CITY OF SEWARD
City Council
Regular Meeting
Agenda

Tuesday, December 2, 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, December 2, 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
ELECTION OF COUNCIL PRESIDENT
CONSENT AGENDA

1. Claims & Payables Reports

CLAIMS LIST
12/2/2025
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

8S Repair LLC	SU	67.07
ADE	RE	240.50
AKRS Equipment Inc	OI/RE	215.22
All Road Barricades Inc	SU	700.63
Amazon Capital Services Inc	MAT/SU	1,875.17
AMG Technology/NextLink	UT	103.35
Andrew Brosius	MC	410.00
Aqua-Chem Inc	SU	2,622.07
BIC Construction LLC	CI	4,314.00
Bizco Technologies	IT	12,956.81
Bound Tree Medical LLC	SU	302.76
BSN Sports LLC	EQ	1,100.00
Capital Business Systems Inc	SE	1,131.16
Cattle Bank	RI	118.71
Central States Hydraulic	RE	359.93
City Seward Buildings/Grounds	OP	4,000.00
City Seward Library Petty Cash	PF/SU	217.28
Clarion Events Inc	TR	3,635.00
Codr Plumbing & Excavating	BU	1,017.51
Constellation Newenergy Gas	UT	24.26
County Road Tire LLC	RE	379.50
Creative Product Sourcing Inc	SU	284.87
Custom Products Corporation	SU	658.03
Dan Cerny	RI	144.44
Dennis Johnson	MC	350.00
Eakes Office Solution	BU/SU	696.30
ECES Inc/Campbell Cleaning	SE	1,602.00
Farmers Coop - Seward	GS/DF	515.44
Firstar Fiber Inc	SE	415.93
G & P Development Landfill	SE	515.53
Gary Gross Auto Sales & Lease	RE	199.62

Gerhold Concrete Co Inc	GU	364.54
Grainger Inc	BU	220.23
Hansen International Truck Inc	RE	510.35
Hireright LLC	SE	301.15
Hoffschneider Law PC LLO	SE	5,000.00
Husker Electric Supply Co	SU	3,300.90
Jacob Jaeger	MC	350.00
James Moore	MC	245.00
JEO Consulting Group Inc	CI	15,635.00
Kerry Thomas	RI	175.00
Kobe Policky	MC	310.00
Last Mile Network	IT	75.30
Lincoln Winwater Works	SU/RE	1,863.94
Matheson Tri-Gas Inc	SU	81.87
Matthew Weisman	MC	425.00
Menards	MC	41.98
Meyer Automotive	RE	1,142.22
Mid-American Benefits LLC	INS	562.00
Miracle Playsystems	FA	98,848.25
NE Dept Of Health/Human Services	MC	140.00
Nebraska Public Health Env Lab	TE	154.00
Norris Public Power District	UT	1,225.67
Odeys Inc	SU	13,458.00
Olivia Halquist	MC	325.00
Olsson	CI	19,127.25
O'Reilly Automotive Inc	RE	397.02
Overhead Door Co Lincoln	SU	205.50
Pac 'N' Save Discount Foods	ML	3,784.10
Phil Stauffer	MC	435.00
Quill Corp	SU	113.08
R&R Refrigeration/Lee's	BU	229.01
Richard Mailand/Mailand's Clothing	UN	37.00
Ryan Shrum	RI	947.28
Sapp Brothers Petroleum Inc	GS	9,590.40
Schemmer Architects Engineers	CI	10,266.00
Seiler Instrument & Mfg. Co.	CI	455.00
Seth Stutzman	MC	470.00
Seward County Chamber & Development	RI	3,622.21
Seward County Clerk/Reg Deeds	SE	49.50
Sports Express	EQ	1,301.02
ST P J Supply Inc	SU	82.50
That Tuning Guy	SE	140.00
Thomas Hansmeyer	MC	305.00
Tim Hobson/Hobson Auto	RE	1,125.33

Timothy Janousek	RI		1,054.98
Titan Machinery	RE		463.71
Total Fire & Security Inc	SE		420.00
Tractor Supply	SU		341.94
Transunion Risk & Alternative	SE		100.00
Trenton Kumm	MC		435.00
U S Cellular	UT		150.35
Verizon	UT		281.64
VISA			26,881.43
SMTP2GO	IT	75.00	
MailChimp	MS	59.00	
IIMC	MS	195.00	
Amazon.com	BU/SU	2,756.81	
Air One Equipment	RE	243.42	
Walmart	SU	829.37	
Emergency Solutions	IT	163.64	
Les Lukert Conference	TR	2,530.00	
Lemony Split	MC	220.00	
The Wagon Wheel	MC	247.38	
What's the Scoop	MC	250.00	
Billies Grilled Cheese	MC	83.75	
Honest Engines	RE	1,995.95	
Seward Family Pharmacy	SU	160.00	
Nebrascut Lawn Service	SE	145.48	
Sam's Club	SU/MC	1,771.55	
FDSOA	TR	595.00	
Air Care	BU	1,082.09	
USPS	PF	133.20	
Quill	SU	346.53	
Kwik Trip	GS	56.00	
Hilton Garden Inn	TR	399.20	
Cenex-Blueline Junction	GS	46.37	
Home Depot	BU/SU	3,356.04	
Crutchfield.com	BU	349.35	
Ubiquiti Store	BU	3,212.10	
Fast Mart	SU	49.50	
Sparetime	ML	114.37	
Herpolsheimer's	RE	589.78	
Valentino's	ML	127.74	
Runza	ML	195.74	
The Webstaurant Store	SU/RE	262.03	
Dragon Palace	ML	184.34	
Office Max/Office Depot	SU	32.49	
Party America	SU	23.52	

La Carreta	ML	523.34	
Constant Contact	MC	26.00	
ForeUP	IT	686.08	
Tracfone	UT	34.28	
Adobe	IT	26.48	
Hulu	MS	107.48	
SquareSpace	AF	20.00	
Holiday Inn Kearney	TR	864.84	
True North Gear	SU	1,430.54	
Perkins Restaurant	TR	28.63	
Hampton Inn Hastings	TR	252.02	
Vulcan Industries Inc	RE		1,563.21
Wesco Distribution Inc	SU		3,848.50
Woods & Aitken LLP	SE		2,069.70
		TOTAL	**$276,221.15**

2. SCCDP Quarterly Report

PRESIDENT & CEO

QUARTERLY REPORT SUMMARY

Prepared for SCCDP Members • November 2025

- SCCDP selected for Communities for Housing program through Nebraska Investment Finance Authority (NIFA) with Seward County Housing Corporation which provides grant funding of $30,000 over a three-year period which will help facilitate launching a new Seward Co. Housing Study
- Co-hosted 2nd Annual Nebraska Tech Builders Challenge (24-hour hackathon) on September 19-20 with Concordia University and approximately 45 college and high school students competing from the region
- Hosted Connecting Young Nebraskans (CYN) Summit in Seward on September 26 with approximately 120 young professionals from across the state including a Downtown Progressive Dinner on September 25 which included welcoming community members to participate as well
- Continued efforts to build membership base for Seward County Young Professionals (SCYP) including hosting Coffee & Convos on August 21, September 18, and October 16 and conducting a podcast interview to promote SCYP
- Hosted Ag Delegation from Ghana on October 28, 2025 in partnership with Ghana-Nebraska Agribusiness Growth and Trade Relations Chamber which included visiting Southeast Community College - Milford Campus, Farmers Cooperative, Petsource, and Beck's Hybrids
- Hosted site visit on November 7 for Seward Revitalize and Thrive Partnership Program (talent recruitment and retention initiative) intern, Catie Reed engaging Seward High School and Concordia University students along with Action Team members to work on planning a new public space in town
- Collaborated with Concordia University, Nebraska (for the 6th academic year) to host the Concordia Catalyst Competition (C3), which is a business pitch event, to encourage students toward entrepreneurship including Mentor Night (Sept. 30), Semi-Finals (October 28), and Finals (November 11)
- Hosted site visit on November 12 for ag equipment research and development company to identify a building and testing acres to grow their business in Seward Co. which involves creating up to 10 new jobs
- Celebrated ribbon cuttings for DC Door Company, Plum Creek Seed Services business expansion, and groundbreaking ceremony for Parker Baby Company (August 20), Chartwells (September 17), Milford Uptown Park, Anniebel's, and Scooters new ownership (October 15)
- Hosted SCCDP Professional Development Luncheon about "Search Engine Optimization" on August 29 and SCCDP Professional Development Luncheon "Domestic Violence in Seward County" on October 9
- Attended multiple conferences including NE Chamber Economic Development Policy Council Meeting (September 24), NE Chamber Economic Development Summit (September 11), Bio Innovations Midwest (September 15-16), C4K Convening Childcare Conference - Presented about Seward County Kernels for Kids (September 17), NE Chambers Association Fall Conference (October 1-3)
- Submitted NPPD Site Readiness Assistance Pre-Application to seek grant funding for due diligence activities to support recruiting new hotel
- Seward County Digital Empowerment Center workshops have been provided in partnership with Nextlink Internet, Microsoft Airband Initiative, and Hanus Tech Solutions (August 26 on Internet Safety and September 30 on Tech Support Open Hours)
- Presentations about childcare sub pool network to various communities on August 25 and October 28 (current partners with Seward County including Lincoln County/North Platte, Norfolk, and York County); presentations to Milford Childhood Learning Center Board of Directors on September 26, Rotary Club of Seward on October 1, and Aging Partners Advisory Council about Digital Empowerment Center on October 16
- Connected resources for LB 840, TIF, grants, and/or available building and land to various business owners and brokers including companies that want to start or expand including two data center projects in Seward County, ambulance service in Seward, expanding church in Seward, music studio in Seward, veterinarian in Seward County, housing in Cordova, commercial real estate in Seward, candle business in Seward, welding company in Seward, housing in Garland, housing in Seward, truck repair business in Utica, truck repair business in Milford, energy engineering firm in Seward County, downtown building appraisals, and precision ag company in Seward County
- Since the beginning of the gift card program in July 2022, SCCDP has sold $258,782.00 in gift cards (7,791 individual cards); there are 47 participating businesses across Seward County
- Continued with consistent gains of followers/likes/shares on all of our SCCDP media platforms: Weekly electronic newsletter (Blue River Buzz - 43 new subscribers), video content in the BUZZ and the SCCDP YouTube Channel, articles in the local newspaper (Seward County Independent), Talk Seward Co. shared 5 new podcast episodes with 187 downloads in the past 90 days; posted regularly on Facebook, Instagram & TikTok photos, video, and content posts to promote workforce development/quality of life opportunities
- Continuing to work on Entrepreneurial Operating System (EOS – Vision/Traction Organizer) and 2025 Implementation Plan goals that our staff is implementing on a weekly basis to ensure SCCDP's multiple-year strategic plan is being executed

QUESTIONS OR FOLLOW UP?
CONTACT: JONATHAN JANK
402-570-8020

THANK YOU TO OUR QUARTERLY REPORT SUMMARY SPONSORS!

Cattle Bank & Trust · JonesBank · Memorial Health Care Systems · PETSOURCE

MEET THE SCCDP TEAM

PRESIDENT & CEO
Jonathan Jank



The President & CEO is the chief executive officer of the Seward County Chamber & Development Partnership (SCCDP) and directs all activities necessary to meet the objectives and implement policy, as established by the Board of Directors.
This executive position is accountable for the effective and efficient operation of all organizational activities of the SCCDP to move Seward County forward to fulfill the Vision Statement 2035. Reports to the SCCDP Board of Directors; responsible for leadership and development of professional staff members.

DIRECTOR OF MEMBERSHIP
Donna Hendrickson



The Director of Membership is responsible for working with their teammates, members, and community volunteers to accomplish the short and long-term goals of the Seward County Chamber & Development Partnership (SCCDP) related to maintaining current relationships with members while seeking new membership and sponsorship opportunities for the SCCDP. This position helps the President & CEO work to fulfill the Vision Statement 2035

DIRECTOR OF COMMUNITY AFFAIRS
Collin Hain



The Community Affairs Director is responsible for working with the Seward County Chamber & Development Partnership (SCCDP) President & CEO, members, and community volunteers to create strategies to strengthen Seward County's workforce and housing development activities and find solutions to relevant community issues. This position also leads SCCDP's legislative efforts including building relationships with elected officials and advocating for policies, regulations, and programs which benefit the Seward County business community. This position helps the President & CEO work to fulfill the Seward County Vision Statement 2035.

DIRECTOR OF MARKETING & STORYTELLING
Joanie Brecka



The Director of Marketing & Storytelling is responsible for working with their teammates, members, and community volunteers to accomplish the short and long-term goals of the Seward County Chamber & Development Partnership (SCCDP) related to marketing/communications through Facebook, Instagram, TikTok, websites, podcasting, video content creation, photography, and various print media. This position helps the President & CEO work to fulfill the Vision Statement 2035.

