHALL BE PROVIDED BY A WHITE BAND 6 INCHES WIDE, NO MORE THAN 4 INCHES FROM THE TOP OF THE CONE, AND AN ADDITIONAL 4 INCH WIDE WHITE BAND A MINIMUM OF 2 INCHES BELOW THE 6 INCH BAND.

APPLICATION

TRAFFIC CONES ARE USED TO CHANNELIZE TRAFFIC, DIVIDE OPPOSING TRAFFIC LANES, DIVIDE TRAFFIC LANES WHEN TWO OR MORE LANES ARE KEPT OPEN IN THE SAME DIRECTION, AND DELINEATE SHORT-DURATION MAINTENANCE AND UTILITY WORK. CONES SHALL NOT BE USED FOR LANE CLOSURE TAPERS OR SHIFTS, CONES SMALLER THAN 42 INCHES SHALL NOT BE USED AT NIGHT ON RURAL HIGHWAYS, UNLESS SHOWN ON THE PLANS OR AS APPROVED OR DIRECTED BY THE ENGINEER.

STEPS SHOULD BE TAKEN TO ENSURE THAT CONES WILL NOT BE BLOWN OVER OR DISPLACED BY WIND OR MOVING TRAFFIC. CONES CAN BE DOUBLED UP TO INCREASE THEIR WEIGHT. SOME CONES ARE CONSTRUCTED WITH BASES THAT CAN BE FILLED WITH BALLAST. OTHERS HAVE SPECIAL WEIGHTED BASES, OR WEIGHTS SUCH AS SANDBAG RINGS THAT CAN BE DROPPED OVER THE CONES AND ONTO THE BASE TO PROVIDE ADDED STABILITY. BALLAST, HOWEVER, SHOULD NOT PRESENT A HAZARD IF THE CONES ARE INADVERTENTLY STRUCK.

42 INCH CONES



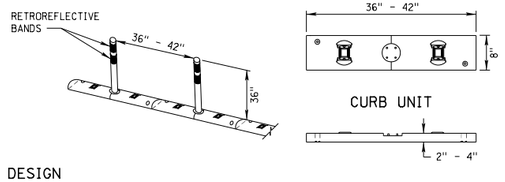
DESIGN

42 INCH CONES SHALL INCLUDE A 30 POUND RUBBER BASE AND DISPLAY FOUR 6 INCH WIDE BANDS OF RETROFEFLECTIVE SHEETING, ALTERNATING FLUORESCENT ORANGE-WHITE-FLOURESCENT ORANGE-WHITE.

APPLICATION

WHEN APPROVED BY THE ENGINEER OR SHOWN IN THE PLANS, 42 INCH REFLECTIVE CONES MAY BE USED IN LIEU OF TYPE II BARRICADES OR REFLECTORIZED DRUMS. 42 INCH CONES SHALL NOT BE USED FOR LANE-CLOSURE TAPERS OR SHIFTS. IF A RECTANGULAR BASE IS USED, THE LONG SIDE OF THE BASE SHOULD BE ORIENTED PARALLEL TO THE DIRECTION OF TRAFFIC.

TUBULAR POST AND CURB SYSTEM



DESIGN

TUBULAR POSTS USED IN THE SYSTEM SHALL BE 36 INCHES HIGH AND A MINIMUM OF 2 INCHES WIDE WHEN FACING TRAFFIC. THE TUBULAR POST AND CURB SYSTEM SHALL BE MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING IMPACTING VEHICLES. THE COLOR SHALL BE AS SHOWN IN THE PLANS.

THE TUBULAR POSTS SHALL BE RETROREFLECTIVE. RETROREFLECTION OF TUBULAR POSTS SHALL BE PROVIDED BY TWO 3-INCH WIDE RETROREFLECTIVE BANDS PLACED A MAXIMUM OF 2 INCHES FROM THE TOP WITH A MAXIMUM OF 6 INCHES BETWEEN THE BANDS. EACH CURB SECTION SHALL CONTAIN ONE RETROREFLECTIVE MARKER FACING EACH DIRECTION OF TRAFFIC. THE COLOR OF THE RETROREFLECTIVE BANDS AND MARKERS SHALL MATCH THE POST/CURB COLOR.

THE CURB SECTIONS SHALL BE CONFIGURED TO ALLOW FOR DRAINAGE FROM THE PAVEMENT SURFACE.

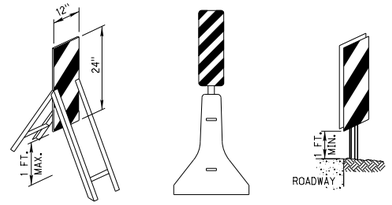
APPLICATION

TUBULAR POST AND CURB SYSTEMS MAY BE USED TO DIVIDE OPPOSING LANES OF TRAFFIC OR TO DIVIDE TRAFFIC LANES WHEN TWO OR MORE LANES ARE KEPT OPEN IN THE SAME DIRECTION.

FASTENING THE CURBS TO THE PAVEMENT WITH ANCHOR BOLTS OR OTHER SUITABLE METHODS AS DIRECTED BY THE MANUFACTURER IS REQUIRED TO MINIMIZE THE CHANCE OF BEING MOVED BY TRAFFIC.

TUBULAR POST AND CURB SYSTEMS SHALL BE INSTALLED IN THE LOCATIONS SHOWN IN THE PLANS OR DIRECTED BY THE ENGINEER.

VERTICAL PANELS



DESIGN

RETROREFLECTIVE MATERIAL ON VERTICAL PANELS SHALL BE 12 INCHES WIDE AND AT LEAST 24 INCHES HIGH. THEY SHALL HAVE ALTERNATING ORANGE AND WHITE STRIPES, WHERE THE HEIGHT OF THE RETROREFLECTIVE MATERIAL ON THE VERTICAL PANEL IS MORE THAN 36 INCHES, A PANEL STRIPE WIDTH OF 6 INCHES SHALL BE USED. WHERE THE HEIGHT OF THE RETROREFLECTIVE MATERIAL ON THE VERTICAL PANEL IS 36 INCHES OR LESS, A PANEL STRIPE WIDTH OF 4 INCHES SHALL BE USED. IF USED FOR TWO-WAY TRAFFIC, BACK-TO-BACK PANELS SHALL BE USED.

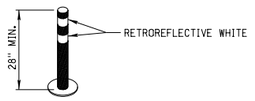
MARKINGS FOR VERTICAL PANELS SHALL BE ALTERNATING ORANGE AND WHITE RETROREFLECTORIZED STRIPES SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION TRAFFIC IS TO PASS.

POST MOUNTED VERTICAL PANELS SHALL BE MOUNTED WITH THE BOTTOM A MINIMUM OF 1 FOOT ABOVE THE ROADWAY. VERTICAL PANELS ON A TEMPORARY STAND SHALL BE MOUNTED WITH THE BOTTOM A MAXIMUM OF 1 FOOT ABOVE THE ROADWAY.

APPLICATION

WHERE SPACE IS LIMITED VERTICAL PANELS MAY BE USED TO CHANNEL TRAFFIC, DIVIDE OPPOSING LANES OF TRAFFIC, DIVIDE TRAFFIC LANES OR REPLACE BARRICADES. WHEN APPROVED BY THE ENGINEER, VERTICAL PANELS MAY BE POST-MOUNTED ALONG THE SIDE OF THE ROADWAY.

TUBULAR POSTS



DESIGN

TUBULAR POSTS SHALL BE PREDOMINANTLY ORANGE, NOT LESS THAN 28 INCHES HIGH, BE A MINIMUM OF 2 INCHES WIDE WHEN FACING TRAFFIC, AND MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING IMPACTING VEHICLES.

TUBULAR POSTS SHALL BE RETROREFLECTIVE. RETROREFLECTION OF TUBULAR POSTS SHALL BE PROVIDED BY TWO 3 INCHES WIDE WHITE BANDS PLACED A MAXIMUM OF 2 INCHES FROM THE TOP, WITH A MAXIMUM OF 6 INCHES BETWEEN THE BANDS. THE BASE SHALL NOT BE WIDER THAN 12 INCHES OR HIGHER THAN 2 INCHES.

APPLICATION

TUBULAR POSTS HAVE LESS VISIBLE AREA THAN OTHER DEVICES AND SHOULD BE USED ONLY WHERE SPACE RESTRICTIONS DO NOT ALLOW FOR THE USE OF OTHER MORE VISIBLE DEVICES. THEY MAY BE USED EFFECTIVELY TO DIVIDE OPPOSING LANES OF TRAFFIC OR TO DIVIDE TRAFFIC LANES WHEN TWO OR MORE LANES ARE KEPT OPEN IN THE SAME DIRECTION.

STEPS SHOULD BE TAKEN TO ASSURE THAT TUBULAR POSTS WILL NOT BE BLOWN OVER OR DISPLACED BY TRAFFIC BY EITHER AFFIXING THEM TO THE PAVEMENT WITH ANCHOR BOLTS OR ADHESIVE, IF A NONCYLINDRICAL DEVICE IS USED, IT SHALL BE ATTACHED TO THE PAVEMENT TO ENSURE THAT THE WIDTH FACING TRAFFIC MEETS THE MINIMUM REQUIREMENTS.

TUBULAR POSTS SHOULD NOT BE USED FOR PEDESTRIAN CHANNELIZATION OR A PEDESTRIAN BARRIERS IN TEMPORARY TRAFFIC CONTROL ZONES ON OR ALONG SIDEWALKS.

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	JUN 14	2009 MUTCD UPDATE
R5	OCT 98	REVISE CHANNELIZATION DEVICES, TAPER

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 920-R7

TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

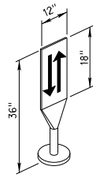
DATE

ORIGINAL: OCTOBER 1998
DATE

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File: 92000e07.dgn Date: 29-JUN-2021 09:21 Computer: NDOTDESIGN134

OPPOSING TRAFFIC LANE DIVIDERS



DESIGN

OPPOSING TRAFFIC LANE DIVIDERS SHALL BE A TWO SIDED UPRIGHT RETROREFLECTORIZED ORANGE PANEL, WITH A WIDTH OF 12 INCHES AND A HEIGHT OF 18 INCHES. THE TOP OF THE PANEL SHALL BE 36 INCHES ABOVE THE PAVEMENT. THE SYMBOL ON EACH SIDE SHALL BE TWO OPPOSING BLACK ARROWS. THE LANE DIVIDER SHALL BE MADE OF LIGHTWEIGHT MATERIAL THAT WILL YIELD UPON IMPACT BY A VEHICLE. THE LANE DIVIDER BASE SHALL NOT BE WIDER THAN 12 INCHES OR HIGHER THAN 4 INCHES. THE BASE SHALL BE ATTACHED TO THE EXISTING SURFACE BY EPOXY OR OTHER SUITABLE ADHESIVE, TO ENSURE THAT THE PANEL REMAINS FACING TRAFFIC.

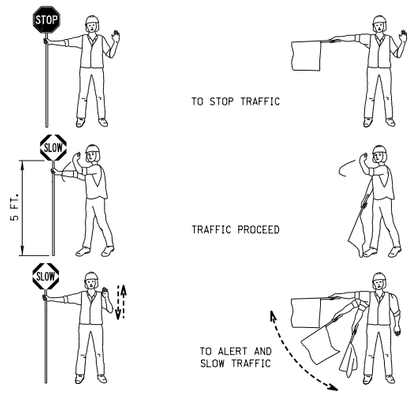
APPLICATION

OPPOSING TRAFFIC LANE DIVIDERS ARE DELINEATION DEVICES USED AS CENTER LANE DIVIDERS TO SEPARATE OPPOSING TRAFFIC ON A TWO-LANE, TWO-WAY OPERATION.