COORDINATOR OF EVENTS & PLACEMAKING
Tiffany Schmidt



The Coordinator of Events & Placemaking is responsible for working with the President & CEO to accomplish the short and long-term goals of the Seward County Chamber & Development Partnership (SCCDP) through coordinating all aspects of event planning and execution, developing strong relationships with existing and new SCCDP members, working with countywide stakeholders to develop a welcoming environment throughout Seward County for current/future visitors/residents, and organizing various aspects of community development projects including planning, engaging volunteers, and public space activation This position helps the President & CEO work to fulfill the Vision Statement 2035.

EXECUTIVE ASSISTANT & EXECUTIVE DIRECTOR FOR BRIDGES
Heidi Blank



The SCCDP Executive Assistant & Executive Director for Bridges is responsible for working with the President & CEO to accomplish the short and long-term goals of SCCDP through maintaining office systems and equipment including responding to general communications, helping members and visitors feel welcome, and providing administrative support as needed and working with the Board of Directors of Seward County Bridges to fulfill their mission. This position helps the SCCDP President & CEO work to fulfill the Vision Statement 2035.

3. Draft Minutes of November 18, 2025 City Council Meeting

November 18, 2025

The Seward City Council met at 7:00 p.m. on Tuesday, November 18, 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, Karl Miller, John Singleton, Matt Stryson, Rich Wergin. Councilmembers absent: Tatum Tonniges. Other officials present: City Administrator Greg Butcher, City Engineer Michael Oneby, Building/Zoning & Code Enforcement Director Tim Dworak, and Police Officer Lacy Samek.

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 $1,227,198.09)
4. Police Department Report
5. Draft Minutes of November 4, 2025, City Council Meetings
6. Mayor Appointments to Boards and Commissions:
    A. Re-Appoint Gerald "Jerry" Meyer and Clark Koehler to the Cemetery Board for a 3-Year Term
    B. Re-Appoint Larry Goldsmith and Thomas Suhr to the Tree Board for a 3-Year Term
    C. Re-Appoint Ronald Wallman and Traci Menke to the Planning Commission for a 3-Year Term
    D. Re-Appoint Mark Kolterman to the Civic Center Commission for a 3-Year Term
    E. Re-Appoint Curt Sherman and Stan Obermueller to the Citizens Advisory Review Committee for a 3-Year Term
    F. Re-Appoint Amy Harms, Jim Placke, and Brett Wobken to the Park & Recreation Board for a 3-Year Term
    G. Re-Appoint Jonathan Jank to the Rail Campus Review Committee for a 2-Year Term
    H. Re-Appoint Megan Kahler and Karl Miller to the LB840 Application Review Board for a 3-Year Term

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

PUBLIC HEARINGS

1. CONSIDERATION OF ISSUANCE OF A HOUSE MOVING PERMIT APPLICATION FOR CHAD WYTHERS, 407 SOUTH STREET

Tim Dworak stated this is a permit to move a house out of Seward and there are no issues outside of coordinating the move with all utility companies. NPPD will need two weeks to back feed high voltage line that needs to be relocated during the move. Dworak recommended an 180-day window to approve this move, given the coordination needs.

The public hearing was opened at 7:04 p.m. With no public comment received, it was closed at 7:05 p.m.

Councilmember Singleton moved, seconded by Councilmember Stryson, to approve the issuance of a house moving permit application for Chad Wythers, 407 South Street with a 180-day window to complete the move.

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

2. CONSIDERATION OF AN ORDINANCE APPROVING THE PRELIMINARY AND FINAL PLAT OF PRAIRIE VIEW 1ST ADDITION

Tim Dworak indicated this is the second phase of the addition and sits within the city limits. The subdivision agreement has a few modifications including the allowance of a 6-inch water main within the addition, which has been reviewed and approved by the City Engineer and Water Director. Planning Commission unanimously recommended the approval of the preliminary and final plat. Councilmember Singleton mentioned to Brandon Bartek with Olsson the need to clean out the retention pond better.

The public hearing was opened at 7:09 p.m. With no public comment received, it was closed at 7:09 p.m.

Councilmember Francescato introduced Ordinance No. 2025-30. Councilmember Wergin moved, seconded by Councilmember Kahler to dispense with the statutory rule.

Aye: Francescato, Kahler, Kolterman, Miller, Singleton, Stryson, Wergin.

Nay: None. Absent: Tonniges. Motion carried.

Councilmember Stryson 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. 2025-30**, AN ORDINANCE TO APPROVE THE PLAT ENTITLED "PRAIRIE VIEW 1ST ADDITION", A PLAT OF LAND LOCATED IN THE SE1/4 OF THE SW1/4 AND A PORTION OF THE SW1/4 OF THE SW1/4 OF SECTION 22, TOWNSHIP 11 NORTH, RANGE 3 EAST OF THE 6TH P.M., SEWARD COUNTY, NEBRASKA, " AS HEREINAFTER SET FORTH; TO PROVIDE FOR PUBLICATION OF THIS ORDINANCE IN PMPHLET FORM; TO PROVIDE FOR A TIME WHEN THIS ORDINANCE SHALL TAKE EFFECT.

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

Councilmember Miller moved, seconded by Councilmember Kahler, that all ordinances be added to the permanent record.

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

ADMINISTRATIVE ITEMS

1. CONSIDERATION OF A LONG-TERM LEASE WITH SEWARD PUBLIC SCHOOLS FOR PLUM CREEK MEMORIAL FIELD

City Administrator Greg Butcher stated this is a long-term lease from the City of Plum Creek Memorial Field to Seward Public Schools. The Park & Recreation Board discussed the terms of the lease and unanimously approved the lease to forward to council. Mayor Eickmeier stated the City has a good working relationship with the schools and if needed the contract can be revisited.

Councilmember Kolterman moved, seconded by Councilmember Wergin, to approve a long-term lease with Seward Public Schools for Plum Creek Memorial Field.

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

2. CONSIDERATION OF A RESOLUTION PERMITTING THE MAYOR TO SIGN AN AGREEMENT FOR ELECTRIC UTILITY RELOCATION IN ADVANCE OF NDOR PROJECT NUMBER BRO-7080(56) HILLCREST BRIDGE

City Engineer Mike Oneby reported this would be the bridge on East Hillcrest leading out to Bluff Road. This bridge project is eligible for complete federal funding. One requirement, the city must enter an agreement with any utilities that need to relocate. The electric utility lines near the project are owned by the City. The City will move these lines as part of the project. All utility relocations are the responsibility of the utility. The agreement between the local agency (City) and the utility (also City) is a formality.

Councilmember Kolterman introduced **Resolution No. 2025-37**. Councilmember Wergin moved, seconded by Councilmember Stryson, to permit the Mayor to sign an agreement for electric utility relocation in advance of NDOR project number BRO-7080(56) Hillcrest Bridge.

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

3. CONSIDERATION OF AN AGREEMENT WITH JEO CONSULTING GROUP, INC. FOR SEWARD WATER SYSTEM FIELD DATA COLLECTION IN THE AMOUNT OF $26,500

Mr. Oneby indicated the samples needed for analysis must be taken in specific weather conditions, and only a few days left this year to complete the assignment. Councilmember Kolterman noted this would be good information to have on hand as new industries look to Seward.

Councilmember Kolterman moved, seconded by Councilmember Francescato, to sign an agreement with JEO Consulting Group, INC. for Seward Water System Field Data Collection in the amount of $26,500.

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

4. CONSIDERATION TO DESIGNATE MICHAEL ONEBY, LICENSE #E-17257, AS CITY STREET SUPERINTENDENT FOR NDOT PROGRAMMING REQUIREMENTS AND INCENTIVE PAYMENTS, EFFECTIVE JANUARY 1, 2026.

Mr. Butcher indicated the language needed is a technicality and would be for the year to come starting in January,

using specific wording as listed.

Councilmember Kahler moved, seconded by Councilmember Singleton, to designate Michael Oneby as City Street Superintendent for NDOT programming requirements and incentive payments, effective January 1, 2026.

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

CITY ADMINISTRATOR'S REPORT

Councilmember Kolterman moved, seconded by Councilmember Francescato, that the City Administrator's report of November 18, 2025, be accepted.

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

MOTION TO ADJOURN

Councilmember Singleton moved, seconded by Councilmember Stryson, that the November 18, 2025, City Council Meeting be adjourned.

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

Adjourned approximately 7:33 p.m.

THE CITY OF SEWARD, NEBRASKA

_____
Joshua Eickmeier, Mayor

_____
Derek Bargmann, City Clerk

4. Mayor Appointments to Board and Commissions:
   A. Re-Appoint Dan Brumm as Assistant Fire Chief of the Seward Volunteer Fire Department for a 2-Year Term
   B. Appoint Brent Royuk (Replaces Ben Hughes) to Cemetery Board for Remainder of Term
   C. Re-Appoint Brad Perdue to the Housing Authority Board for a 3-Year Term

ADMINISTRATIVE ITEMS

1. Authorization to Advertise for Public Bids for the Worthman Boulevard Water Main Phase III Project - City Engineer Oneby

SCHEMMER

Design with Purpose. Build with Confidence.

Project: Worthman Blvd Water Main
Phase III Cost Estimate
Job No.: SCHEMMER 09336001-D

WORTHMAN BOULEVARD WATER MAIN PHASE III - 100% OPINION OF PROBABLE CONSTRUCTION COSTS

COMPUTED BY: Megan Starner DATE: 10/27/2025

CHECKED BY: Alex Roth DATE: 10/27/2025

UPDATES: DATE:

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
0030.00	MOBILIZATION (8%)	1	LS	$20,000.00	$20,000.00
0005.01	TRAFFIC CONTROL	1	LS	$6,000.00	$6,000.00
1009.00	GENERAL CLEARING AND GRUBBING	1	LS	$3,500.00	$3,500.00
1101.00	REMOVE PAVEMENT	17	SY	$15.00	$261.67
1995.00	STABILIZED CONSTRUCTION EXIT	1	EA	$4,000.00	$4,000.00
7151.00	REMOVE AND RESET FENCE	30	LF	$15.00	$450.00
2010.33	CRUSHED ROCK SURFACE COURSE	54	TON	$70.00	$3,806.22
3075.32	8" CONCRETE PAVEMENT, CLASS 47B-3500	73	SY	$105.00	$7,630.00
	CLASS 47B-3000 CONCRETE FOR HEADER	2	CY	$500.00	$1,000.00
9173.20	SUBGRADE PREPARATION	93	SY	$5.00	$464.44
L001.02	SEEDING, TYPE B	0.48	AC	$1,450.00	$694.55
L019.13	EROSION CONTROL, CLASS 1D	2,314	SY	$3.50	$8,099.00
L022.11	FABRIC SILT FENCE-LOW POROSITY	1,261	LF	$3.00	$3,783.00
	REMOVE 16" PLUG	1	EA	$400.00	$400.00
W800.21	REMOVE WATER MAIN PIPE, 14"	12	LF	$25.00	$300.00
W800.21	REMOVE WATER MAIN PIPE, 16"	30	LF	$50.00	$1,500.00
W205.16	16" WATER MAIN PIPE	173	LF	$150.00	$25,950.00
	RESTRAINED JOINT WATER MAIN PIPE, 16"	12	LF	$300.00	$3,600.00
	SMOOTH STEEL CASING, BORED IN PLACE, 30"	90	LF	$1,000.00	$90,000.00
	14" SOLID SLEEVE, M.J.	2	EA	$500.00	$1,000.00
	16" SOLID SLEEVE, M.J.	2	EA	$500.00	$1,000.00
	16"X45 DEG BEND	4	EA	$1,400.00	$5,600.00
	16"X90 DEG BEND	1	EA	$1,800.00	$1,800.00
	16" GATE VALVE (PROVIDED BY CITY OF SEWARD)	4	EA	$0.00	$0.00
	16"x14" REDUCER, M.J.	2	EA	$1,100.00	$2,200.00
W356	16"X16" TEE	1	EA	$2,750.00	$2,750.00
	16" RETAINER GLAND	27	EA	$350.00	$9,450.00
	14" RETAINER GLAND	2	EA	$300.00	$600.00
	CONC FOR THRUST BLOCKS AND ANCHORAGES	16.8	C.Y.	$450.00	$7,578.00
	STEEL FOR THRUST BLOCKS AND ANCHORAGES	520.3	LBS	$2.50	$1,300.75
4054.65	TEMPORARY SHORING	800	SF	$75.00	$60,000.00
	SUBTOTAL CONSTRUCTION				$274,717.63
	CONSTRUCTION CONTINGENCIES (15% OF CONSTRUCTION)				$41,207.64
	TOTAL CONSTRUCTION COST				**$315,925.28**
	BNSF RAILWAY FEES AND INSURANCE	1	LS	$5,200.00	$5,200.00
	BNSF RAILWAY FLAGGER	1	LS	$35,000.00	$35,000.00
ROW (Approximate Impacts and Costs)					.
	TEMPORARY EASEMENT (ACCESS ONLY)	22,445.84	SF	$0.00	$0.00
	TEMPORARY EASEMENT (DISTURBED AREA)	21,515.19	SF	$0.50	$10,757.60
	PERMANENT EASEMENT	0	SF	$0.00	$0
	TOTAL RIGHT-OF-WAY COSTS				**$10,758**
	CONSTRUCTION ENGINEERING & INSPECTION	**13%**			**$41,070.29**
	GRAND TOTAL				**$367,753.16**

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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
SCHEMMER NO. 09336001-D	A1

PLANS FOR CONSTRUCTION

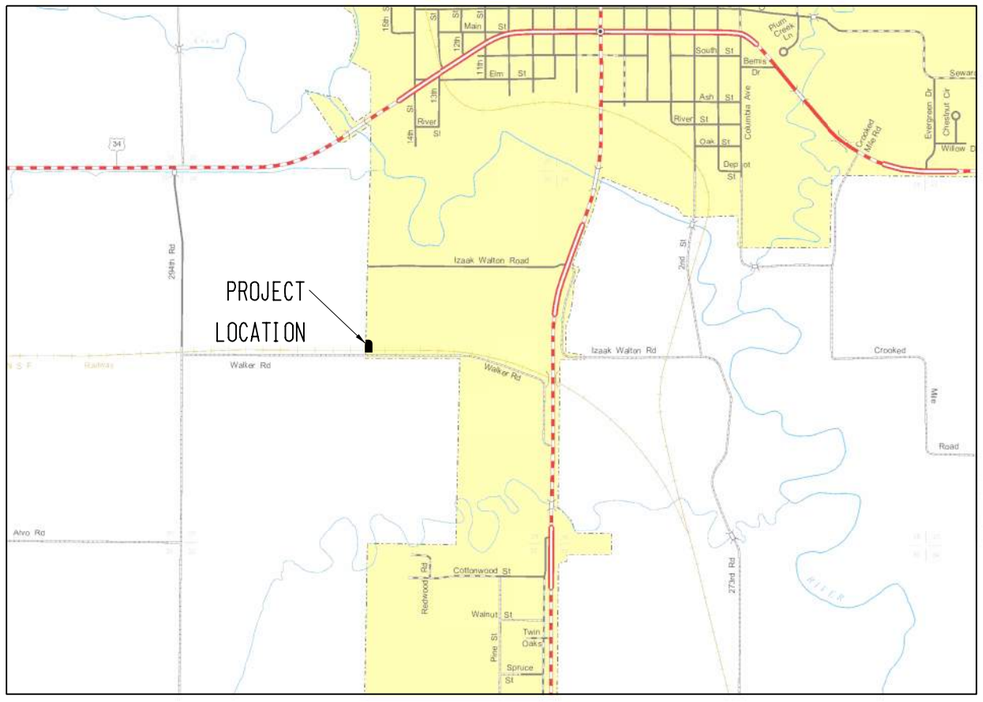
WORTHMAN BOULEVARD WATER MAIN
PHASE III
CITY OF SEWARD

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
A1	TITLE SHEET
C1	SUMMARY OF QUANTITIES
F1	HORIZONTAL ALIGNMENT AND CONTROL POINTS
G1	GENERAL INFORMATION
G2	CONTRACTOR ACCESS
J1	CONSTRUCTION AND REMOVAL
J2	EROSION CONTROL
K1 - K5	WATER MAIN
M1	TRAFFIC CONTROL
W1	RIGHT-OF-WAY

STD. PLAN NO.	DESCRIPTION
329	8 TO 16 INCH CONCRETE PAVEMENT
501	EROSION CONTROL
920	TRAFFIC CONTROL, CONSTRUCTION & MAINTENANCE
923	TRAFFIC CONTROL ROAD CLOSURE
924	URBAN TRAFFIC CONTROL PLAN

LINCOLN STD. PLAN NO.	DESCRIPTION
185	PIPE BEDDING
301	WATER MAIN RECONSTRUCTION
310	WATER MAIN VALVE MANHOLES, AIR RELIEFS AND BLOW OFFS
320	R.C. COLLARS, THRUST BLOCKS, ANCHORAGES, TEE BLOCKS AND PLUG BLOCKS
325	TRACER WIRE INSTALLATION



ALL NON-WATER MAIN CONSTRUCTION SHALL ADHERE TO THE 2017 ENGLISH EDITION OF THE NEBRASKA STANDARD SPECIFICATIONS.

ALL WATER MAIN CONSTRUCTION SHALL ADHERE TO THE SPECIAL PROVISIONS.

THE WORK ON THIS PROJECT CONSISTS OF GROUPS
1-GRADING, 3-SURFACING, L-EROSION CONTROL, W-WATER

◣ GROUPS 1, 3, L, W ARE INCLUDED IN THE LETTING OF _____

▲ GROUPS _____ ARE INCLUDED IN THE LETTING OF _____

■ GROUPS _____ ARE INCLUDED IN THE LETTING OF _____

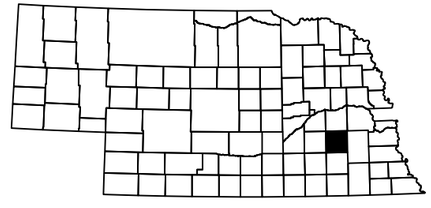
PLANS PREPARED BY:
THE SCHEMMER ASSOCIATES, INC.
333 S. 21ST STREET, SUITE 102
LINCOLN, NE 68510

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
10-27-2025
STATE OF NEBRASKA

SEWARD CITY
APPROVED:
DATE

SUMMARY OF QUANTITIES

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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-D	C1

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 27-OCT-2025 14:01
Computer: LINMEGANS

File: 09336001 Water Main Phase 3 Summary of Quantities.dgn
Scale: 1:40

GRADING
GROUP I

ITEM	QUANTITY	UNITS
MOBILIZATION	1	LUMP SUM
TRAFFIC CONTROL	1	LUMP SUM
GENERAL CLEARING AND GRUBBING	1	LUMP SUM
REMOVE PAVEMENT	17	SQUARE YARDS
STABILIZED CONSTRUCTION EXIT	1	EACH
REMOVE AND RESET FENCE	30	LINEAL FEET

SURFACING
GROUP 3

ITEM	QUANTITY	UNITS
CRUSHED ROCK SURFACE COURSE	54	TON
8" CONCRETE PAVEMENT, CLASS 47B-3500	73	SQUARE YARDS
CLASS 47B-3000 CONCRETE FOR HEADER	2	CUBIC YARDS
SUBGRADE PREPARATION	93	SQUARE YARDS

EROSION CONTROL
GROUP L

ITEM	QUANTITY	UNITS
SEEDING, TYPE B	0.48	ACRES
EROSION CONTROL, CLASS 1D	2,314	SQUARE YARDS
FABRIC SILT FENCE - LOW POROSITY	1,261	LINEAL FEET

WATER MAIN
GROUP W

ITEM	QUANTITY	UNITS
REMOVE 16" PLUG	1	EACH
REMOVE WATER MAIN, 14"	12	LINEAL FEET
REMOVE WATER MAIN, 16"	30	LINEAL FEET
16" WATER MAIN PIPE	173	LINEAL FEET
RESTRAINED JOINT WATER MAIN PIPE, 16"	12	LINEAL FEET
SMOOTH STEEL CASING, BORED IN PLACE, 30"	90	LINEAL FEET
14" SOLID SLEEVE, M.J.	2	EACH
16" SOLID SLEEVE, M.J.	2	EACH
16" X 45 DEG BEND, M.J.	4	EACH
16" X 90 DEG BEND, M.J.	1	EACH
16" GATE VALVE, M.J. (PROVIDED BY CITY OF SEWARD)	4	EACH
16" X 14" REDUCER, M.J.	2	EACH
16" X 16" TEE, M.J.	1	EACH
16" RETAINER GLAND	27	EACH
14" RETAINER GLAND	2	EACH
CONCRETE FOR THRUST BLOCKS AND ANCHORAGES	16.8	CUBIC YARDS
STEEL FOR THRUST BLOCKS AND ANCHORAGES	520.3	POUNDS
TEMPORARY SHORING	800	SQUARE FEET

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
10-27-2025
STATE OF NEBRASKA

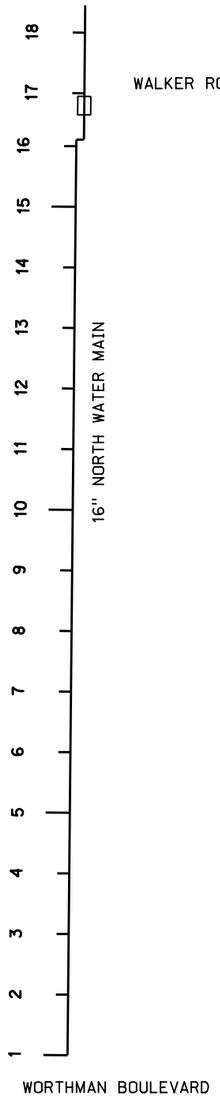
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-D	F1

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 27-OCT-2025 13:23
Computer: LINMEGANS

File: 09336001 Water Main Phase 3 Horz & Vert Control.dgn
Scale: 1:250



Beginning chain NORTH_WATER description

Point 154	N	80,215.675	E	88,226.695	Sta 1+00.00
Course from 154 to 155 N 0° 32' 58" E Dist 400.000					
Point 155	N	80,615.657	E	88,230.531	Sta 5+00.00
Course from 155 to 156 N 0° 32' 58" E Dist 800.000					
Point 156	N	81,415.620	E	88,238.203	Sta 13+00.00
Course from 156 to 157 N 0° 32' 58" E Dist 311.000					
Point 157	N	81,726.606	E	88,241.186	Sta 16+11.00
Course from 157 to 158 S 89° 40' 23" E Dist 12.501					
Point 158	N	81,726.534	E	88,253.687	Sta 16+23.50
Course from 158 to 159 N 0° 32' 38" E Dist 65.012					
Point 159	N	81,791.544	E	88,254.304	Sta 16+88.51
Course from 159 to 160 N 0° 32' 38" E Dist 156.433					
Point 160	N	81,947.969	E	88,255.788	Sta 18+44.95

Ending chain NORTH_WATER description

GEOPAK ALIGNMENT INFORMATION		
ALIGNMENT	CHAIN	PROFILE
16" NORTH WATER MAIN	NORTH_WATER	WATER_N_PRO



HORIZONTAL ALIGNMENT & CONTROL

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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-D	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

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	MOISTURE REQUIREMENTS 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 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.

The Contractor shall not enter BNSF premises or commence construction unless accompanied by a BNSF representative, the Scheduling Agent, or its designee. The Contractor shall notify the BNSF representative or Scheduling Agent at ROWCoordinator@BNSF.com at least ten (10) business days prior to installation of the pipeline or entering BNSF premises.

The Contractor shall only use public roadways to cross from one side the BNSF tracks to the other.

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
10-24-2025
STATE OF NEBRASKA

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 27-OCT-2025 13:23
Computer: LINMEGANS

File: 09336001 Water Main Phase 3 General Information.dgn
Scale: 1:200

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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-D	G2

0 75' 150'
SCALE



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
10-27-2025
STATE OF NEBRASKA

CONTRACTOR ACCESS

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 27-OCT-2025 13:23
Computer: LINMEGANS

File: 09336001 PT01-Phase 3.dgn
Scale: 1:150

ROADWAY DESIGN DIVISION.