FLAGGERS

REQUIRED METHOD

EMERGENCY USE ONLY



FLAGGER PADDLE

THE STOP/SLOW PADDLE SHALL HAVE AN OCTAGONAL SHAPE ON A RIGID HANDLE. STOP/SLOW PADDLES SHALL BE AT LEAST 18 INCHES WIDE WITH LETTERS AT LEAST 6 INCHES HIGH. IF THE STOP/SLOW PADDLE IS PLACED ON A RIGID STAFF, THE MINIMUM LENGTH OF THE STAFF, MEASURED FROM THE BOTTOM OF THE SIGN TO THE END OF THIS STAFF THAT RESTS ON THE GROUND, SHOULD BE 5 FEET. THE STOP/SLOW PADDLE SHOULD BE THE PRIMARY AND PREFERRED HAND-SIGNALING DEVICE BECAUSE THE STOP/SLOW PADDLE GIVES ROAD USERS MORE POSITIVE GUIDANCE THAN RED FLAGS. USE OF FLAGS SHOULD BE LIMITED TO EMERGENCY SITUATIONS.

FLAGGERS

A FLAGGER MUST BE DRESSED FOR SAFETY. IN ADDITION TO THE REQUIREMENTS OF THE "WORKER VISIBILITY" SECTION LISTED BELOW, FLAGGERS SHALL WEAR:

1. AN ORANGE OR YELLOW/GREEN CAP OR HARD HAT.
2. A SHIRT WITH SLEEVES, PANTS AND SHOES (TANK TOPS, SHORTS OR SANDALS SHALL NOT BE WORN).

FLAGGERS SHALL BE INSTRUCTED IN THE PROPER LOCATION, DUTIES AND PROCEDURES FOR FLAGGING AS OUTLINED IN THE CURRENT MUTCD AND THE DEPARTMENT OF ROADS FLAGGER'S HANDBOOK. AS REQUIRED BY THE DEPARTMENT OF ROADS, THE FLAGGER SHALL BE CERTIFIED, AND HAVE IN THEIR POSSESSION, A VALID FLAGGER CERTIFICATION CARD.

WORKER VISIBILITY

ALL WORKERS WITHIN THE RIGHT-OF-WAY WHO ARE EXPOSED EITHER TO TRAFFIC (VEHICLES USING THE HIGHWAY FOR PURPOSES OF TRAVEL) OR TO CONSTRUCTION EQUIPMENT WITHIN THE WORK AREA SHALL WEAR HIGH-VISIBILITY SAFETY APPAREL. HIGH-VISIBILITY SAFETY APPAREL IS DEFINED TO MEAN PERSONAL PROTECTIVE SAFETY CLOTHING THAT;

1. IS INTENDED TO PROVIDE CONSPICUITY DURING BOTH DAYTIME AND NIGHTTIME USAGE, AND
2. MEETS THE PERFORMANCE CLASS 2 OR CLASS 3 REQUIREMENTS OF THE ANSI/ISEA 107-2004 PUBLICATION ENTITLED "AMERICAN NATIONAL STANDARDS FOR HIGH-VISIBILITY SAFETY APPAREL AND HEADWEAR"

LIGHTING DEVICES

FUNCTION

CONSTRUCTION AND MAINTENANCE ACTIVITIES OFTEN CREATE CONDITIONS ON OR NEAR THE TRAVELED WAY THAT ARE PARTICULARLY HAZARDOUS AT NIGHT. IT IS OFTEN DESIRABLE AND NECESSARY TO SUPPLEMENT THE REFLECTORIZED SIGNS, BARRIERS, AND CHANNELIZING DEVICES WITH LIGHTING DEVICES. STROBE TYPE LIGHTS ARE NOT PERMITTED.

BARRICADE WARNING LIGHTS DESIGN (BATTERY OPERATED)

TYPE "A" LOW INTENSITY FLASHING WARNING LIGHTS ARE MOST COMMONLY MOUNTED ON BARRICADES, OR WITH SIGNS AND ARE INTENDED TO WARN THE DRIVER THAT THEY ARE PROCEEDING IN A HAZARDOUS AREA. THESE LIGHTS SHALL NOT BE USED FOR DELINEATION, AS A SERIES OF FLASHING LIGHTS IN A ROW WOULD TEND TO OBSCURE THE DESIRED PATH.

TYPE "A" HIGH INTENSITY FLASHING WARNING LIGHTS ARE NORMALLY MOUNTED ON THE TYPE III BARRICADE THAT ACCOMPANIES THE ADVANCE WARNING SIGNS.

TYPE "C" STEADY BURN LIGHTS AS USED HEREIN, SHALL MEAN A SERIES OF LOW WATTAGE YELLOW ELECTRIC LIGHTS. WHERE LIGHTS ARE NEEDED TO DELINEATE OR MARK THE TRAVELED WAY THROUGH AND AROUND OBSTRUCTIONS IN A CONSTRUCTION MAINTENANCE AREA, THE DELINEATION SHALL BE ACCOMPLISHED BY USE OF STEADY BURNING LIGHTS. WHEN USED TO SUPPLEMENT CHANNELIZATION, THE MAXIMUM SPACING FOR WARNING LIGHTS SHOULD BE IDENTICAL TO THE CHANNELIZING DEVICE SPACING REQUIREMENTS. WHEN USED TO DELINEATE A CURVE, TYPE "C" WARNING LIGHTS SHOULD ONLY BE USED ON DEVICES ON THE OUTSIDE OF THE CURVE, AND NOT ON THE INSIDE OF THE CURVE.

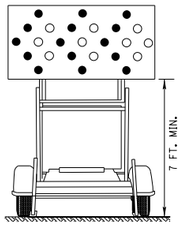
FLASHING ARROW PANEL (DISPLAY)

AN ARROW PANEL IS A SIGN WITH A MATRIX OF ELEMENTS, CAPABLE OF EITHER FLASHING OR SEQUENTIAL DISPLAYS. THIS SIGN SHALL PROVIDE ADDITIONAL WARNING AND DIRECTIONAL INFORMATION TO ASSIST IN MERGING AND CONTROLLING ROAD USERS THROUGH OR AROUND A TEMPORARY TRAFFIC CONTROL ZONE. AN ARROW PANEL SHOULD BE USED IN COMBINATION WITH APPROPRIATE SIGNS, CHANNELIZING DEVICES OR OTHER TRAFFIC CONTROL DEVICES.

DESIGN

ARROW PANELS SHALL MEET THE SIZE AND SPECIFICATIONS OF THE MUTCD FOR TYPE "C" ARROW DISPLAYS.

FLASHING ARROW PANEL SHALL BE RECTANGULAR, OF SOLID APPEARANCE AND FINISHED IN NON-REFLECTIVE BLACK. THE PANEL SHALL BE MOUNTED ON A VEHICLE, TRAILER OR OTHER SUITABLE SUPPORT. MINIMUM MOUNTING HEIGHT MEASURED VERTICALLY FROM THE BOTTOM OF THE PANEL TO THE ROADWAY BELOW IT OR TO THE ELEVATION OF THE NEAR EDGE OF THE ROADWAY. SHALL BE 7 FEET EXCEPT ON VEHICLE-MOUNTED PANELS, WHICH SHOULD BE AS HIGH AS PRACTICAL.



THE FOLLOWING SELECTIONS SHALL BE PROVIDED ON THE ARROW PANEL	
OPERATING MODE	PANEL DISPLAY
FLASHING ARROW	RIGHT SHOWN; LEFT OPPOSITE
SEQUENTIAL ARROW	RIGHT SHOWN; LEFT OPPOSITE
SEQUENTIAL CHEVRON	RIGHT SHOWN; LEFT OPPOSITE
FLASHING DOUBLE ARROW	
FLASHING OR ALTERNATING CAUTION	FLASHING LINE OR FLASHING CORNERS OR ALTERNATING DIAMOND CAUTION

THE ARROW PANEL SHALL HAVE A MINIMUM SIZE OF 96 INCHES WIDE AND 48 INCHES HIGH. THE MINIMUM LEGIBILITY DISTANCE SHALL BE 1 MILE. THE PANEL SHALL CONTAIN 25 LAMP ELEMENTS. ARROW PANEL ELEMENTS SHALL BE CAPABLE OF A MINIMUM 50 PERCENT DIMMING, AUTOMATICALLY WHEN AMBIENT LIGHT FALLS BELOW 50 LUX.

THE MINIMUM ELEMENT "ON TIME" SHALL BE 50 PERCENT FOR THE FLASHING MODE AND EQUAL INTERVALS OF 25 PERCENT FOR EACH SEQUENTIAL CHEVRON PHASE. THE FLASHING RATE SHALL BE NO FEWER THAN 25 NOR MORE THAN 40 FLASHES PER MINUTE.

APPLICATION

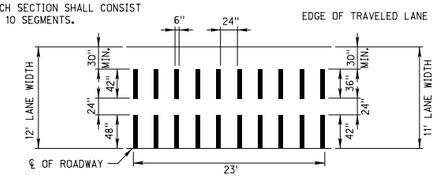
A FLASHING ARROW OR SEQUENTIAL CHEVRON MODE SHALL ONLY BE USED FOR STATIONARY OR MOVING LANE CLOSURES.

FOR SHOULDER WORK BLOCKING THE SHOULDER, FOR ROADSIDE WORK NEAR THE SHOULDER, OR FOR TEMPORARILY CLOSING ONE LANE ON A TWO-LANE, TWO-WAY ROADWAY, AN ARROW PANEL SHALL BE USED ONLY IN THE CAUTION MODE.

AN ARROW DISPLAY MODE SHALL NOT BE USED ON A TWO-LANE TWO-WAY ROADWAY FOR TEMPORARY ONE-LANE OPERATION OR LANE SHIFTS. AN ARROW DISPLAY SHALL NOT BE USED TO LATERALLY SHIFT TRAFFIC.

TEMPORARY RUMBLE STRIPS

EACH SECTION SHALL CONSIST OF 10 SEGMENTS.



DESIGN

TEMPORARY RUMBLE STRIPS MAY BE MADE OF ASPHALT PAVING MATERIAL, EPOXY AND AGGREGATE OR OTHER SUITABLE MATERIAL WHICH WILL MAINTAIN A DESIRABLE RUMBLE EFFECT. THE TEMPORARY RUMBLE STRIP SHOULD HAVE AN INSTALLED HEIGHT OF 5/8". PREFORMED RUMBLE STRIPS MAY BE USED PROVIDED THEY HAVE A MINIMUM ½" HEIGHT.

TRAFFIC SIGNALS

TRAFFIC SIGNALS MAY BE ALLOWED AT CERTAIN EQUIPMENT CROSSINGS WHERE THE VOLUME OF FILL MATERIAL AND THE NUMBER OF EQUIPMENT CROSSINGS PER HOUR IS HIGH. TRAFFIC SIGNALS MAY BE ALLOWED AT CERTAIN BRIDGE CONSTRUCTION SITES WHERE A COMBINATION OF ONE-WAY TRAFFIC AND HIGH TRAFFIC VOLUMES WOULD BE BEST SERVED WITH THIS TYPE OF TRAFFIC CONTROL.

ALL TRAFFIC SIGNAL REQUESTS AND METHOD OF INSTALLATION ON THE STATE HIGHWAY SYSTEM SHALL BE IN COMPLIANCE WITH THE MUTCD AND MUST BE APPROVED BY THE STATE TRAFFIC ENGINEER.

IF, AFTER THE SIGNAL ASSEMBLIES ARE ERECTED AND THE ROAD IS OPEN TO PUBLIC TRAVEL, THE SIGNAL SYSTEM IS NOT PUT IMMEDIATELY INTO OPERATION, THE SIGNAL FACES SHALL BE COVERED WITH BURLAP OR OTHER OPAQUE MATERIAL SUBJECT TO THE APPROVAL OF THE ENGINEER. INOPERATIVE SIGNALS ON ROADS OPEN TO THE PUBLIC SHALL ALWAYS BE COVERED. TILTING THE SIGNALS UPWARD IS NOT AN ACCEPTABLE ALTERNATIVE TO COVERING THE HEADS.