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PROJECT NO.	SHEET NO.
09336001-D	J1

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 27-OCT-2025 13:23
Computer: LINMEGANS

File: 09336001 CR01-Phase 3.dgn
Scale: 1:20

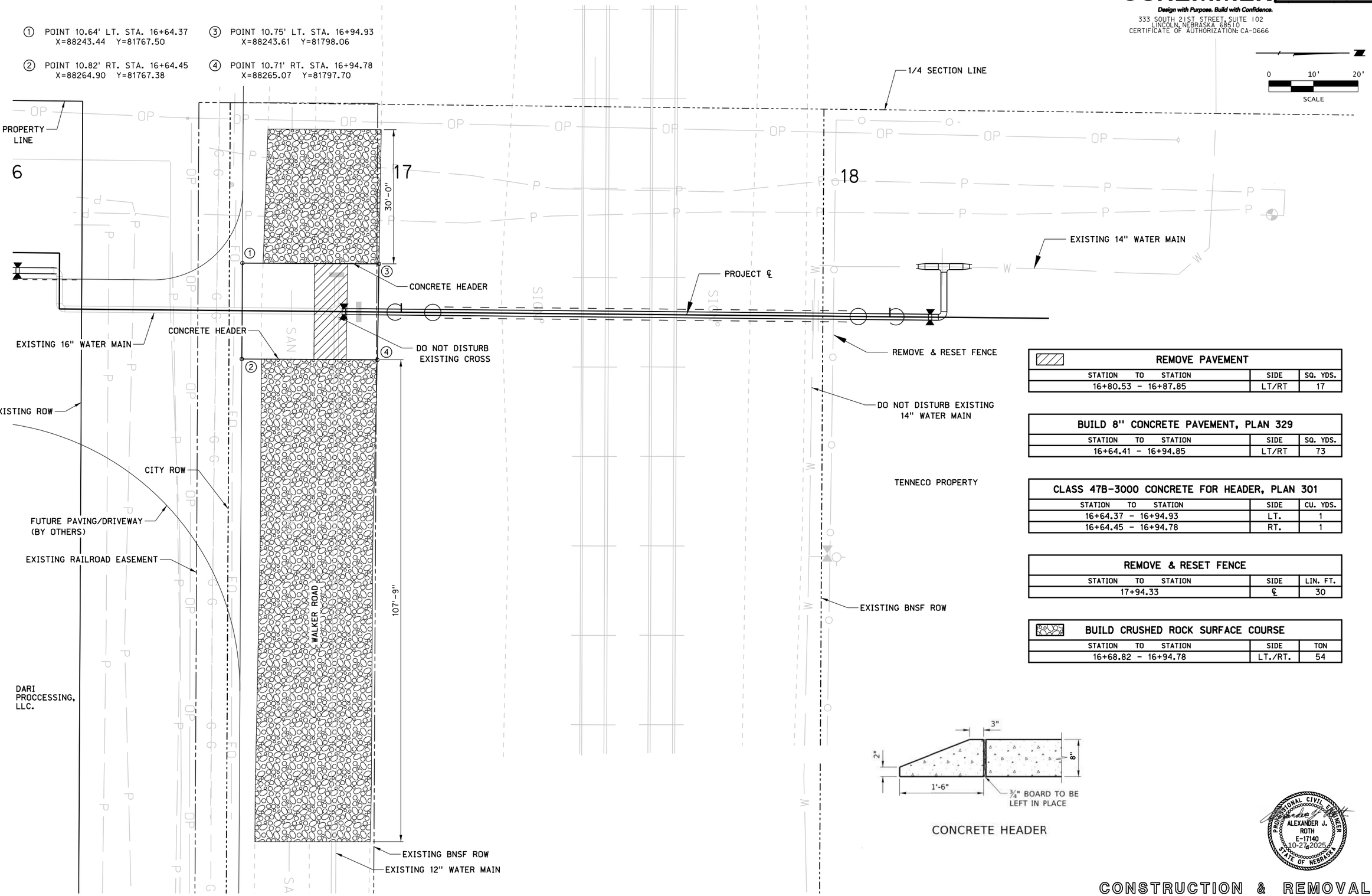
① POINT 10.64' LT. STA. 16+64.37
X=88243.44 Y=81767.50

② POINT 10.82' RT. STA. 16+64.45
X=88264.90 Y=81767.38

③ POINT 10.75' LT. STA. 16+94.93
X=88243.61 Y=81798.06

④ POINT 10.71' RT. STA. 16+94.78
X=88265.07 Y=81797.70

0 10' 20'
SCALE



REMOVE PAVEMENT		
STATION TO STATION	SIDE	SQ. YDS.
16+80.53 - 16+87.85	LT/RT	17

BUILD 8" CONCRETE PAVEMENT, PLAN 329		
STATION TO STATION	SIDE	SQ. YDS.
16+64.41 - 16+94.85	LT/RT	73

CLASS 47B-3000 CONCRETE FOR HEADER, PLAN 301		
STATION TO STATION	SIDE	CU. YDS.
16+64.37 - 16+94.93	LT.	1
16+64.45 - 16+94.78	RT.	1

REMOVE & RESET FENCE		
STATION TO STATION	SIDE	LIN. FT.
17+94.33	℄	30

BUILD CRUSHED ROCK SURFACE COURSE		
STATION TO STATION	SIDE	TON
16+68.82 - 16+94.78	LT./RT.	54

CONCRETE HEADER

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ALEXANDER J. ROTH
E-17140
10-27-2025
STATE OF NEBRASKA

CONSTRUCTION & REMOVAL

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CERTIFICATE OF AUTHORIZATION: CA-0666

1D	BUILD EROSION CONTROL-CLASS 1D, PLAN 501				
STATION	TO STATION	SIDE	DESCRIPTION	WIDTH	SQ. YDS.
VARIES		LT./RT.	AREAS OF DISRUPTION	VARIES	2270

—x—	BUILD FABRIC SILT FENCE-LOW POROSITY, PLAN 502			
STATION	TO STATION	SIDE	DESCRIPTION	LIN. FT.
17+14.60		LT./RT.	AT TOE OF FORESLOPE	108
VARIES		LT./RT.	2' OUTSIDE DISTURBED AREA	803
ALONG WALKER ROAD		RT.	AROUND PERIMETER OF EXCAVATION STOCKPILE	216

SEEDING, TYPE "B"	0.47 ACRES

0 20' 40'
SCALE

1/4 SECTION LINE
BORE PIT AREA
BORE PIT AREA
PROPOSED PAVING/DRIVEWAY
50'
50'
EXCAVATION STOCKPILE LOCATION
20' WIDE CONTRACTOR ACCESS DRIVE
TENNECO PROPERTY
EXISTING 12" WATER MAIN
EXISTING BNSF ROW
EXISTING BNSF ROW
80'
EXCAVATION STOCKPILE LOCATION
20'
CITY ROW
EXISTING RAILROAD EASEMENT
WALKER ROAD
6
17
18
1D

ALEXANDER J. ROTH
E-17140
10-27-2025
PROFESSIONAL CIVIL ENGINEER
STATE OF NEBRASKA

EROSION CONTROL

ROADWAY DESIGN DIVISION.
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 27-OCT-2025 13:23
Computer: LINMEGANS
File: 09336001 PC01-Phase 3.dgn
Scale: 1:40

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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-D	K1
C.N.	

0 20' 40'
SCALE

REMOVE WATER MAIN

STATION	TO	STATION	SIDE	SIZE	L.F.
1+00.00	–	1+09.25	℄	16"	10

WATER MAIN

NO.	STATION	TO	STATION	SIDE	SIZE	L.F.
1	1+00.00	–	1+09.25	℄	16"	10

WATER VALVE

NO.	STATION	OFFSET	DESCRIPTION
1	1+06.00	℄	1 – 16" GATE VALVE, M.J. 2 – 16" RETAINER GLANDS

NOTE: 16" GATE VALVES PROVIDED BY THE CITY OF SEWARD

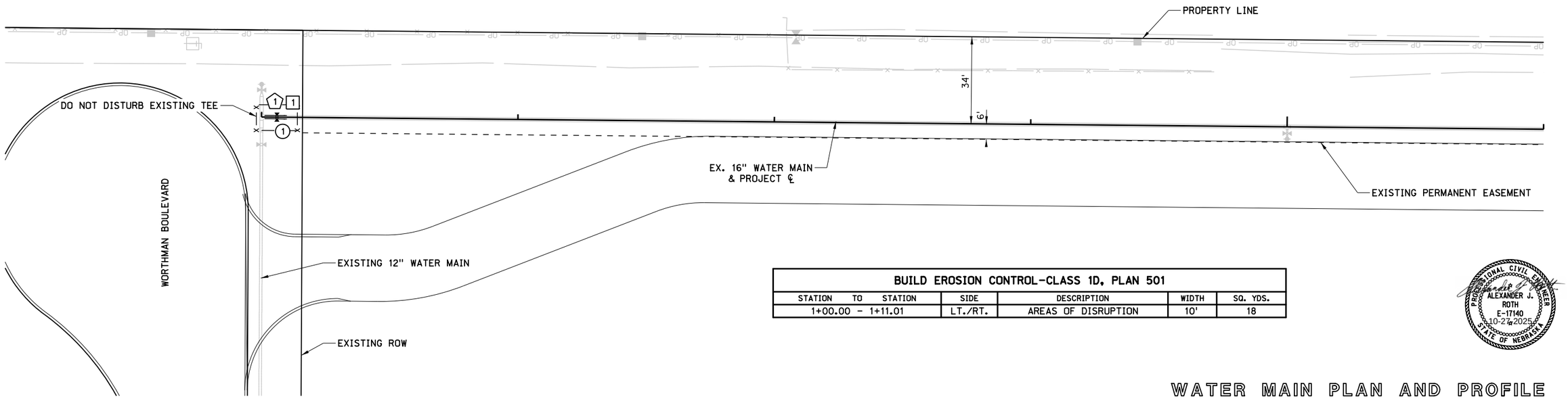
SEEDING, TYPE "B" 0.004 ACRES

DUCTILE IRON WATER MAIN FITTINGS, M.J.

NO.	STATION	OFFSET	DESCRIPTION
1	1+09.25	℄	1 – 16" SOLID SLEEVE, M.J. 2 – 16" RETAINER GLAND

BUILD FABRIC SILT FENCE-LOW POROSITY, PLAN 502

STATION	TO	STATION	SIDE	DESCRIPTION	LIN. FT.
1+00.00	–	1+11.01	LT./RT.	IN ALL DISTURBED AREAS	70

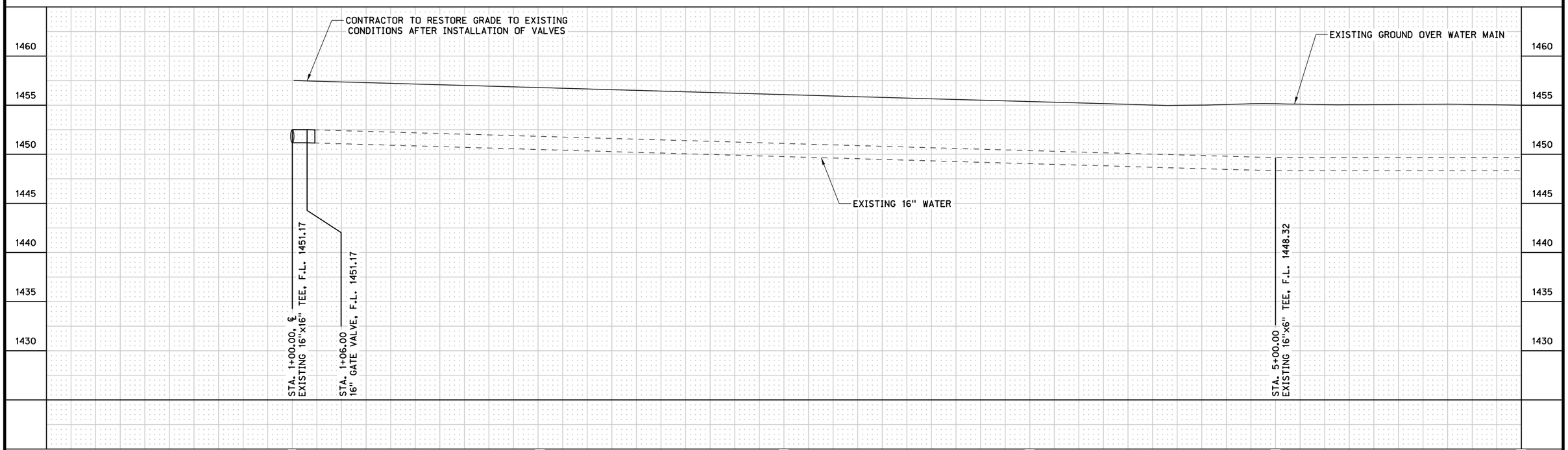


BUILD EROSION CONTROL-CLASS 1D, PLAN 501

STATION	TO	STATION	SIDE	DESCRIPTION	WIDTH	SQ. YDS.
1+00.00	–	1+11.01	LT./RT.	AREAS OF DISRUPTION	10'	18

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
10-27-2025
STATE OF NEBRASKA

WATER MAIN PLAN AND PROFILE



File: 09336001 PW01-Phase 3.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 27-OCT-2025 13:24 Computer: LINMEGANS

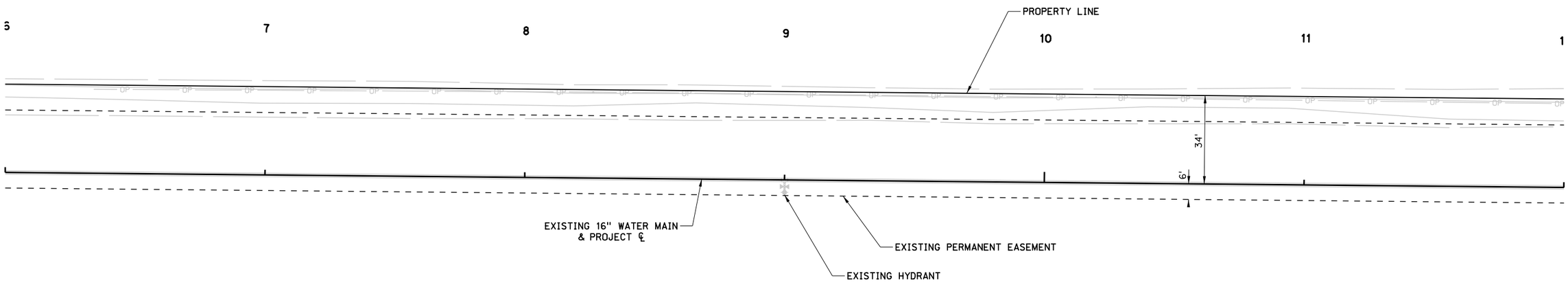
ROADWAY DESIGN DIVISION.

SCHEMMER
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-D	K2

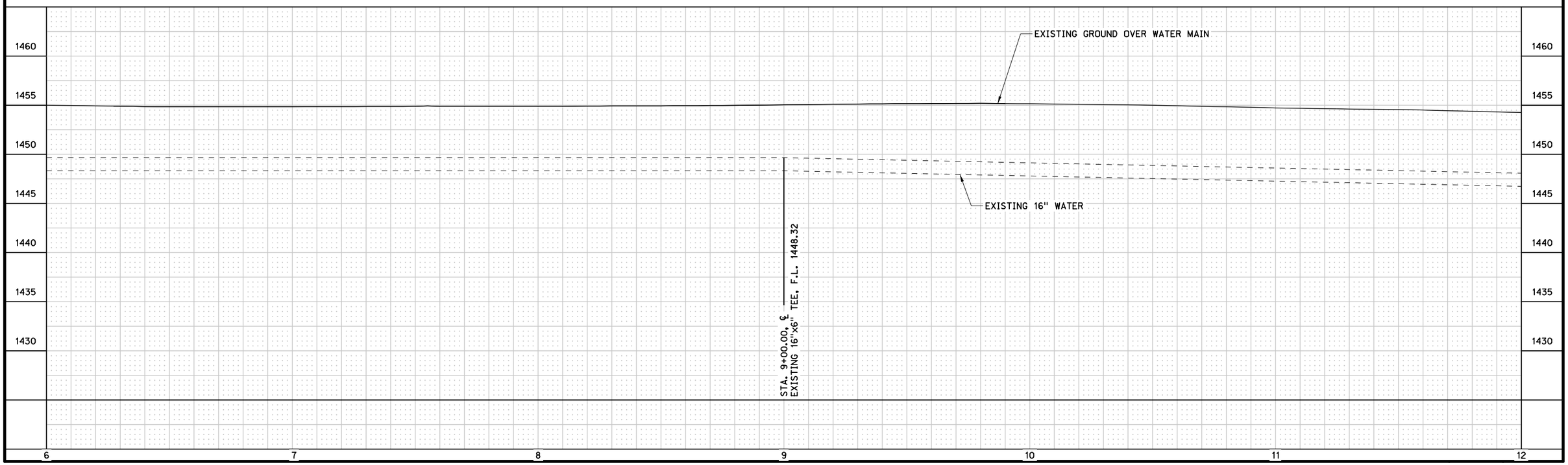
C.N.

0 20' 40'
SCALE



ALEXANDER J. ROTH
E-17140
10-27-2025
PROFESSIONAL CIVIL ENGINEER
STATE OF NEBRASKA

WATER MAIN PLAN AND PROFILE



File: 09336001 PW02-Phase 3.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 27-OCT-2025 13:24
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.
09336001-D	K3
C.N.	

REMOVE WATER MAIN			
STATION TO STATION	SIDE	SIZE	L.F.
15+91.64 - 16+15.00	4' RT.	16"	20

WATER MAIN				
NO.	STATION TO STATION	SIDE	SIZE	L.F.
1	15+91.64 - 16+15.00	4' RT.	16"	20

WATER VALVE			
NO.	STATION	OFFSET	DESCRIPTION
1	16+01.64	4' RT.	1 - 16" GATE VALVE, M.J. 2 - 16" RETAINER GLANDS

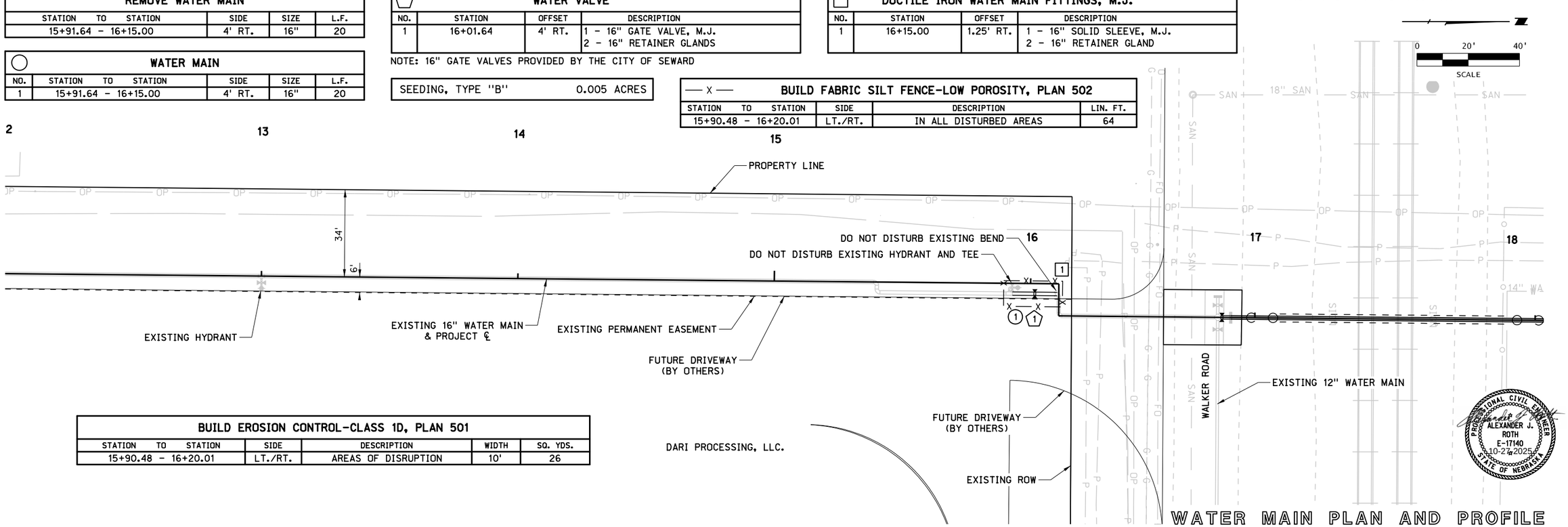
NOTE: 16" GATE VALVES PROVIDED BY THE CITY OF SEWARD

DUCTILE IRON WATER MAIN FITTINGS, M.J.			
NO.	STATION	OFFSET	DESCRIPTION
1	16+15.00	1.25' RT.	1 - 16" SOLID SLEEVE, M.J. 2 - 16" RETAINER GLAND

SEEDING, TYPE "B"	0.005 ACRES

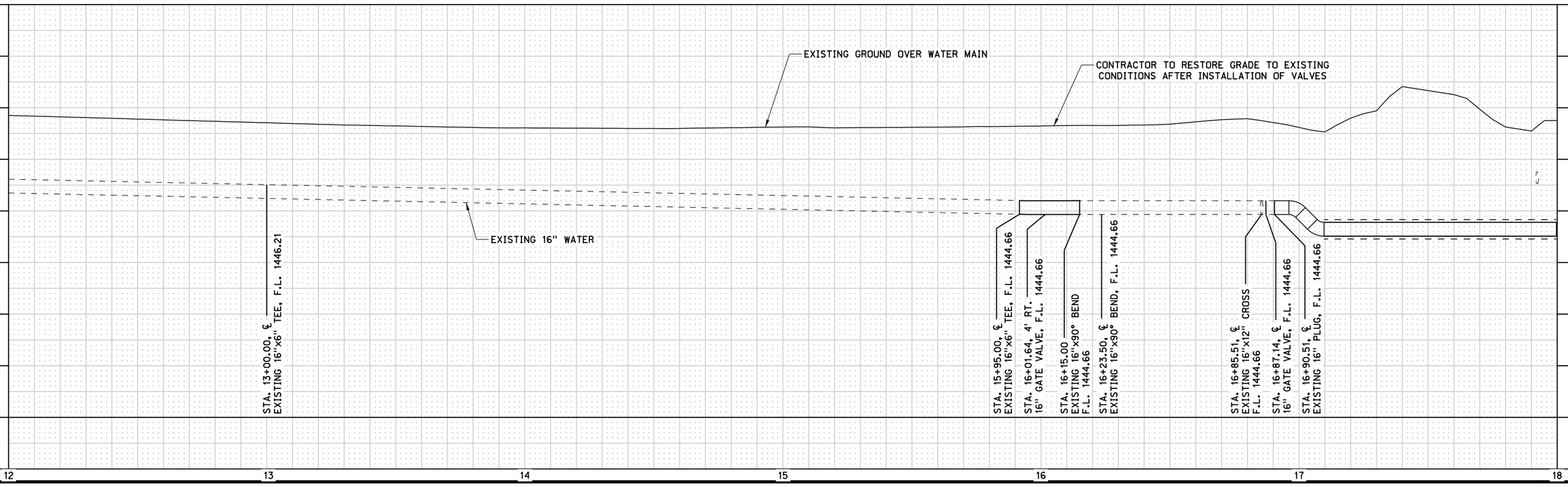
BUILD FABRIC SILT FENCE-LOW POROSITY, PLAN 502			
STATION TO STATION	SIDE	DESCRIPTION	LIN. FT.
15+90.48 - 16+20.01	LT./RT.	IN ALL DISTURBED AREAS	64

BUILD EROSION CONTROL-CLASS 1D, PLAN 501				
STATION TO STATION	SIDE	DESCRIPTION	WIDTH	SQ. YDS.
15+90.48 - 16+20.01	LT./RT.	AREAS OF DISRUPTION	10'	26



PROFESSIONAL CIVIL ENGINEER
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E-17140
10-27-2025
STATE OF NEBRASKA

WATER MAIN PLAN AND PROFILE



File: 09336001 PW03-Phase 3.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
Scale: 1:40 Date: 27-OCT-2025 13:24
Computer: LINMEGANS

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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-D	K4

C.N.

0 20' 40'
SCALE

EDGE OF GRAVEL
EDGE OF RR BALLAST
EDGE OF RR BALLAST
60'
℄ WALKER ROAD
90 L.F. OF 16" DR-18 PVC WITH 30" STEEL CASING
EX. 16" PLUG TO BE REMOVED
EDGE OF GRAVEL
PROPERTY LINE
EXISTING CROSS CONNECTION
1/4 SECTION LINE
POTHOLE LOCATION 2
TOP OF 14" WATER = 1447.90
PROPOSED 16" GATE VALVE
BORE PIT LOCATION
VERTICAL SHORING
VERTICAL SHORING
VALVE INSTALLATION CALLOUTS SHOWN ON SHEET K3
16
17
18
34'
41'
20'
20'
40'
40'
PERMANENT EASEMENT
EXISTING ROW
16" PVC WATER MAIN
30'
30'
16" PVC WATER MAIN
DARI PROCESSING, LLC.
RECEIVING PIT LOCATION
POTHOLE LOCATION 1 - DO NOT DISTURB EXISTING WATER MAIN
TOP OF 14" WATER = 1448.79
SURVEYED DEPTH OF WATER VALVE, 3.9'
14" F.L. = 1446.05
TENNECO PROPERTY
CITY ROW
PROPOSED PAVING/DRIVEWAY
WALKER ROAD
EXISTING BNSF ROW
EXISTING RAILROAD EASEMENT
EXISTING 12" WATER MAIN
EXISTING BNSF ROW

30" STEEL CASING PIPE
0.406" WALL THICKNESS
0.967" WALL THICKNESS
16" PVC CARRIER PIPE
COATED STEEL CASING SPACER

STEEL PIPE SHALL BE IN CONFORMANCE WITH ASTM A1097 AND OF LEAKPROOF CONSTRUCTION, SUCH AS BUTT WELDED OR INTERLOCKING JOINTS WHICH ARE CAPABLE OF WITHSTANDING RAILROAD LOADING. PIPE SHALL BE ASTM A-139, GRADE B AND HAVE A SPECIFIED MINIMUM YIELD STRENGTH, SMYS, OF AT LEAST 35,000 PSI (POUNDS PER SQUARE INCH/241,317kPa.)

ALL METALLIC CASING PIPES ARE TO BE DESIGNED FOR EFFECTIVE CORROSION CONTROL, LONG SERVICE LIFE AND RELATIVELY FREE FROM ROUTINE SERVICING AND MAINTENANCE. CORROSION CONTROL MEASURES FOR METALLIC CASING PIPING MUST INCLUDE COATING SUCH AS FUSION BONDED EPOXY COATING (FBE) WITH AN ABRASION RESISTANT OVERCOATING (ARO).

STEEL CASING PIPE WILL BE SEALED ON BOTH ENDS.