FLOODLIGHTS

WHEN NIGHTTIME WORK IS REQUIRED, FLOODLIGHTS SHALL BE USED TO ILLUMINATE FLAGGER STATIONS. FLOODLIGHTS SHOULD BE USED TO ILLUMINATE EQUIPMENT CROSSINGS, AND OTHER AREAS WHERE EXISTING LIGHT IS NOT ADEQUATE FOR THE WORK TO BE PERFORMED SAFELY.

IN NO CASE SHALL FLOODLIGHTING BE PERMITTED TO CREATE A DISABLING GLARE FOR DRIVERS. THE ADEQUACY OF THE FLOODLIGHT PLACEMENT AND ELIMINATION OF POTENTIAL GLARE SHOULD BE CHECKED BY DRIVING THROUGH THE PROJECT.

PAVEMENT MARKING

IT IS INTENDED TO THE EXTENT POSSIBLE, THAT MOTORISTS BE PROVIDED MARKINGS WITHIN A WORK AREA COMPARABLE TO THE MARKINGS NORMALLY MAINTAINED ALONG ADJACENT ROADWAYS, PARTICULARLY AT EITHER END OF THE WORK AREA.

ALL MARKINGS AND DEVICES USED TO DELINEATE VEHICLE AND PEDESTRIAN PATHS SHALL BE CAREFULLY REVIEWED DURING DAYTIME AND NIGHTTIME PERIODS TO AVOID INADVERTENTLY LEADING DRIVERS OR PEDESTRIANS FROM THE INTENDED PATH.

PAVEMENT MARKINGS NO LONGER APPLICABLE SHALL BE REMOVED UNLESS OTHERWISE APPROVED BY THE ENGINEER.

TAPERS

TAPERS ARE CREATED USING A SERIES OF CHANNELIZING DEVICES OR PAVEMENT MARKINGS TO MOVE TRAFFIC OUT OF OR INTO ITS NORMAL PATH.

MERGING TAPER

A MERGING TAPER REQUIRES THE LONGEST DISTANCE BECAUSE DRIVERS ARE REQUIRED TO MERGE INTO COMMON ROAD SPACE. THE TAPER SHOULD BE LONG ENOUGH TO ENABLE MERGING DRIVERS TO HAVE ADEQUATE ADVANCE WARNING AND SUFFICIENT LENGTH TO ADJUST THEIR SPEEDS AND MERGE INTO A SINGLE LANE BEFORE THE DOWNSTREAM END OF THE TRANSITION.

SHIFTING TAPER

A SHIFTING TAPER IS USED WHEN MERGING IS NOT REQUIRED, BUT A LATERAL SHIFT IS NEEDED. APPROXIMATELY ONE-HALF "L" HAS BEEN FOUND TO BE ADEQUATE. WHERE MORE SPACE IS AVAILABLE, IT MAY BE BENEFICIAL TO USE LONGER TAPERS. GUIDANCE FOR CHANGES IN ALIGNMENT MAY ALSO BE ACCOMPLISHED BY USING HORIZONTAL CURVES DESIGNED FOR NORMAL HIGHWAY SPEEDS.

SHOULDER TAPERS

A SHOULDER TAPER MAY BE BENEFICIAL ON HIGH-SPEED ROADWAYS WHERE SHOULDERS ARE PART OF THE ACTIVITY AREA AND ARE CLOSED, OR WHEN IMPROVED SHOULDERS MIGHT BE MISTAKEN AS A DRIVING LANE IN THESE INSTANCES, THE SAME TYPE, BUT ABBREVIATED, CLOSURE PROCEDURES USED ON A NORMAL PORTION OF THE ROADWAY CAN BE USED. IF USED, SHOULDER TAPERS APPROACHING THE ACTIVITY AREA SHOULD HAVE A LENGTH OF ABOUT ONE-THIRD "L".

DOWNSTREAM TAPERS

THE DOWNSTREAM TAPER MAY BE USEFUL IN TERMINATION AREAS TO PROVIDE A VISUAL CUE TO THE DRIVER THAT ACCESS IS AVAILABLE TO THE ORIGINAL LANE OR PATH THAT WAS CLOSED. WHEN USED, IT SHOULD HAVE A MINIMUM LENGTH OF ABOUT 100 FEET PER LANE, WITH DEVICES SPACED ABOUT 20 FEET APART.

ONE LANE, TWO WAY TAPER

THE ONE-LANE, TWO-WAY TAPER IS USED IN ADVANCE OF AN ACTIVITY AREA THAT OCCUPIES PART OF A TWO-WAY ROADWAY IN SUCH A WAY THAT A PORTION OF THE ROAD IS USED ALTERNATELY BY TRAFFIC IN EACH DIRECTION. A SHORT TAPER HAVING A MINIMUM LENGTH OF 50 FEET AND A MAXIMUM LENGTH OF 100 FEET WITH CHANNELZING DEVICES AT APPROXIMATELY 20 FOOT SPACINGS SHOULD BE USED TO GUIDE TRAFFIC INTO THE ONE-LANE-SECTION AND A DOWNSTREAM TAPER WITH A LENGTH OF APPROXIMATELY 100 FEET SHOULD BE USED TO GUIDE TRAFFIC BACK INTO THEIR ORIGINAL LANE.

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES	
TYPE OF TAPER	TAPER LENGTH (FEET)
MERGING TAPER	L MINIMUM
SHIFTING TAPER	1/2 L MINIMUM
SHOULDER TAPER	1/3 L MINIMUM
TWO-WAY TAPER	100 FEET MAXIMUM

FORMULAS FOR L	
SPEED	FORMULA
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR GREATER	L = WS

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

TAPER LENGTH L (FEET)			
SPEED (MPH)	LANE WIDTH		
S	10 FT.	11 FT.	12 FT.
25	105	115	125
30	150	165	180
35	205	225	245
40	270	295	320
45	450	495	540
50	500	550	600
55	550	605	660
60	600	660	720
65	650	715	780
75	750	825	900

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	JUN 14	2009 MUTCD UPDATE
R5	OCT 98	REVISE CHANNELIZATION DEVICES, TAPER

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 920-R7

TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

DATE

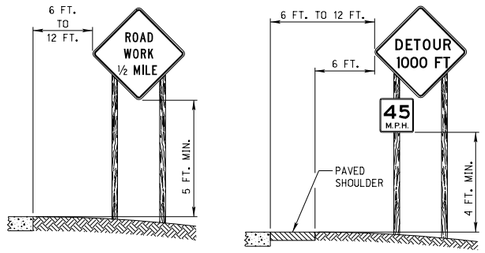
ORIGINAL: OCTOBER 1998
DATE

File: 92000e07.dgn
Date: 29-JUN-2021 09:21
Computer: NDOTDESIGN134

ROADWAY DESIGN DIVISION

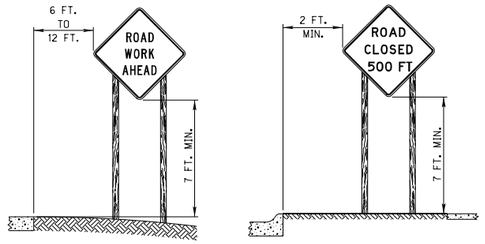
ROADSIDE SIGNS

HEIGHT AND LATERAL LOCATION OF SIGNS
RURAL AREA



WITH SPEED ADVISORY PLATE

URBAN AREA



TYPICAL FIRST SIGN AT CONSTRUCTION SITE



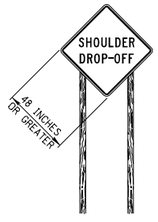
WITH TYPE "A" FLASHING WARNING LIGHT MOUNTED ABOVE TYPE III BARRICADE

PORTABLE AND TEMPORARY MOUNTING

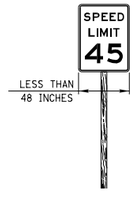


TYPICAL SIGN MOUNTINGS

POST MOUNTED



SIGNS 48 INCHES OR WIDER REQUIRE TWO POSTS



SIGN WIDTHS LESS THAN 48 INCHES MAY BE MOUNTED WITH ONE POST

TYPICAL SIGN MOUNTINGS

OTHER THAN POST MOUNTED



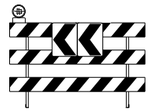
TYPE III BARRICADE WITH SIGN



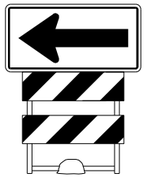
PORTABLE AND TEMPORARY MOUNTING



TYPE III BARRICADE WITH SIGN AND DETOUR ARROW



TYPE III BARRICADE WITH CHEVRONS



TYPE II BARRICADE WITH DETOUR ARROW OR SIGN



PLASTIC DRUM WITH CHEVRON OR SIGN

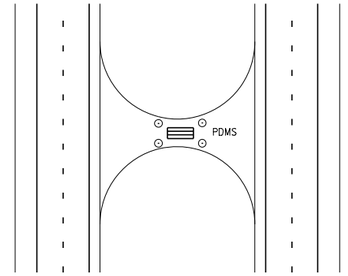
TEMPORARY SIGN SUPPORTS

ALL "TEMPORARY SIGN" SUPPORTS (BASES) SHALL BE NCHRP 350 OR MASH (TL-3) APPROVED.

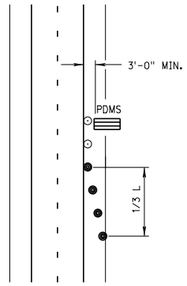
"TEMPORARY SIGNS" ARE ALL TEMPORARILY MOUNTED WORK ZONE SIGNS THAT ARE NOT POST MOUNTED IN THE GROUND AT THE TYPICAL 5 FOOT MOUNTING HEIGHT. TEMPORARY SIGNS ARE CONSIDERED NCHRP 350 OR MASH CATEGORY 2 DEVICES AND ARE MOUNTED ON TEMPORARY SIGN STANDS. TEMPORARY SIGNS SHALL BE MOUNTED A MINIMUM OF 1 FOOT ABOVE THE GROUND, UNLESS OTHERWISE REQUIRED TO BE MOUNTED AT A HIGHER HEIGHT.

TEMPORARY SIGNS AND THEIR SUPPORTS SHALL NOT BE IN PLACE LONGER THAN 3 DAYS. ANY SIGN THAT IS TO BE IN PLACE LONGER THAN 3 DAYS SHALL BE POST MOUNTED OR MOUNTED TO A DRUM, BARRICADE, OR BARRIER, AS REQUIRED BY THE PLANS OR SPECIFICATIONS.

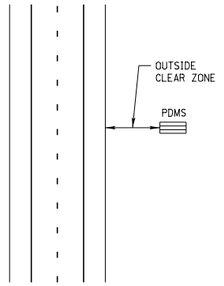
PORTABLE DYNAMIC MESSAGE SIGN DELINEATION



IN MEDIAN



ON SHOULDER



OFF SHOULDER

PORTABLE DYNAMIC MESSAGE SIGNS (PDMS)

THE PLACEMENT OF PDMS SHOULD BE IN THE FOLLOWING ORDER:

WHENEVER POSSIBLE, PDMS SHOULD BE PLACED OFF OF ANY USABLE PORTION OF THE ROADWAY ON THE RIGHT SIDE OF THE ROADWAY. WHEN PLACED OUTSIDE THE CLEAR ZONE OR BEHIND GUARDRAIL OR CONCRETE PROTECTION BARRIERS, DELINEATION IS NOT REQUIRED.

WHERE FIELD CONDITIONS DO NOT ALLOW FOR THIS PLACEMENT, THE SIGNS MAY BE LOCATED ON THE OUTSIDE SHOULDER OF THE ROADWAY OR WITHIN THE MEDIAN.