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
10-27-2025
STATE OF NEBRASKA

WATER MAIN PLAN AND PROFILE

SCALE
HORZ= 40:1
VERT= 4:1

60'
℄ TRACK
STA. 16+94.51
END WALKER RD EASEMENT
34'
41'
STA. 16+54.51
BEGIN RR/WALKER RD EASEMENT
BASE OF RAIL
EL. 1456.92
BASE OF RAIL
EL. 1456.32
STA. 17+96.71, TENNECO FENCE
STA. 17+94.33, EXISTING ROW/PROPERTY LINE
EXISTING GROUND OVER WATER MAIN
EX. FIBER OPTIC
EX. GAS
℄ WALKER ROAD
30'
30'
AREA OF SHORING
AREA OF SHORING
EX. UG POWER
8.49'
12.76'
12.11'
8.58'
EX. 14" WATER
F.L. 1,447.63
EX. 14" WATER
F.L. 1,446.73
EX. 18" SANITARY
APPROX. F.L. 1440.36
PROPOSED 16" WATER
WITH 30" STEEL CASING

EXISTING GROUND OVER WATER MAIN
EX. 14" WATER
F.L. 1,446.73

1460 1455 1450 1445 1440 1435 1430

STA. 15+95.00, ℄ EXISTING 16"x6" TEE, F.L. 1444.66
STA. 16+01.64, 4' RT. 16" GATE VALVE, F.L. 1444.66
STA. 16+15.00 EXISTING 16"x90° BEND F.L. 1444.66
STA. 16+23.50, ℄ EXISTING 16"x90° BEND F.L. 1444.66
STA. 16+85.51, ℄ EX. CROSS, F.L. 1444.66
STA. 16+90.51, ℄ REM EX. 16" PLUG F.L. 1444.66
STA. 16+98.65, ℄ 16"x45° BEND, F.L. 1444.66
STA. 17+07.06, ℄ 16"x45° BEND, F.L. 1442.56 BEGIN HORIZONTAL BORE
STA. 17+43.35, ℄ RAIL
STA. 17+58.62, ℄ RAIL
STA. 18+02.26, ℄ 16"x45° BEND, F.L. 1442.56 END HORIZONTAL BORE
STA. 18+10.67, ℄ 16"x45° BEND, F.L. 1444.66
STA. 18+18.33, ℄ 16" GATE VALVE, F.L. 1444.66
STA. 18+21.27, ℄ 16"x90° BEND, F.L. 1444.66 ROTATE UP 10°
STA. 18+21.33, 11.35' LT. 16"x90° BEND, F.L. 1446.65 ROTATE DOWN 10°
STA. 18+21.27, ℄ 16"x90° BEND, F.L. 1444.66 ROTATE UP 10°

16 17 18

File: 09336001 PW04-Phase 3.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 27-OCT-2025 13:24
Computer: LINMEGANS
Scale: 1:40

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 27-OCT-2025 14:02
Computer: LINMEGANS

File: 09336001 PW05-Phase 3.dgn
Scale: 1:20

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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-D	K5

REMOVE FITTING

STATION	OFFSET	SIZE	TYPE	EA
16+90.51	℄	16"	PLUG	1

REMOVE 14" WATER MAIN PIPE

STATION TO STATION	SIDE	L.F.
18+15.58 - 18+27.09	11.30' LT.	12

WATER VALVE

NO.	STATION	OFFSET	DESCRIPTION
1	16+87.14	℄	1 - 16" GATE VALVE, M.J. 2 - 16" RETAINER GLANDS
2	18+18.33	℄	1 - 16" GATE VALVE, M.J. 2 - 16" RETAINER GLANDS

NOTE: 16" GATE VALVES PROVIDED BY THE CITY OF SEWARD

RESTRAINED JOINT WATER MAIN

NO.	STATION TO STATION	SIDE	SIZE	L.F.
7	18+21.33 - 18+21.43	℄-11.35' LT	16"	12

WATER MAIN

NO.	STATION TO STATION	SIDE	SIZE	L.F.
1	16+90.51 - 16+98.65	℄	16"	8
2	16+98.65 - 17+07.06	℄	16"	9
3	17+07.06 - 18+02.26	℄	16"	96
4	18+02.26 - 18+10.67	℄	16"	9
5	18+10.67 - 18+18.33	℄	16"	8
6	18+18.33 - 18+21.27	℄	16"	3
8	18+17.08 - 18+21.33	11.31'-11.35' LT	16"	5
9	18+21.33 - 18+25.58	11.35'-11.39' LT	16"	5

SMOOTH STEEL CASING, BORED IN PLACE, 30"

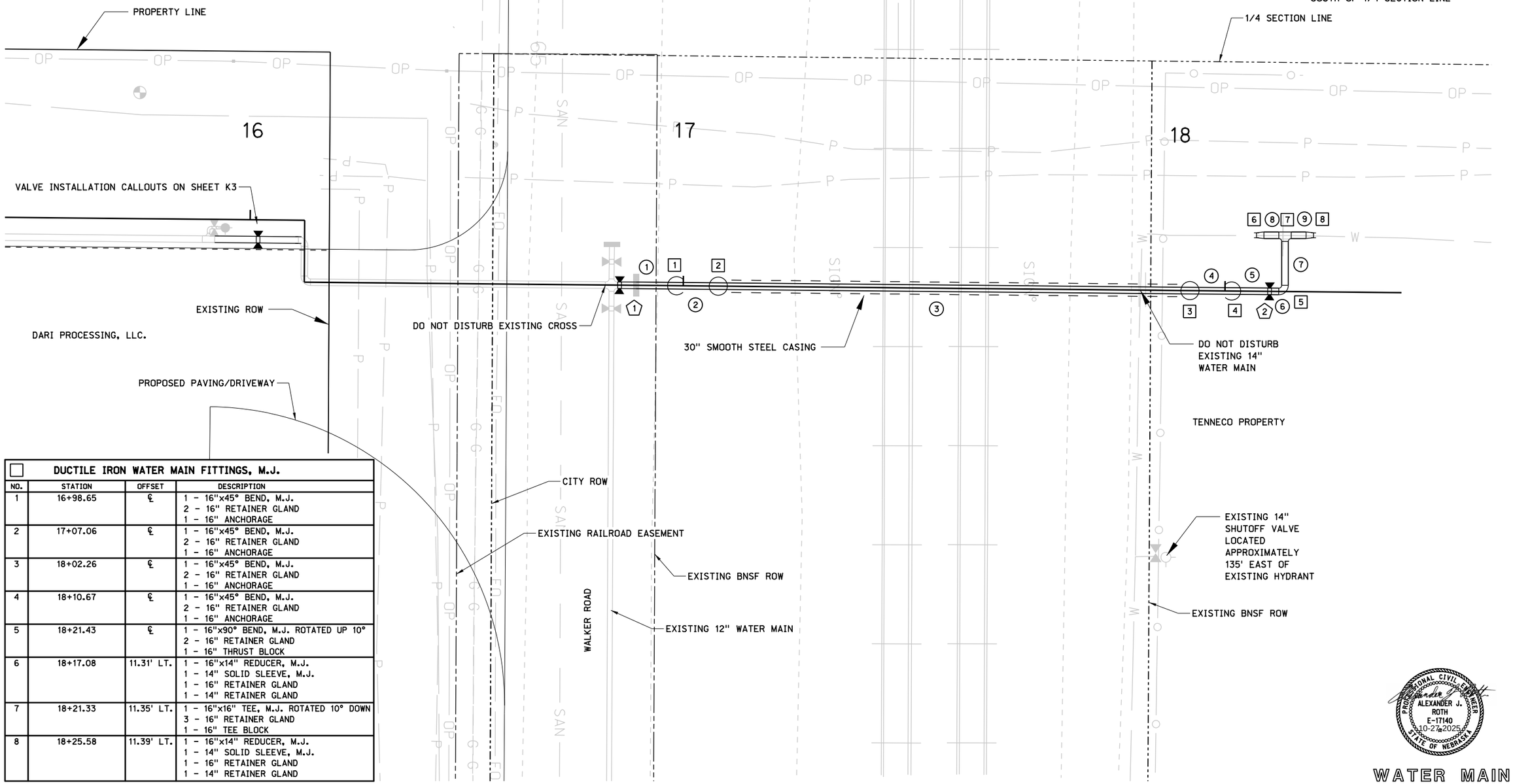
STATION TO STATION	SIDE	SIZE	L.F.
17+09.71 - 17+99.71	℄	30"	90

CONC. & STEEL FOR THRUST BLOCKS AND ANCHORAGES

STATION	OFFSET	SIZE	CONC (CY)	STEEL (LB)
16+98.65	℄	16"	3.46	92
17+07.06	℄	16"	3.46	92
18+02.26	℄	16"	3.46	92
18+10.67	℄	16"	3.46	92
18+21.43	℄	16"	2.0	109.5
18+21.33	11.35' LT.	16"	1.0	42.8

0 10' 20'
SCALE

NOTE TO CONTRACTOR:
EXISTING SHUTOFF VALVE LOCATED APPROXIMATELY 561' WEST & 10' SOUTH OF 1/4 SECTION LINE



DUCTILE IRON WATER MAIN FITTINGS, M.J.

NO.	STATION	OFFSET	DESCRIPTION
1	16+98.65	℄	1 - 16"x45° BEND, M.J. 2 - 16" RETAINER GLAND 1 - 16" ANCHORAGE
2	17+07.06	℄	1 - 16"x45° BEND, M.J. 2 - 16" RETAINER GLAND 1 - 16" ANCHORAGE
3	18+02.26	℄	1 - 16"x45° BEND, M.J. 2 - 16" RETAINER GLAND 1 - 16" ANCHORAGE
4	18+10.67	℄	1 - 16"x45° BEND, M.J. 2 - 16" RETAINER GLAND 1 - 16" ANCHORAGE
5	18+21.43	℄	1 - 16"x90° BEND, M.J. ROTATED UP 10° 2 - 16" RETAINER GLAND 1 - 16" THRUST BLOCK
6	18+17.08	11.31' LT.	1 - 16"x14" REDUCER, M.J. 1 - 14" SOLID SLEEVE, M.J. 1 - 16" RETAINER GLAND 1 - 14" RETAINER GLAND
7	18+21.33	11.35' LT.	1 - 16"x16" TEE, M.J. ROTATED 10° DOWN 3 - 16" RETAINER GLAND 1 - 16" TEE BLOCK
8	18+25.58	11.39' LT.	1 - 16"x14" REDUCER, M.J. 1 - 14" SOLID SLEEVE, M.J. 1 - 16" RETAINER GLAND 1 - 14" RETAINER GLAND

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E-17140
10-27-2025
STATE OF NEBRASKA

WATER MAIN

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PROJECT NO.	SHEET NO.
09336001-D	M1

0 225' 450'
SCALE

N

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 27-OCT-2025 13:24 Computer: LINMEGANS

File: 09336001 TC01-Phase 3.dgn
Scale: 1:450

IZAAK WALTON ROAD

294TH STREET

BNSF RAILWAY

WALKER ROAD

ROAD CLOSED AHEAD

ROAD CLOSED

ROAD CLOSED

ROAD CLOSED AHEAD

ROAD CLOSED AHEAD

PINE STREET

HIGHWAY 15

WORTHMAN BOULEVARD

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
10-27-2025
STATE OF NEBRASKA

TRAFFIC CONTROL

OWNERSHIP				TEMPORARY EASEMENTS	
TRACT NO. 1	OWNER TENSENE001 LLC	DESCRIPTION 29-11-3 TRACT IN NE 1/4 60.33 AC	TAKING SQ. FT. 0	AREA OF DISTUBANCE 19,115.19 S.F.	FOR ACCESS 22,445.84 S.F.
TRACT NO. 2	OWNER DARI PROCESSING, LLC.	DESCRIPTION 29-11-3 TRACT IN SE 1/4, LOT 17	TAKING SQ. FT. 0	AREA OF DISTUBANCE 2,400 S.F.	FOR ACCESS 0

LEGEND

TEMPORARY EASEMENT IN AREAS OF DISTURBANCE

TEMPORARY EASEMENT FOR ACCESS

IZAAK WALTON ROAD

S 89° 29' 23" E, 12.00'

S 0° 0' 0" E, 29.40'

TENNECO PROPERTY LINE

N 90° 0' 0" E, 292.53'

N 0° 0' 0" W, 41.51'

N 90° 0' 0" W, 292.46'

N 0° 20' 58" E, 540.65'

S 0° 20' 58" W, 564.65'

TRACT 1
TENNECO
SEWARD 29-11-3 TRACT IN NE 1/4 60.33 AC

N 90° 0' 0" E, 73.26'

CONTRACTOR ACCESS

N 90° 0' 0" W, 82.97'

N 69° 3' 57" E, 324.23'

S 69° 3' 57" W, 324.32'

DO NOT
DISTURB RACKS

S 89° 6' 22" E, 581.50'

N 89° 6' 22" W, 562.66'

N 39° 47' 9" E, 253.35'

S 39° 47' 9" W, 248.74'

1/4 SECTION LINE

N 0° 32' 38" E, 113.75'

DO NOT DISTURB TRANSFORMER

S 0° 32' 38" W, 74.97'

DO NOT DISTURB TRANSFORMER

N 90° 0' 0" E, 49.71'

N 90° 0' 0" E, 34.17'

TENNEO PROPERTY LINE

S 0° 0' 0" E, 114.36'

EXISTING VALVE FOR ISOLATION

N 0° 37' 50" E, 84.04'

EXISTING VALVE FOR ISOLATION

BNSF RAILWAY

N 89° 40' 39" W, 107.13'

EXISTING BNSF ROW

CITY ROW

EXISTING RAILROAD EASEMENT

WALKER ROAD

S 89° 42' 37" E, 60.00'

N 0° 17' 23" E, 40.00'

S 0° 17' 20" W, 40.00'

N 89° 42' 37" W, 60.00'

TRACT 2
DARI PROCESSING, LLC.
SEWARD 29-11-3 TRACT IN SE 1/4, LOT 17

0 75' 150'
SCALE

RIGHT-OF-WAY

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PROJECT NO. 09336001-D
SHEET NO. W1

ALEXANDER J. ROTH
E-17140
10-27-2025
PROFESSIONAL CIVIL ENGINEER
STATE OF NEBRASKA

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 27-OCT-2025 14:04
Computer: LINMEGANS

File: 09336001 PR01-Phase 3.dgn
Scale: 1:150

2. Authorization to Advertise for Public Bids for the Industrial Substation Expansion Project at 2845 Walker Road - City Administrator Butcher

Contract Documents and Specifications

INDUSTRIAL SUBSTATION EXPANSION
2845 WALKER RD
SEWARD, NEBRASKA
2025

olsson®

Nebraska Certificate of Authorization # CA-0638

December 2025

Olsson Project No. 024-05881

I, Jeremy Calloway, am the Coordinating Professional on the Substation Expansion project.