A. A MINIMUM CLEARANCE OF 3 FEET MEASURED HORIZONTALLY FROM THE EDGE OF THE SIGN TO THE EDGE OF THE TRAVELED WAY IS RECOMMENDED.
B. THE PDMS SHOULD HAVE A MINIMUM MOUNTED HEIGHT OF 7 FEET ON FREEWAYS, EXPRESSWAYS AND IN URBAN AREAS.
C. ALL OTHER RURAL APPLICATIONS SHOULD HAVE A MINIMUM HEIGHT OF 5 FEET.

THESE HEIGHTS ARE MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE ELEVATION OF THE NEAR EDGE OF THE PAVEMENT.

REFLECTORIZED PLASTIC DRUMS SHOULD BE USED TO DELINEATE EACH SIGN USING A 1/3 L TAPER. THESE DRUMS SHOULD BE POSITIONED ON THE UPSTREAM END OF THE SIGN TO FORM A TAPER LEADING UP TO THE TRAFFIC SIDE OF THE SIGN. FOR A SIGN LOCATED IN THE MEDIAN, THE SIGN SHOULD BE DELINEATED WITH A 42 INCH CONE ON ALL FOUR CORNERS.

WHEN DEPLOYED, THE SIGN SHALL BE SIGHTED AND ALIGNED WITH APPROACHING TRAFFIC TO ENSURE VISIBILITY OF THE MESSAGE. IF MULTIPLE SIGNS ARE USED, THE SIGNS SHOULD BE LOCATED ON THE SAME SIDE OF THE ROAD AND SEPARATED ACCORDING TO PROPER SIGN SPACING.

WHEN PRACTICAL, PDMS SHOULD NOT BE USED TO REPLACE STATIC SIGNS FOR LONG TERM USAGE (OVER 10 DAYS).

WHEN PDMS ARE TO BE DEPLOYED FOR LONG PERIODS, SUCH AS INCIDENT MANAGEMENT ROLES, CONCRETE PADS WITH APPROPRIATE TIE DOWNS SHOULD BE CONSTRUCTED FOR THEIR PLACEMENT.

PDMS NOT ACTIVELY BEING USED IN A CONSTRUCTION OR INCIDENT MANAGEMENT ROLE SHOULD BE REMOVED.

REFER TO NDOR "DMS GUIDELINES" FOR PROPER PDMS MESSAGE INFORMATION.

NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL MEET THE APPLICABLE STANDARDS AND SPECIFICATIONS PRESCRIBED IN PART 6 OF THE LATEST ADOPTED EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD)" AND THE STATE OF NEBRASKA SUPPLEMENT TO THE MUTCD. ALL TRAFFIC CONTROL DEVICES SHALL BE CRASHWORTHY AND QUALIFY AS SUCH ACCORDING TO THE TESTING AND ACCEPTANCE GUIDELINES OF THE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. TRAFFIC CONTROL PLANS AND DEVICES SHOULD FOLLOW THE PRINCIPLES SET FORTH, BUT MAY DEVIATE FROM THE TYPICAL DRAWINGS TO ALLOW FOR CONDITIONS AND REQUIREMENTS OF THE PROJECT.
3. TRAFFIC CONTROL DEVICES SHALL BE INSTALLED SO AS NOT TO OBSTRUCT THE VIEW OF OTHER TRAFFIC CONTROL DEVICES.
4. THE ENGINEER SHALL HAVE THE AUTHORITY TO REQUIRE THE USE, AND APPROVE THE LOCATION OF ANY OF THE DEVICES SHOWN IN THESE PLANS.

WORK ZONE SPEED LIMIT NOTES

A. WORK ZONE SPEED LIMITS SHALL NOT BE INSTALLED WITHOUT A SPEED ZONE AUTHORIZATION COMPLETED BY THE DEPARTMENT.
B. REDUCED SPEED LIMITS SHOULD BE USED ONLY IN THE SPECIFIC PORTION OF THE WORK ZONE WHERE CONDITIONS OR RESTRICTIVE FEATURES ARE PRESENT. HOWEVER, FREQUENT CHANGES IN THE SPEED LIMIT SHOULD BE AVOIDED. THE REDUCTION OF SPEED SHOULD BE DESIGNED SO VEHICLES CAN SAFELY TRAVEL THROUGH THE WORK ZONE WITH A SPEED LIMIT REDUCTION OF NO MORE THAN 10 MPH UNLESS OTHERWISE NOTED IN THE PLANS.
C. WORK ZONE SPEED LIMITS SHOWN ARE TYPICAL APPLICATIONS ONLY AND ARE NOT TO BE ASSUMED AS THE SPEED LIMITS REQUIRED FOR THE WORK.
D. EXISTING SPEED LIMIT SIGNS SHALL BE REMOVED OR COVERED WHEN A REDUCED WORK ZONE SPEED LIMIT IS IN EFFECT IN THE SAME AREA.
E. WORK ZONE SPEED LIMIT SIGNS SHALL BE INSTALLED EVERY MILE THROUGH THE WORK AREA WHEN SPEED ZONE IS REDUCED.
F. A SPEED LIMIT SIGN ENDING THE REDUCED SPEED ZONE SHALL BE INSTALLED AT THE END OF EACH ZONE.
G. DOUBLE FINES AND REDUCED SPEED ZONE SIGNING ARE NOT REQUIRED FOR SHORT-DURATION WORK LESS THAN 12 HOURS.

TAPER FORMULA

L = S x W FOR SPEEDS OF 45 MPH OR MORE.

L = $\frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

WHERE:

L = MINIMUM LENGTH OF TAPER.

S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

W = WIDTH OF OFFSET (LANE WIDTH).

LEGEND

- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- REFLECTORIZED PLASTIC DRUM OR 42" CONE
- PORTABLE DYNAMIC MESSAGE SIGN

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R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	JUN 14	2009 MUTCD UPDATE
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NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 920-R7

TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

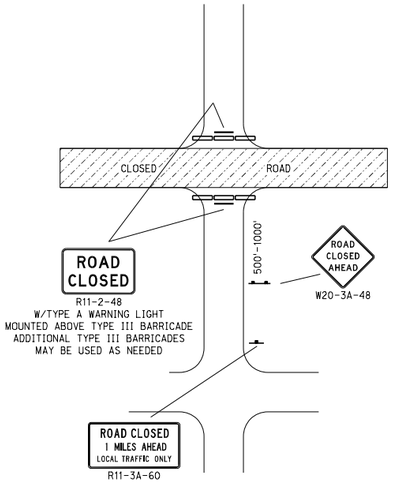
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ORIGINAL:
OCTOBER 1998
DATE

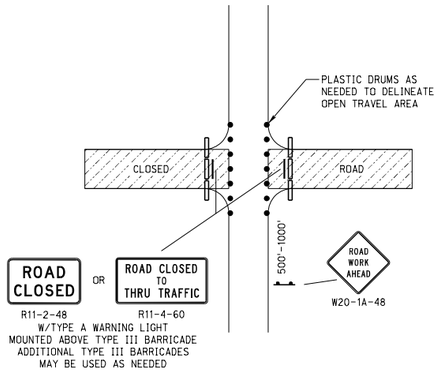
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CROSS ROAD INTERSECTING CLOSED ROAD

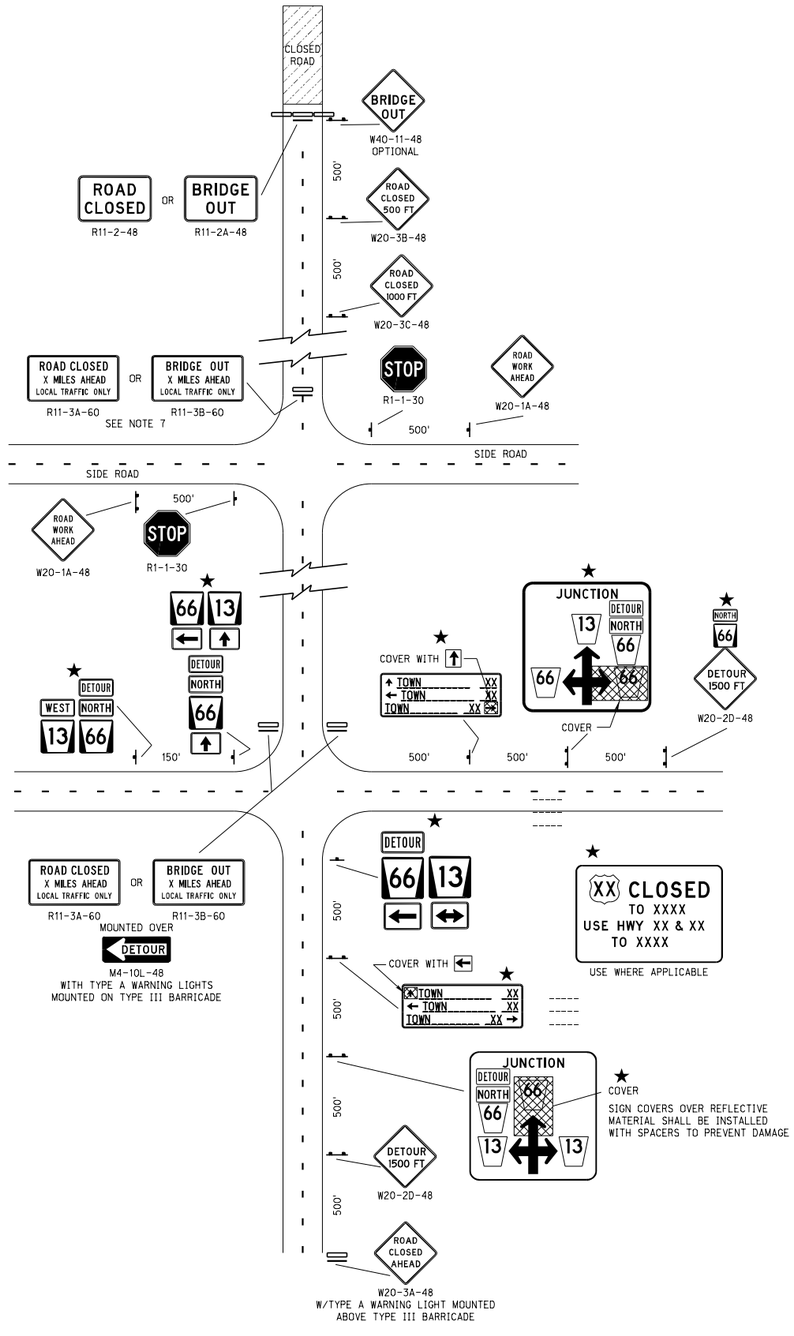


TRAFFIC NOT ALLOWED TO CROSS CLOSED ROAD



TRAFFIC ALLOWED TO CROSS CLOSED ROAD

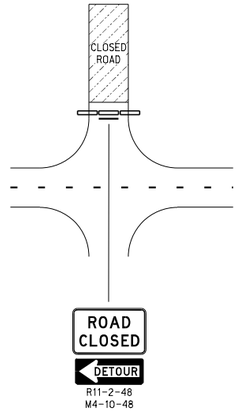
ROAD CLOSED BEYOND JUNCTION



NOTES

1. SIGNS SHOWN ARE USUALLY FOR ONE DIRECTION OF TRAVEL ONLY.
2. THE CONTRACTOR SHALL INSTALL, MAINTAIN, AND REMOVE ALL SIGNS IN ACCORDANCE WITH THE DETAILS OF AND AT THE LOCATIONS SHOWN IN THE PLANS. SIGNS INSTALLED BY THE DEPARTMENT OR OTHER GOVERNMENT AGENCY SHALL BE MAINTAINED AND REMOVED BY THEIR FORCES.
3. WHEN MESSAGE IS NOT PERTINENT, SIGNS SHALL BE TAKEN DOWN, COVERED OR FOLDED. TAPE IS NOT PERMITTED ON THE FACE OF THE SIGN.
4. VEHICLES OR EQUIPMENT SHALL NOT BE PARKED SO AS TO OBSCURE OR DISTRACT FROM TRAFFIC CONTROL DEVICES.
5. FLAGS MAY BE USED TO CALL ATTENTION TO WARNING SIGNS.
6. WHEN APPROPRIATE THE SIGN R11-2B "BRIDGE OUT" MAY BE USED INSTEAD OF R11-2 "ROAD CLOSED".
7. BARRICADE AND SIGN MAY BE PLACED ALONG EDGE OF ROAD IF NEEDED FOR LOCAL TRAFFIC.
8. REFER TO STANDARD PLAN 920 FOR GENERAL INFORMATION NOT SHOWN.