601 P Street / Suite 200 / Lincoln, NE 68508

O 402.474.6311 / **olsson.com**

TABLE OF CONTENTS

DIVISION 00 - CONTRACTING REQUIREMENTS

00 11 13 Invitation for Bids
00 21 13 Instructions to Bidders
00 41 43 Bid Form
00 43 13 Bid Bond
00 45 13 Qualification Statement
00 45 19 Anti-Collusion Statement
00 52 00 Agreement
00 52 01 Documentation to Sign
00 61 13 Performance Bond
00 61 14 Payment Bond
00 51 00 Notice of Award
00 55 00 Notice to Proceed
00 72 00 Standard General Conditions
00 73 00 Supplementary Conditions

APPENDICES

Appendix A – Geotechnical Report and Addendum No. 1

DRAWINGS

Issued for Bid Preliminary Design Seward, NE 34.5 – 12.47kV Industrial Substation Expansion

INVITATION FOR BIDS

The City of Seward, Nebraska will receive and accept bids through QuestCDN.com via their electronic VirtuBid™ online bid service for the project briefly described below. A virtual bid opening will be held January 15, 2026, at 3:00 P.M. CST, utilizing a web conferencing application.

- **Seward Industrial Substation Expansion**

The Project includes shipping and handling to the site, and other items incidental work indicated on the plans and specifications, including the following Work:

- **Install 34.5kV and 12.74KV medium voltage equipment and conductor**
- **Install relevant low voltage signal and power cables and equipment such as potential signals, current signals, and AC power.**
- **Install foundations, grounding, conduit, and other below grade items as required.**
- **Install structures and foundations as required.**
- **Procure contractor supplied equipment and structures to meet engineer specifications.**
- **All apparatuses shall be field tested in accordance with ANSI/NETA ATS-2025**
    - **Optional tests not required, but may be required based on bidders provided justification**
    - **Reference the one line for the major equipment and relaying items for testing and commissioning**

The Proposal consist of furnishing and delivery of the specified equipment (referred to as Goods) to the point of destination, including performance of special services at the site in conjunction with installation of the Goods by others as part of the Buyer's construction program, all in accordance with the Proposal documents.

The Issuing Office for the Bidding Documents is Olsson, 601 P Street, Suite 200, Lincoln, Nebraska 68508. Questions will be answered in Quest.

A complete set of electronic plans, contracts documents, and proposal form may be obtained from www.questcdn.com for a fee of $22.00 (non-refundable). If submitting a bid, a fee of $42 (non-refundable) will be required. Once logged into the site, insert eBIDdoc project number 9954102 Seward Industrial Substation Expansion.

A pre-bid conference will not be conducted for this Project.

Each successful bidder shall supply a Performance Bond and a Payment Bond executed by a corporate surety licensed in the State of Nebraska in an amount equal to 100 percent of the contract price as part of this contract.

A bidder's bond in an amount of not less than five percent of the amount bid. The bond(s) shall be made payable to City of Seward, NE, as security that the bidder(s) to whom the award(s) are made will enter into contract to build the improvements bid upon and furnish the required bonds and insurance. The draft may be cashed by the City as liquidated damages in the event the successful bidder fails to enter into a contract within 15 days after the Notice of Award and post bond satisfactory to the City ensuring the faithful fulfillment of the contract.

No proposal may be withdrawn within a period of 60 days after the date fixed for proposal opening. The City of Seward, Nebraska reserves the right to reject any and all proposals and to waive informalities in proposals submitted.

Owner: City of Seward, Nebraska
By: Greg Butcher, City Administrator

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

ARTICLE 1—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 which registers plan holders.

ARTICLE 2—BIDDING DOCUMENTS

2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.

2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.

2.04 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Owner recommends that Bidder register as a plan holder with the Issuing Office at such website and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.

2.05 Bidder may register as a plan holder and obtain complete sets of Bidding Documents, in the number and format stated in the Advertisement or invitation to bid, from the Issuing Office. Bidders may rely that sets of Bidding Documents obtained from the Issuing Office are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.

2.06 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) may make them available for examination. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms, or for a Bidder's failure to obtain Addenda from a plan room.

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ARTICLE 3—QUALIFICATIONS OF BIDDERS

3.01 Bidder is to submit the following information with its Bid to demonstrate Bidder's qualifications to perform the Work:

A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.

B. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.

C. Bidder's state or other contractor license number, if applicable.

D. Subcontractor and Supplier qualification information.

E. Other required information regarding qualifications.

3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

3.03 No requirement in Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

ARTICLE 4—PRE-BID CONFERENCE

4.01 A pre-bid conference will not be conducted for this Project.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

5.01 *Site and Other Areas*

A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. The Supplementary Conditions identify the following regarding existing conditions at or adjacent to the Site:

a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.

b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.

c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.

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d. Technical Data contained in such reports and drawings.

2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in 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.

3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

B. Underground Facilities: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

5.03 *Other Site-related Documents*

A. No other Site-related documents are available.

5.04 *Site Visit and Testing by Bidders*

A. Bidder is not required to conduct a Site visit although they will be available upon request.

B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.

C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.

D. Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.

E. Bidder must fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

5.05 *Owner's Safety Program*

A. Site visits and work at the Site may be governed by an Owner safety program. If an Owner safety program exists, it will be noted in the Supplementary Conditions.

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5.06 *Other Work at the Site*

A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.

B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

7.01 *Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.*

7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Administrative Professional in writing. Contact information and submittal procedures for such questions are as follows:

A. Heidie Stock – hstock@olsson.com.

7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.

7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of five percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents.

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8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract 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, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.

8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.

9.02 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND "OR EQUAL" ITEMS

10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or "or-equal" items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or "or-equal" item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.

10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

11.01 A Bidder must be prepared to retain specific Subcontractors and Suppliers for the performance of the Work if required to do so by the Bidding Documents or in the Specifications. If a prospective Bidder objects to retaining any such Subcontractor or Supplier and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.

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11.02 The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors and/or Suppliers proposed for all portions of the Work within five days after Bid opening. Owner has the right to request adjustments including requiring engineering review of all submittal drawings for any suppliers provided.

11.03 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute and/or require Engineer review of Supplier submittals, in which case apparent Successful Bidder will submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

11.04 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 and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, 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 subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

ARTICLE 12—PREPARATION OF BID

12.01 The Bid Form is included with the Bidding Documents.

A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.

B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."

12.01 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.

12.02 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.

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12.03 A Bid by a partnership must 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 must be shown.

12.04 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.

12.05 A Bid by an individual must show the Bidder's name and official address.

12.06 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.

12.07 All names must be printed in ink below the signatures.

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

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

12.10 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.

12.11 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

ARTICLE 13—BASIS OF BID

13.01 *Unit Price*

A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.

B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.

C. Discrepancies between the multiplication 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.

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13.02 *Allowances*

A. For cash allowances the Bid price must include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

ARTICLE 14—SUBMITTAL OF BID

14.01 The Bidding Documents include Bid Form completed in Quest, and, if required, the Bid Bond Form. The Bid Form to be completed in Quest is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form.

14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must 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 must 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 must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the location designated in the Advertisement.

14.03 Bids received after the date and time prescribed for the opening of bids or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

15.01 An unopened Bid may be 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. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.

15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.

15.03 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, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

16.01 Bid 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.

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ARTICLE 17— BIDS TO REMAIN SUBJECT TO ACCEPTANCE

17.01 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 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.

18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.

18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.

18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.

18.05 *Evaluation of Bids*

A. In evaluating Bids, Owner will consider whether 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.

B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner will announce to all bidders a "Base Bid plus alternates" budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.

C. For determination of the apparent low Bidder(s) when sectional bids are submitted, Bids will be compared on the basis of the aggregate of the Bids for separate sections and the Bids for combined sections that result in the lowest total amount for all of the Work.

D. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.

E. For the determination of the apparent low Bidder when cost-plus-fee bids are submitted, Bids will be compared on the basis of the Guaranteed Maximum Price set forth by Bidder on the Bid Form.

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F. Bid prices will be compared after adjusting for differences in time of Substantial Completion (total number of calendar days to substantially complete the Work) designated by Bidders. The adjusting amount will be determined at the rate set forth in the Agreement for liquidated damages for failing to achieve Substantial Completion, or such other amount that Owner has designated in the Bid Form.

1. The method for calculating the lowest bid for comparison will be the summation of the Bid price shown in the Bid Form plus the product of the Bidder-specified time of Substantial Completion in calendar days times the rate for liquidated damages in dollars per day.

2. This procedure is only used to determine the lowest bid for comparison and contractor selection purposes. The Contract Price for compensation and payment purposes remains the Bid price shown in the Bid Form.

18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

18.07 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 19—BONDS AND INSURANCE

19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.

19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 21—SALES AND USE TAXES

Owner is not exempt from **Nebraska** state sales and use taxes on materials and equipment to be incorporated in the Work. Refer to Paragraph SC-7.10 of the Supplementary Conditions for additional information.

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BID FORM FOR CONSTRUCTION CONTRACT

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 1—OWNER AND BIDDER

1.01 This Bid is submitted to: The City of Seward, Nebraska

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—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid Security;

B. List of Proposed Subcontractors;

C. List of Proposed Suppliers;

D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;

E. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;

F. Required Bidder Qualification Statement with supporting data.

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND/OR UNIT PRICES

3.01 *Unit Price Bids:*

A. Bidder will perform the following Work at the indicated unit prices:

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
Total of All Unit Price Bid Items	$				

Complete in Quest

B. Bidder acknowledges that:

1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and

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2. estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 4—TIME OF COMPLETION

4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

4.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

5.01 *Bid Acceptance Period*

A. This Bid will remain subject to acceptance for **60 days** after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 *Instructions to Bidders*

A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Bidder's Representations*

A. In submitting this Bid, Bidder represents the following:

1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.

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5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

6. Bidder has considered the information known to Bidder itself; 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 Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no 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.

8. 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.

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

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

11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. 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.

2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.

3. Bidder has not solicited or induced any individual or entity to refrain from bidding.

4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:

a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.

b. 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

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artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.

c. 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.

d. 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.

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BIDDER hereby submits this Bid as set forth above:

Bidder:

_____

(typed or printed name of organization)

By: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

Address for giving notices:

_____

_____

Bidder's Contact:

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Phone: _____

Email: _____

Address:

_____

_____

_____

Bidder's Contractor License No.: (if applicable) _____

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BID BOND (PENAL SUM FORM)

Bidder Name: **[Full formal name of Bidder]** Address *(principal place of business)*: **[Address of Bidder's principal place of business]**	**Surety** Name: **[Full formal name of Surety]** Address *(principal place of business)*: **[Address of Surety's principal place of business]**
Owner Name: **City of Seward, Nebraska** Address *(principal place of business)*: **537 Main Street** **Seward, NE 68434**	**Bid** Project *(name and location)*: **Seward Industrial Substation Expansion** **Agreement Between Owner and Contractor for Construction Contract** **Seward, Nebraska** Bid Due Date: **[Enter date bid is due]**
Bond Penal Sum: **[Amount]** Date of Bond: **[Date of Bond]**	

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

Bidder	Surety
_____ *(Full formal name of Bidder)*	_____ *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature) (Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title:	Title:

Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.