ROAD CLOSED AT JUNCTION



LEGEND

- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- SINGLE POSTED SIGN
- DOUBLE POSTED SIGN
- ★ INSTALLED BY OTHERS

TAPER FORMULA

L = S x W FOR SPEEDS OF 45 MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

WHERE:

L = MINIMUM LENGTH OF TAPER.

S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

W = WIDTH OF OFFSET (LANE WIDTH).

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN 18	NDOR BORDER TO NDOT BORDER
R1	JUN 14	2009 MUTCD UPDATES

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 923-R2

TRAFFIC CONTROL ROAD CLOSURE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

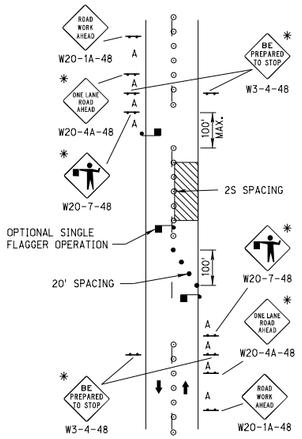
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ORIGINAL: AUGUST 1998
DATE

1
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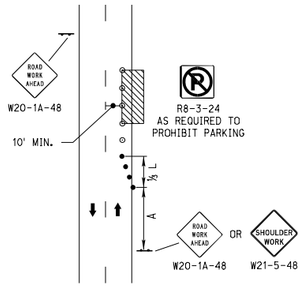
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ROADWAY DESIGN DIVISION
Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:21
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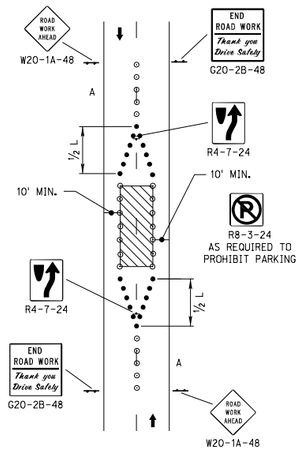


ONE LANE CLOSED
WITH FLAGGER

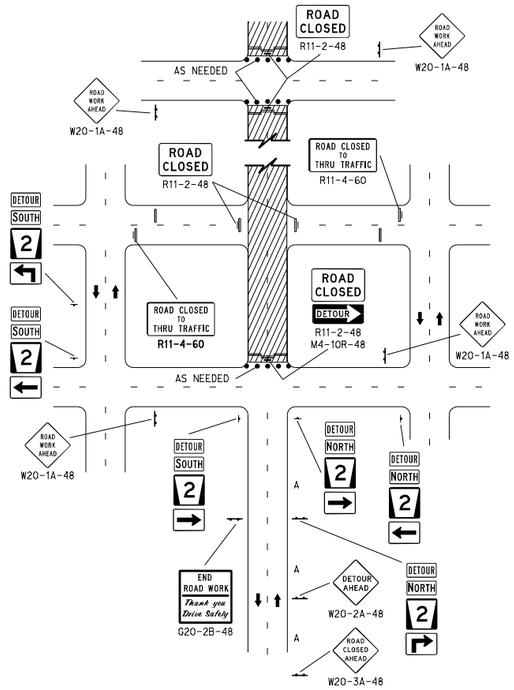
✳ SIGNS AND CONES ARE SUBSIDIARY TO THE FLAGGING OPERATION.



SHOULDER OR PARKING
LANE CLOSED

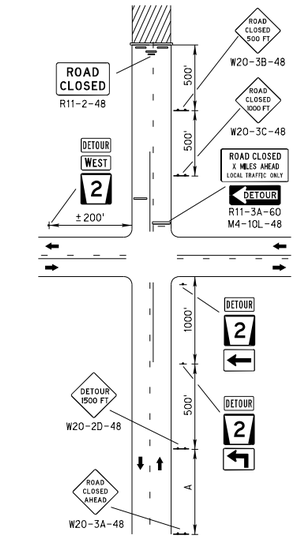


WORK IN CENTER OF
ROAD WITH LOW
TRAFFIC VOLUMES



ROAD CLOSED AT DETOUR

ROAD TYPE	MINIMUM DISTANCE BETWEEN SIGNS
	A
URBAN (LOW SPEED - 25 MPH TO 40 MPH)	100'
URBAN (HIGH SPEED - 45 MPH OR HIGHER)	350'



ROAD CLOSED BEYOND DETOUR

LEGEND

- FLASHING ARROW PANEL
- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- TUBULAR POST
- REFLECTORIZED PLASTIC DRUM OR 42" CONE
- SINGLE POSTED SIGN
- DOUBLE POSTED SIGN
- FLAGGER
- xxxx PAVEMENT MARKING REMOVAL

TAPER FORMULA

L = S x W FOR SPEEDS OF 45 MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

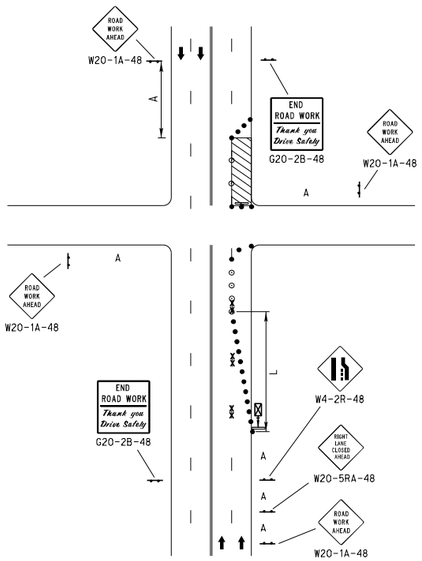
WHERE:
L = MINIMUM LENGTH OF TAPER.

S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

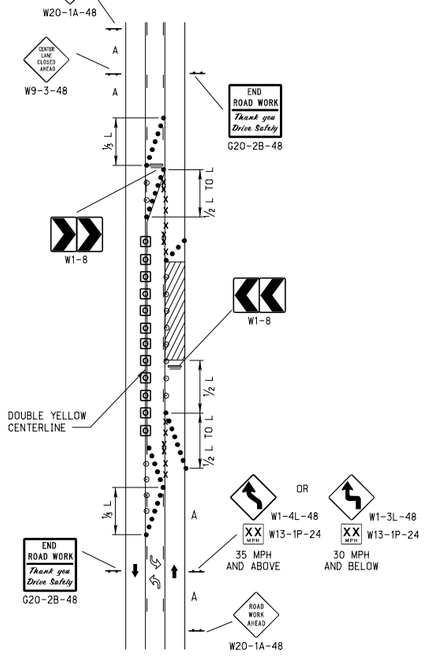
W = WIDTH OF OFFSET (LANE WIDTH).

NOTES

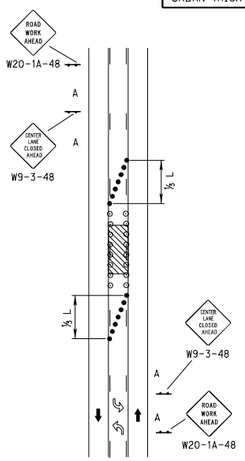
1. ALL BARRICADE AND SIGN LOCATIONS ON THIS PLAN ARE APPROXIMATE, AND MAY BE ADJUSTED TO FIT FIELD CONDITIONS. THE SIGNS SHALL BE INSTALLED SO AS NOT TO OBSCURE THE VIEW OF OTHER TRAFFIC CONTROL DEVICES.
2. MINIMUM WIDTH OF TRAVELLED LANE SHALL BE AS REQUIRED BY THE ENGINEER.
3. FLASHING ARROW PANEL REQUIRED ON ALL ROADWAYS WITH POSTED SPEED LIMIT 45 MPH OR HIGHER. THE USE OF A FLASHING ARROW PANEL IS OPTIONAL ON ROADWAYS WITH A POSTED SPEED OF 40 MPH OR LOWER.
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. FOR SHORT-TERM WORK (LESS THAN 24 HOURS) SIGN G20-2B-48 (END ROAD WORK, THANK YOU, DRIVE SAFELY) MAY BE OMITTED.
6. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT (S). WHERE CHANNELIZING DEVICES ARE USED ALONG THE WORK AREA, THE SPACING MAY BE INCREASED TO THE DISTANCE IN FEET EQUAL TO THE SPEED LIMIT, DOUBLED (2 × S). SEE "TAPER FORMULA" TABLE FOR MORE INFORMATION.
7. FOR LANE CLOSURES OVER 72 HOURS, ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED. ON ASPHALT SURFACES, DURABLE PAVEMENT MARKINGS MAY BE COVERED WITH APPROVED BLACK TEMPORARY PAVEMENT MARKING TAPE.
8. DESIGNATION OF SPEED SHOWN ON ADVISORY SPEED SIGNS W13-1P SHALL BE DETERMINED BY THE ENGINEER IN ACCORDANCE WITH MUTCD. THE SPEED DESIGNATION SHALL BE AS HIGH AS PRACTICAL AND FEASIBLE.



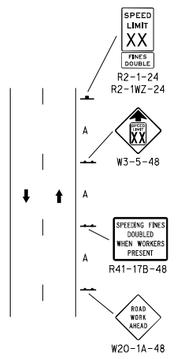
LANE CLOSED NEAR INTERSECTION
(RIGHT LANE CLOSED)



3-LANE ROADWAY
ONE LANE CLOSED



TWO-WAY LEFT TURN
LANE CLOSED



TYPICAL ADVANCED
SIGNING

REV. NO.	DATE	DESCRIPTION OF REVISION
R4	JUL 20	ADDED NOTE TO SHEET ONE
R3	JAN 19	TOOK OUT 1/2 L ON SHEET 2
R2	JAN 18	NDOR BORDER TO NDOT BORDER

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 924-R4

URBAN TRAFFIC CONTROL PLAN

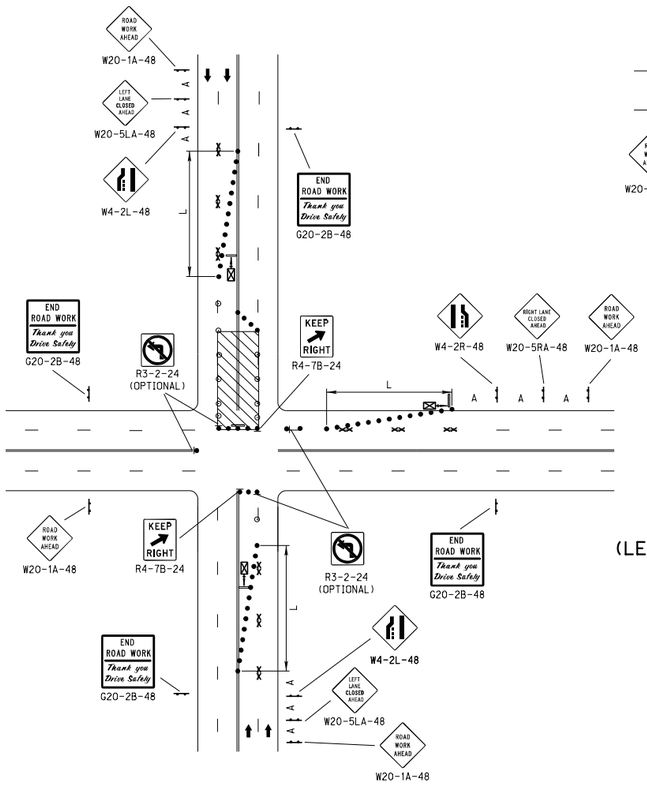
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

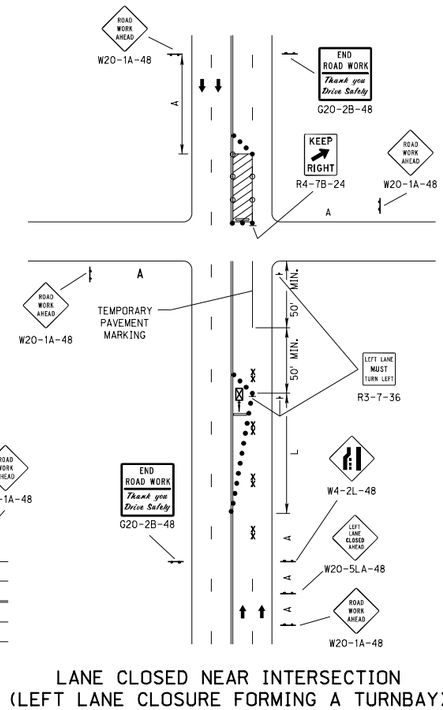
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ORIGINAL:
FEBRUARY 1, 2010
DATE

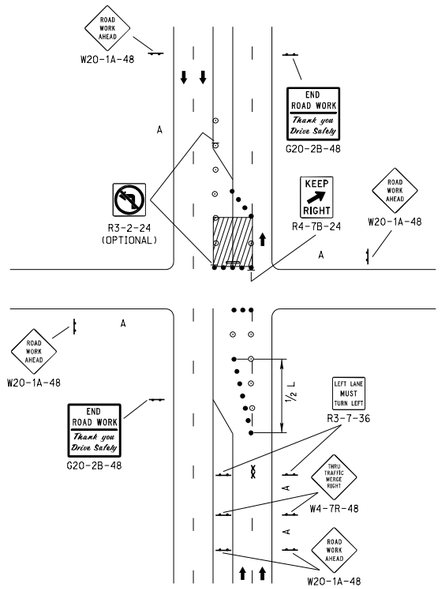
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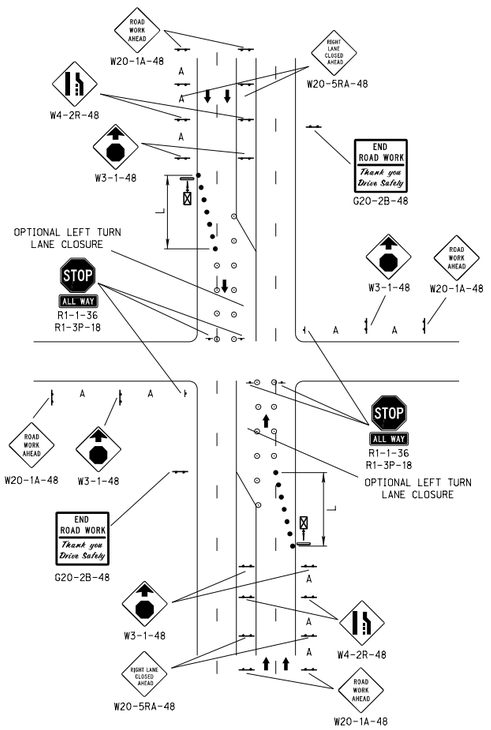
4 LANE UNDIVIDED ROADWAY
CENTER LANES CLOSED
NEAR INTERSECTION



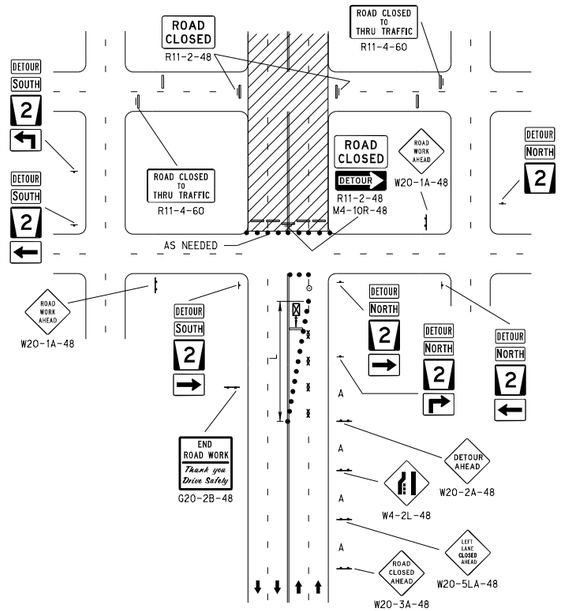
LANE CLOSED NEAR INTERSECTION
(LEFT LANE CLOSURE FORMING A TURNBAY)



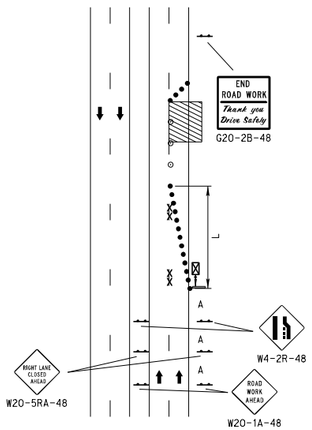
4 LANE DIVIDED ROADWAY
CENTER LANES CLOSED
NEAR INTERSECTION



TEMPORARY ALL-WAY STOP
FOR SIGNAL WORK



ROAD CLOSED AT DETOUR
(OPTIONAL LANE CLOSURE)



DIVIDED ROADWAY
ONE LANE CLOSED

ROAD TYPE	MINIMUM DISTANCE BETWEEN SIGNS
	A
URBAN (LOW SPEED - 25 MPH TO 40 MPH)	100'
URBAN (HIGH SPEED - 45 MPH OR HIGHER)	350'

LEGEND

- FLASHING ARROW PANEL
- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- TUBULAR POST
- REFLECTORIZED PLASTIC DRUM OR 42" CONE
- SINGLE POSTED SIGN
- DOUBLE POSTED SIGN
- FLAGGER
- xxxx PAVEMENT MARKING REMOVAL

TAPER FORMULA

L = S x W FOR SPEEDS OF 45 MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

WHERE:
L = MINIMUM LENGTH OF TAPER.

S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

W = WIDTH OF OFFSET (LANE WIDTH).

REV. NO.	DATE	DESCRIPTION OF REVISION
R4	JUL 20	ADDED NOTE TO SHEET ONE
R3	JAN 19	TOOK OUT 1/2 L ON SHEET 2
R2	JAN 18	NDOR BORDER TO NDOT BORDER

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 924-R4

URBAN TRAFFIC CONTROL PLAN

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

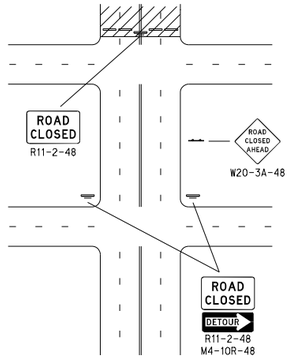
PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

DATE

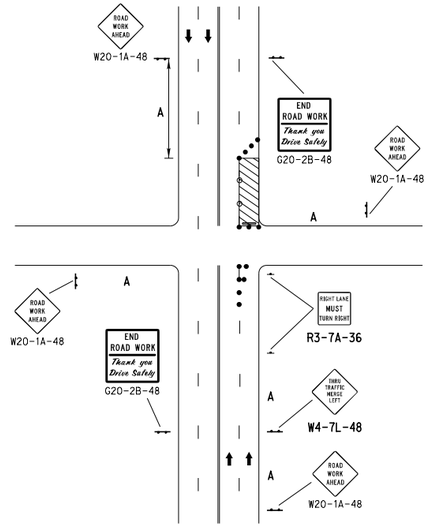
ORIGINAL:
FEBRUARY 1, 2010
DATE

2
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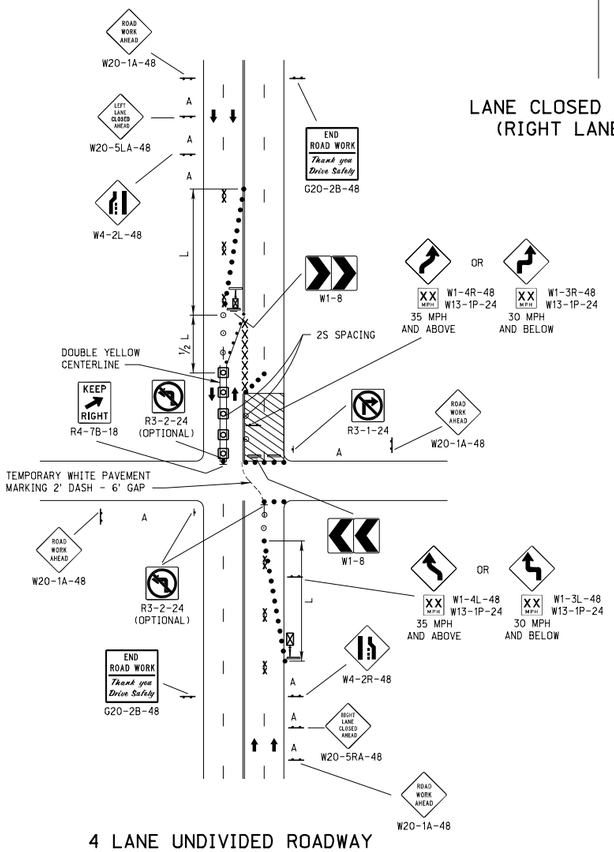
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Computer: NDOTDESIGN134



ROAD CLOSED
BEYOND DETOUR



LANE CLOSED NEAR INTERSECTION
(RIGHT LANE REMAINS OPEN)



4 LANE UNDIVIDED ROADWAY
TWO LANES CLOSED NEAR INTERSECTION

LEGEND

- FLASHING ARROW PANEL
- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- TUBULAR POST
- REFLECTORIZED PLASTIC DRUM OR 42" CONE
- SINGLE POSTED SIGN
- DOUBLE POSTED SIGN
- FLAGGER
- XXXX PAVEMENT MARKING REMOVAL

TAPER FORMULA

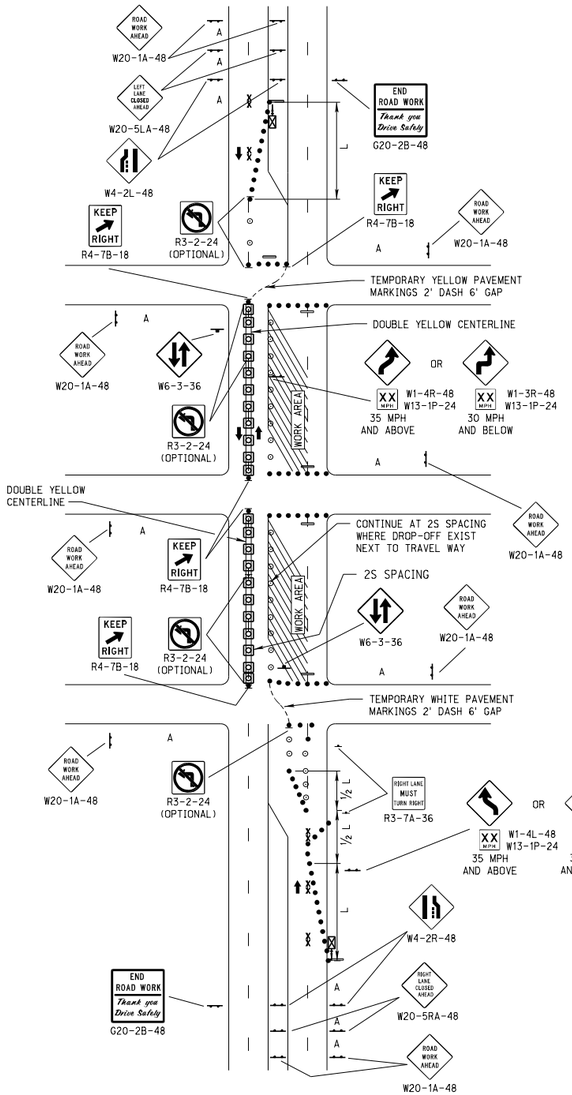
$L = S \times W$ FOR SPEEDS OF 45 MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

WHERE:
L = MINIMUM LENGTH OF TAPER.

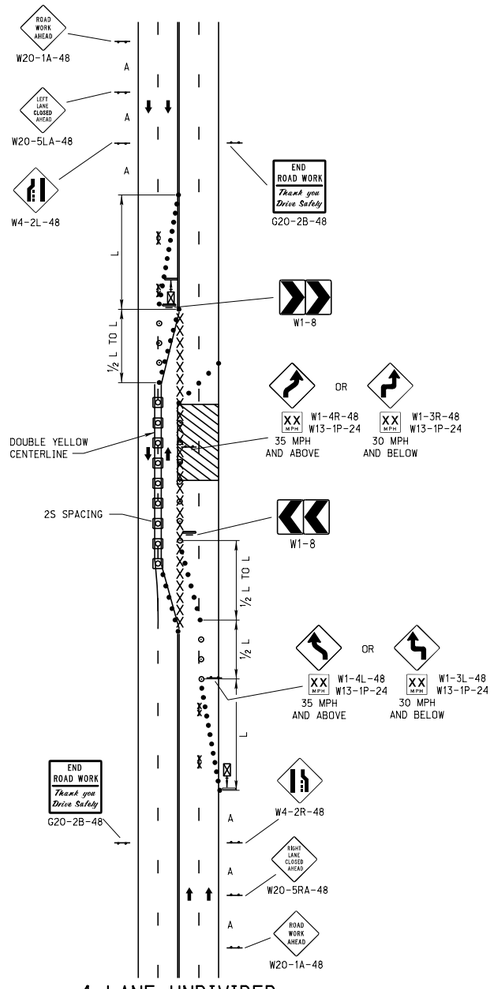
S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

W = WIDTH OF OFFSET (LANE WIDTH).



4-LANE DIVIDED
HALF CLOSED

ROAD TYPE	MINIMUM DISTANCE BETWEEN SIGNS
	A
URBAN (LOW SPEED - 25 MPH TO 40 MPH)	100'
URBAN (HIGH SPEED - 45 MPH OR HIGHER)	350'



4-LANE UNDIVIDED
2 LANES CLOSED

REV. NO.	DATE	DESCRIPTION OF REVISION
R4	JUL 20	ADDED NOTE TO SHEET ONE
R3	JAN 19	TOOK OUT 1/2 L ON SHEET 2
R2	JAN 18	NDOR BORDER TO NDOT BORDER

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 924-R4

URBAN TRAFFIC CONTROL PLAN

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

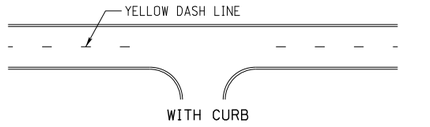
PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

DATE

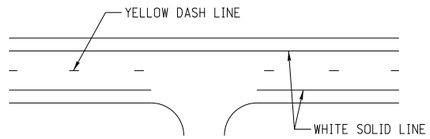
ORIGINAL:
FEBRUARY 1, 2010
DATE

File: 92400e04.dgn Date: 29-JUN-2021 09:21 Computer: NDOTDESIGN34

ROADWAY DESIGN DIVISION
Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:21
File: 941000e01.dgn

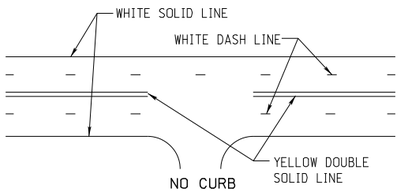


WITH CURB

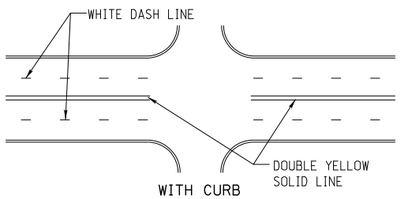


WITH SHOULDERS

2 LANE ROADWAY

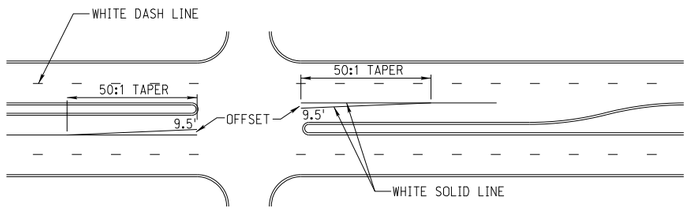


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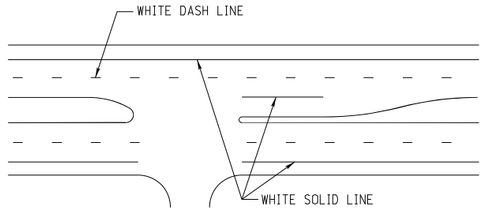


WITH CURB

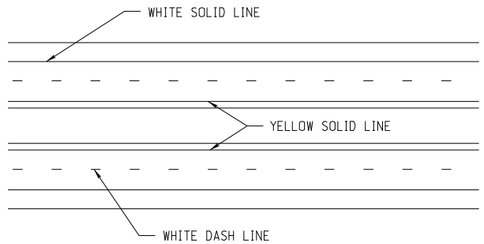
4 LANE UNDIVIDED ROADWAY



WITH CURB

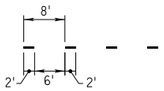


WITH SHOULDERS

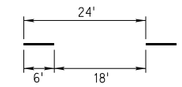


DEPRESSED MEDIAN

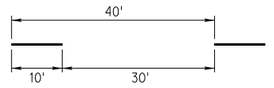
4 LANE DIVIDED ROADWAY



DOTTED LINE DETAIL

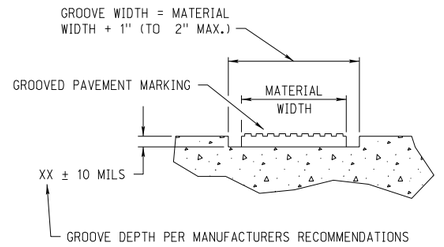


URBAN

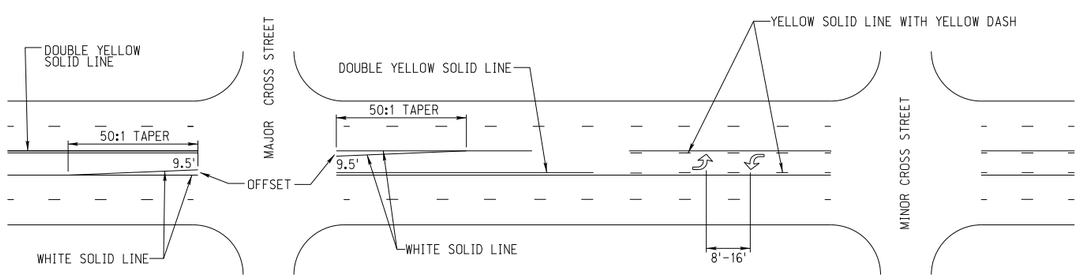


RURAL

DASH LINE DETAIL



PERMANENT PAVEMENT MARKINGS INSTALLED IN GROOVES



3 OR 5 LANE WITH TWO-WAY LEFT TURN LANE

2-LANE ROADWAY
REQUIRED LOCATION FOR EDGE LINES

ROADWAY WIDTH	SHOULDER TYPE	DISTANCE FROM CENTERLINE OF ROADWAY TO OUTSIDE EDGE OF PAVEMENT EDGELINE
LESS THAN 24 FT	SURFACED	12 FT 0 IN
LESS THAN 24 FT	EARTH	PAVEMENT EDGE
24 FT	EARTH	PAVEMENT EDGE
24 FT	SURFACED	12 FT 0 IN
GREATER THAN 24 FT	EARTH	12 FT 0 IN

REV. NO.	DATE	DESCRIPTION OF REVISION
R1	SEP 21	CHANGE 3-GUN TO 2-GUN LAYOUT

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 941-R1

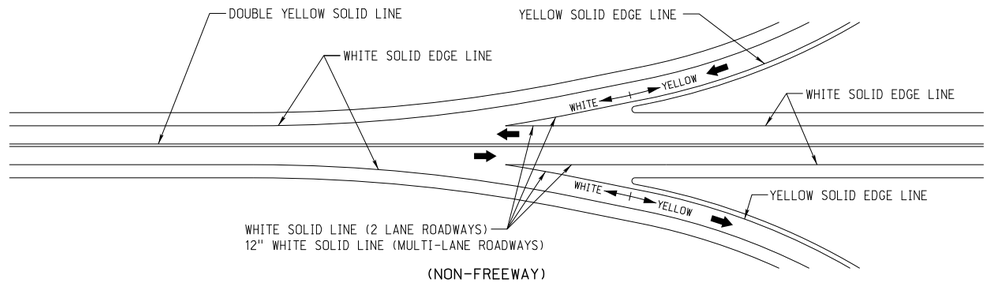
PAVEMENT MARKING

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

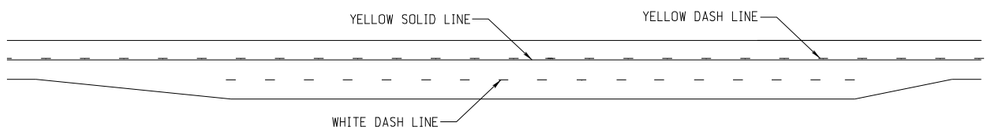
DATE

ORIGINAL:
OCT. 2018
DATE

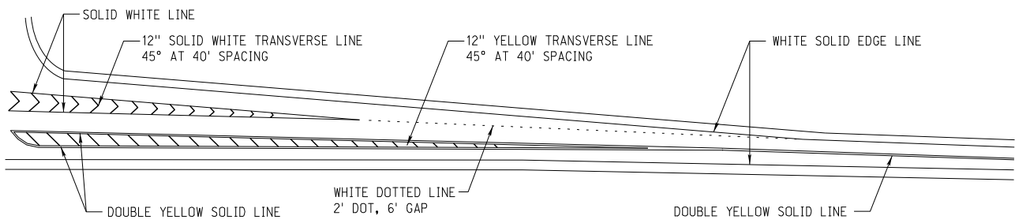


(NON-FREEWAY)

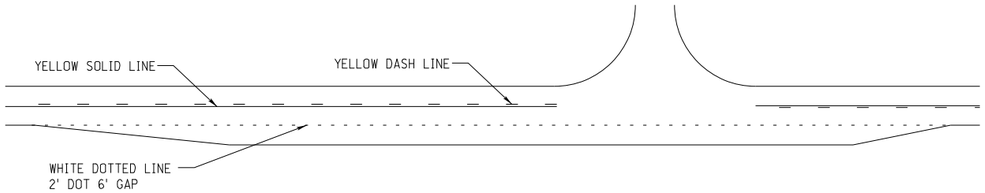
GORE MARKING



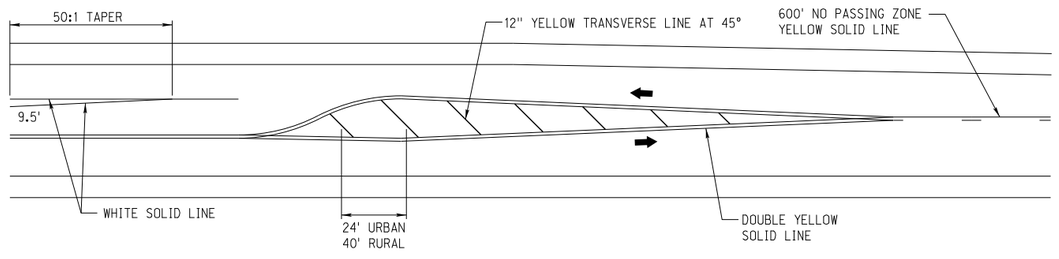
PASSING LANE MARKING



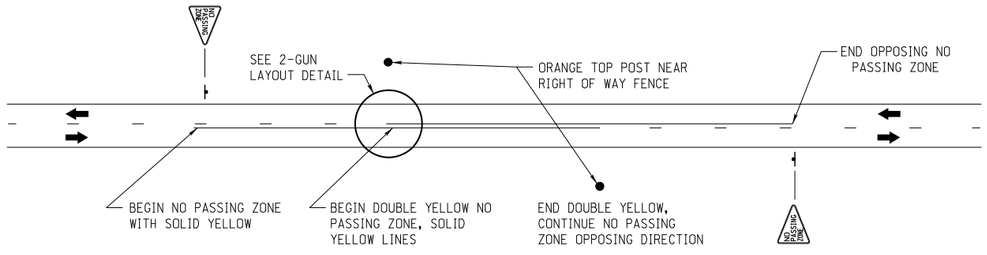
OFFSET RIGHT TURN LANE



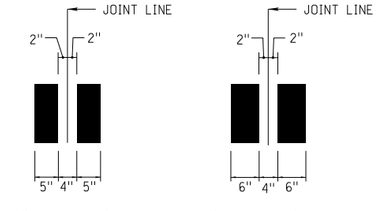
FLY-BY LANE MARKING



LEFT TURN LANE MARKING



NO PASSING ZONE MARKING



5" STRIPE WIDTH 6" STRIPE WIDTH

2-GUN LAYOUT

LEGEND

TRAFFIC FLOW

REV. NO.	DATE	DESCRIPTION OF REVISION
R1	SEP 21	CHANGE 3-GUN TO 2-GUN LAYOUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 941-R1

PAVEMENT MARKING

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

DATE

ORIGINAL: OCT. 2018

DATE

2
2

File: 941000e01.dgn
Date: 29-JUN-2021 09:21
Computer: NDOTDESIGN34

5. Consideration of Approval of a Change Order with Maguire Iron for the 500,000-Gallon Water Tower Project - City Engineer Oneby

CHANGE ORDER

No. 4

Date of Issuance: June 30, 2025 Effective Date: June 6, 2025

Project: 500,000-Gallon Water Tower	Owner: City of Seward, Nebraska	Owner's Contract No.:
Contract: Base Bid – Lump Sum		Date of Contract: May 2, 2023
Contractor: Maguire Iron, Inc.		Engineer's Project No.: 019-3180

The Contract Documents are modified as follows upon execution of this Change Order:

Description:

1. Installation of temporary site fencing. **ADD $2,150.00**
2. Adjustment of contract dates to allow for proper coating application and mural work.

Total Project Increase: $2,150.00

Attachments: Maguire CPR #5

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES
Original Contract Price: $ 3,187,600.00	Original Contract Times: Substantial Completion (days or date): June 1, 2024 Final Completion (days or date): August 1, 2024
Increase from previously approved Change Orders No. 01 to No. 03: $ 130,040.00	Increase from previously approved Change Orders No. 01 to No. 03: Substantial Completion (days or date): 378 Final Completion (days or date): 331
Contract Price prior to this Change Order: $ 3,317,640.00	Contract Times prior to this Change Order: Substantial Completion (days or date): June 13, 2025 Final Completion (days or date): June 27, 2025
Increase of this Change Order: $ 2,150.00	Increase of this Change Order: Substantial Completion (days or date): 140 Final Completion (days or date): 157
Contract Price incorporating this Change Order: $ 3,319,790.00	Contract Times with all approved Change Orders: Substantial Completion (days or date): October 31, 2025 Final Completion (days or date): December 1, 2025

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____	By: _____	By: _____
Engineer (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Title: Project Engineer	Title _____	Title: _____
Date: June 30, 2025	Date _____	Date: _____

cc: City of Seward, Maguire.
F:\2019\3001-3500\019-3180\60-Construction\02-Change Management\Change Orders\Maguire - Water Tower\Change Order 04\Seward Water Tower (Maguire) - CO#4.docx

Maguire Iron, Inc.
SINCE 1915

WATER TOWER EXPERTS

P.O. Box 1446
Sioux Falls, SD 57101
Phone: (605) 334-9749
Fax: (605) 334-9752
info@maguireiron.com

CONTRACT CHANGE ORDER

PROJECT:
Seward, NE
500,000-Gallon Water Tower

CHANGE ORDER PROPOSAL CPR #5
Change Order Amount: $2,150.00
Job Number:
Project: Seward, NE

TO:
Olsson
601 P Street, Ste 200
Lincoln, NE 68508

Maguire Iron, Inc. is pleased to offer the following changes:
Installation of a temporary fence around the water tower job site. 410' of temporary fencing for a period of 2 months. To be installed prior to July 2nd and be onsite through the end of August.

Not valid until signed by Owner and Engineer. Signatures of the Owner and Engineer indicates agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract sum was	**$3,187,600.00**
Net Change by previous change orders	**$ 130,040.00**
The Sum prior to the Change Order was	**$3,317,640.00**
The Contract will be *increased* by this Order	**$ 2,150.00**
The new Subcontract Sum will be	**$3,319,790.00**

AUTHORIZED:

OWNER:
City of Seward
142 N 7th Street
Seward, NE 68434

By _____
Title City Engineer
Date June 18, 2025

ENGINEER:
Olsson
601 P Street, Ste 200
Lincoln, NE 68508

By _____
Title Project Engineer
Date 6/18/2025

CONTRACOR:
Maguire Iron, Inc
P.O. Box 1446
Sioux Falls, SD 57101

By: _____
Title: _____
Date: _____

CITY ADMINISTRATOR'S REPORT

CITY ADMINISTRATORS REPORT – 7/1/25

The departments are working on the following projects to name a few:

- Monitoring a number of street projects including: East Seward (final items), design on East Hillcrest, drainage near Park Street & Bradford Street (punch list), Highway 15 Watermain (punch items) design of 5th and Bradford/Roberts Drainage, Design of Lindell and Jackson Reconstruction, bids of Worthmann Blvd.
- Water Tower project underway, paint coat issues have led to substantial delays. Painting has resumed.
- Worked with Kelly Hoffschneider to work on several real estate items related to the Rail Campus, tower leases, and related legal matters.
- Caselle accounting system project conversion implementation. Utility billing issues within various systems.
- Check in meeting with Building and Zoning Staff.
- Structure fire onsite oversite at 739 N. 6th Street.
- Budget follow up items. Met with department heads to get updated CIP numbers.
- Filled annual TIF Notices to Divide, review legal descriptions.
- Finalized MOU with DARI.
- NPPD Weekly Summer Demand Loading online meetings.
- Reviewed electrical needs for DARI and Rail Campus Substation with Electric Department and Olsson.
- NPPD Municipal Wholesale Customer Meeting in Grand Island.
- NEMA March 2025 Blizzard documentation review with City Clerk.
- Met with Department Heads to review recycling center proposal and planned for site updates.
- Attended the DARI groundbreaking.
- Attended the Summit Contracting Ribbon Cutting/Open House.
- Met with Black Hills regarding easements in the Seward Rail Yard.
- Prepare for water system study and plan to review vendors.
- Reviewed Aid to Construction for electrical department.
- Out of the Office afternoon of 6/20 for medical appointment.
- Out of Office for Colorado vacation 6/12 thru 6/17.

Police Department

- Allison has drug court Monday
- E911 Board meeting Thursday
- Apex Drug Testing Training Friday
- Preparing for the 4th of July

City Clerk/Human Resources/City Hall

- Work with Mike O to submit payment to state for Pump Station
- Surplus Auction – Bids due on July 3 at 10:00am
- HR Webinar on Wednesday
- DR-4868 (March Blizzard) – work on Documentation and FEMA Grants Portal
- Updating job description for Golf Course Superintendent

Water/Wastewater Department

- Disinfection, Sampling, training of 3rd RO Skid
- Remediation of area where main break occurred on North Ave and Hwy 15
- City Metering Structure for DARI site Monday meeting
- RO Startup Check In meeting Wednesday
- DMRQA-45 Study Analytes Testing

Parks and Rec/Cemetery/Golf/Pool

- 12&U Baseball tournament Friday-Saturday
- Get parks and cemeteries ready for the 4th

- Mulch bandshell
- Spraying weeds
- Funeral Thursday

Civic Center
- New irrigation system in and operating
- Elevator repaired again
- Roof issue is fixed
- Refrigerator in basement kitchen being replaced by Lee's Refrigeration
- Subcontractors are gradually getting punch list items done

Electric Department
- Hang Banners
- Replace stars on spacer cable on east side of football field
- Work on overhead 3rd and Depot Street
- Trench in primary set a transformer for Dave Weber on Cottonwood
- Check outlets around the square for the 4th of July
- NPPD Meeting in Grand Island Thursday

Street Department
- Drag Alleys
- Work Gravel Roads
- Spring Sweeping and Downtown
- Mow R.O.W

Library
- Random Reads book group Monday
- NLA Zoom meeting Monday
- Library Board agenda distributed this week
- Daily escape rooms through end of July
- Science Art on Wednesday
- Used book sale Thursday

Building Inspection/Planning Department
- Planning Commission – Public hearing notices due out Thursday 6-26 x noon. Upcoming-Rail Campus Annexation, Paved parking lot code update, Blum Major Subdivision
- Plum Creek Park – Meet with Bob C and Zach about property boundaries on south perimeter
- Hughes Brothers – Complete plan review approval
- Dari – Submitted foundation package for review to Rich Burton and the City of Seward. Update permitting.
- Roger Potratz – Solar discussion and concept
- 107 South St – Continue with property maintenance follow up with Jane Kroger as owner.
- 416 N 1st St – Shannon is cited Sandy 4-4-2025, Went to court 5-7-2025, pled not guilty, new court date 6-18-2025, no action. Genealogy Society is interested in buying and using.

Engineering
- 500k Water Tower – sandblasting and coating, approve colors, Change Order No. 4 – extension of time, US Cellular lease agreement
- WWTP Upgrade – Metering Manhole design meeting, DARI upgrade, revised SRF draft loan agreement, Resolution, incorporate NDEE comments
- DARI LLC - MOU, utilities
- Bradford Street; Park Ave – yard restoration, seeding

- Plum Creek Bridge – letter to NEMA/FEMA (ROW encumbrance)
- Rail Campus Watermain Extension Phase II – construction schedule
- East Hillcrest Drive –easements and R.O.W.
- FY2026 Budget – update cost estimates

Finance Department

- Auditor AJE for FY 23/24
- Claims
- Continue building budget spreadsheet (salaries)
- Print Utility Bills
- Timekeeping to possibly kick off August 9

Seward Wellness Center

- Landscaping work continues
- 6th grade boys 3v3
- 12U Baseball Tournament Friday-Sunday
- Freedom Run

FUTURE REQUESTS FOR COUNCIL AGENDA ITEMS OR ADMINISTRATIVE ACTION
ANNOUNCEMENT OF UPCOMING EVENTS
MOTION TO ADJOURN

I, Derek Bargmann, the duly appointed qualified and acting City Clerk of the City of Seward, Nebraska, hereby certify that the foregoing Notice of Meeting and Agenda for such meeting has been posted in the following places: Seward City Hall, Seward Memorial Library, and CityofSewardNE.gov

IN WITNESS WHEREOF, I have hereunto set my hand officially and affixed the seal of the City.

_____ _____

Derek Bargmann, City Clerk Date