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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 will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs 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 will 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 does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will 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 will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must 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 Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will 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 will 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 governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

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QUALIFICATIONS STATEMENT

ARTICLE 1—GENERAL INFORMATION

1.01 Provide contact information for the Business:

Legal Name of Business:			
Corporate Office			
Name:		Phone number:	
Title:		Email address:	
Business address of corporate office:			
Local Office			
Name:		Phone number:	
Title:		Email address:	
Business address of local office:			

1.02 Provide information on the Business's organizational structure:

Form of Business:	☐ Sole Proprietorship ☐ Partnership ☐ Corporation		
☐ Limited Liability Company ☐ Joint Venture comprised of the following companies:			
	1.		
	2.		
	3.		
Provide a separate Qualification Statement for each Joint Venturer.			
Date Business was formed:		State in which Business was formed:	
Is this Business authorized to operate in the Project location?	☐ Yes ☐ No ☐ Pending		

1.03 Identify all businesses that own Business in whole or in part (25% or greater), or that are wholly or partly (25% or greater) owned by Business:

Name of business:		Affiliation:	
Address:			
Name of business:		Affiliation:	
Address:			
Name of business:		Affiliation:	
Address:			

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1.04 Provide information regarding the Business's officers, partners, and limits of authority.

Name:		Title:	
Authorized to sign contracts: ☐ Yes ☐ No		Limit of Authority:	$
Name:		Title:	
Authorized to sign contracts: ☐ Yes ☐ No		Limit of Authority:	$
Name:		Title:	
Authorized to sign contracts: ☐ Yes ☐ No		Limit of Authority:	$
Name:		Title:	

ARTICLE 2—LICENSING

2.01 Provide information regarding licensure for Business:

Name of License:			
Licensing Agency:			
License No:		Expiration Date:	
Name of License:			
Licensing Agency:			
License No:		Expiration Date:	

ARTICLE 3—DIVERSE BUSINESS CERTIFICATIONS

3.01 Provide information regarding Business's Diverse Business Certification, if any. Provide evidence of current certification.

Certification		Certifying Agency	Certification Date
☐ Disadvantaged Business Enterprise			
☐ Minority Business Enterprise			
☐ Woman-Owned Business Enterprise			
☐ Small Business Enterprise			
☐ Disabled Business Enterprise			
☐ Veteran-Owned Business Enterprise			
☐ Service-Disabled Veteran-Owned Business			
☐ HUBZone Business (Historically Underutilized) Business			
☐ Other			
☐ None			

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ARTICLE 4—SAFETY

4.01 Provide information regarding Business's safety organization and safety performance.

Name of Business's Safety Officer:	

Safety Certifications		
Certification Name	Issuing Agency	Expiration

4.02 Provide Worker's Compensation Insurance Experience Modification Rate (EMR), Total Recordable Frequency Rate (TRFR) for incidents, and Total Number of Recorded Manhours (MH) for the last 3 years and the EMR, TRFR, and MH history for the last 3 years of any proposed Subcontractor(s) that will provide Work valued at 10% or more of the Contract Price. Provide documentation of the EMR history for Business and Subcontractor(s).

Year									
Company	EMR	TRFR	MH	EMR	TRFR	MH	EMR	TRFR	MH

ARTICLE 5—FINANCIAL

5.01 Provide information regarding the Business's financial stability. Provide the most recent audited financial statement, and if such audited financial statement is not current, also provide the most current financial statement.

Financial Institution:		
Business address:		
Date of Business's most recent financial statement:		☐ Attached
Date of Business's most recent audited financial statement:		☐ Attached
Financial indicators from the most recent financial statement		
Contractor's Current Ratio (Current Assets ÷ Current Liabilities)		
Contractor's Quick Ratio ((Cash and Cash Equivalents + Accounts Receivable + Short Term Investments) ÷ Current Liabilities)		

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SURETY INFORMATION

5.02 Provide information regarding the surety company that will issue required bonds on behalf of the Business, including but not limited to performance and payment bonds.

Surety Name:			
Surety is a corporation organized and existing under the laws of the state of:			
Is surety authorized to provide surety bonds in the Project location?	☐ Yes ☐ No		
Is surety listed in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" published in Department Circular 570 (as amended) by the Bureau of the Fiscal Service, U.S. Department of the Treasury? ☐ Yes ☐ No			
Mailing Address (principal place of business):			
Physical Address (principal place of business):			
Phone (main):		Phone (claims):	

ARTICLE 6—INSURANCE

6.01 Provide information regarding Business's insurance company(s), including but not limited to its Commercial General Liability carrier. Provide information for each provider.

Name of insurance provider, and type of policy (CLE, auto, etc.):			
Insurance Provider		Type of Policy (Coverage Provided)	
Are providers licensed or authorized to issue policies in the Project location?			☐ Yes ☐ No
Does provider have an A.M. Best Rating of A-VII or better?			☐ Yes ☐ No
Mailing Address (principal place of business):			
Physical Address (principal place of business):			
Phone (main):		Phone (claims):	

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ARTICLE 7—CONSTRUCTION EXPERIENCE

7.01 Provide information that will identify the overall size and capacity of the Business.

Average number of current full-time employees:	
Estimate of revenue for the current year:	
Estimate of revenue for the previous year:	

7.02 Provide information regarding the Business's previous contracting experience.

Years of experience with projects like the proposed project:				
As a general contractor:		As a joint venturer:		
Has Business, or a predecessor in interest, or an affiliate identified in Paragraph 1.03:				
Been disqualified as a bidder by any local, state, or federal agency within the last 5 years? ☐ Yes ☐ No				
Been barred from contracting by any local, state, or federal agency within the last 5 years? ☐ Yes ☐ No				
Been released from a bid in the past 5 years? ☐ Yes ☐ No				
Defaulted on a project or failed to complete any contract awarded to it? ☐ Yes ☐ No				
Refused to construct or refused to provide materials defined in the contract documents or in a change order? ☐ Yes ☐ No				
Been a party to any currently pending litigation or arbitration? ☐ Yes ☐ No				
Provide full details in a separate attachment if the response to any of these questions is Yes.				

7.03 List all projects currently under contract in Schedule A and provide indicated information.

7.04 List a minimum of three and a maximum of six projects completed in the last 5 years in Schedule B and provide indicated information to demonstrate the Business's experience with projects similar in type and cost of construction.

7.05 In Schedule C, provide information on key individuals whom Business intends to assign to the Project. Provide resumes for those individuals included in Schedule C. Key individuals include the Project Manager, Project Superintendent, Quality Manager, and Safety Manager. Resumes may be provided for Business's key leaders as well.

ARTICLE 8—REQUIRED ATTACHMENTS

8.01 Provide the following information with the Statement of Qualifications:

A. If Business is a Joint Venture, separate Qualifications Statements for each Joint Venturer, as required in Paragraph 1.02.

B. Diverse Business Certifications if required by Paragraph 3.01.

C. Certification of Business's safety performance if required by Paragraph 4.02.

D. Financial statements as required by Paragraph 5.01.

E. Attachments providing additional information as required by Paragraph 8.02.

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F. Schedule A (Current Projects) as required by Paragraph 8.03.

G. Schedule B (Previous Experience with Similar Projects) as required by Paragraph 8.04.

H. Schedule C (Key Individuals) and resumes for the key individuals listed, as required by Paragraph 8.05.

I. Additional items as pertinent.

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This Statement of Qualifications is offered by:

Business: _____
(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(date signed)

(If Business is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address for giving notices:

_____

_____

_____

Designated Representative:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address:

_____

_____

_____

Phone: _____

Email: _____

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Schedule A—Current Projects

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

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Schedule B—Previous Experience with Similar Projects

Name of Organization				
Project Owner		Project Name		
General Description of Project				
Project Cost		Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager
Name				

Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)

	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner		Project Name		
General Description of Project				
Project Cost		Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager
Name				

Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)

	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner		Project Name		
General Description of Project				
Project Cost		Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager
Name				

Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)

	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

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Schedule B—Previous Experience with Similar Projects

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

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Schedule C—Key Individuals

Project Manager			
Name of individual			
Years of experience as project manager			
Years of experience with this organization			
Number of similar projects as project manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	
Project Superintendent			
Name of individual			
Years of experience as project superintendent			
Years of experience with this organization			
Number of similar projects as project superintendent			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	

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Safety Manager			
Name of individual			
Years of experience as project manager			
Years of experience with this organization			
Number of similar projects as project manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	

Quality Control Manager			
Name of individual			
Years of experience as project superintendent			
Years of experience with this organization			
Number of similar projects as project superintendent			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	

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ANTI-COLLUSION STATEMENT

STATE OF _____

CITY/COUNTY OF_____

_____

_____ being first duly sworn, deposes and says that he is

_____
Title of Person Signing

of _____

_____
Name of Bidder

that all statements made and facts set out in the proposal for the above project are true and correct; and the bidder (The person, firm, association, or corporation making said bid) has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with said bid or any contract which may result from its acceptance.

Affiant further certifies that bidder is not financially interested in, or financially affiliated with, any other bidder for the above project.

BY_____

BY_____

BY_____

SWORN to before me this _____ day of _____ **[YEAR].**

_____
Notary Public

My Commission Expires_____

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

This Agreement is by and between **City of Seward, Nebraska** ("Owner") and **[name of contracting entity]** ("Contractor").

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

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:

- **Install 34.5kV and 12.74KV medium voltage equipment and conductor**
- **Install relevant low voltage signal and power cables and equipment such as potential signals, current signals, and AC power.**
- **Install foundations, grounding, conduit, and other below grade items as required.**
- **Install structures and foundations as required.**
- **Procure contractor supplied equipment and structures to meet engineer specifications.**
- **All apparatuses shall be field tested in accordance with ANSI/NETA ATS-2025**
  - **Optional tests not required, but may be required based on bidders provided justification**
  - **Reference the one line for the major equipment and relaying items for testing and commissioning**

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: **Seward Industrial Substation Expansion**.

ARTICLE 3—ENGINEER

3.01 The Owner has retained Olsson ("Engineer") to act as Owner's representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

3.02 The part of the Project that pertains to the Work has been designed by **Engineer.**

ARTICLE 4—CONTRACT TIMES

4.01 *Time is 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 *Contract Times: Dates*

A. The Work will reach substantial completion in two phases. The first mobilization will be substantially complete on or before **October 1, 2026**, the second mobilization will be substantially complete on or before **February 12, 2027**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **March 12, 2027.**

4.04 *Milestones*

A. Parts of the Work must be substantially completed on or before the following Milestone(s):

1. Milestone 1: **30% Completion – March 20, 2026**

    a. Removal of existing 25kVA transformer T-2 and its foundation pad
    b. Cut existing conduits going to existing transformer T-2 and abandon in place
    c. Removal of the existing ground grid being removed including:
        i. 4/0 Cu str. Ground wire
        ii. Tinned copper SD wire for fence ground
        iii. Ground clamps for 4" fence post
        iv. Fence top rail ground clamps
    d. Installation of new station service transformer and connection to existing Bus #1

2. Milestone 2: **60% Completion – June 26, 2026**

    a. Installation and energization of all new switchgear outside of substation fence.
    b. Completion of below grade work including conduit routing
    c. Completion of ground grid
    d. Completion of foundation installation
    e. Completion of drilled pier installation
    f. Completion of final grading

3. Milestone 3: **90% Completion – September 4, 2026**

    a. Removal of existing south fence line and its post foundations
    b. Installation of new fence line
    c. Installation of steel structures
    d. Installation of all equipment except for the new main power transformer (including reclosers, arresters, fuses, etc.)
    e. Control, remaining AC power, and metering cable installation and termination
    f. Removal of existing transformer T1 to bus connectors and installation of new transformer to bus connectors
    g. Removal of 150kV BIL insulators and aluminum bus on the 12.47kV disconnect structure
    h. Removal of existing bus and connectors as appropriate

4. Milestone 4: **Substantial Completion Mobilization #1 – October 1, 2026**

    a. Reenergization of the existing substation
    b. Testing and commissioning of station as possible

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5. Milestone 5: **Substantial Completion Mobilization #2 – January 12, 2027-February 12, 2027**
    a. Main power transformer installation, termination, and testing
    b. Complete remaining testing and commissioning activities
    c. Full substation energization
6. Milestone 6: **Final Completion – February 26, 2027**
    a. Final punch list items complete
    b. All debris removed
    c. Site handover to owner

4.05 *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 and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. 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):

1. *Substantial Completion:* Contractor shall pay Owner **$1,000** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.

2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **$1,000** for each day that expires after such time until the Work is completed and ready for final payment.

4. Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.

B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

ARTICLE 5—CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

A. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item) attached in bid documents.

B. The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

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5.02 Contractor shall be responsible for fees acquired from failure to meet key performance indicators related to the function of the substation during the testing and commissioning phase of construction.

ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 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 the basis of Contractor's Applications for Payment on or about the **27th** day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in 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 elsewhere in the Contract.

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 Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

a. **90** percent of the value of the work completed (with the balance being retainage).

b. If 50 percent or more of the Work has been completed, as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then the retainage will be reduced to 5 percent of the value of the work completed until the Substantial Completion, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

c. **5** 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 **100** percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less **200** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

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6.04 *Consent of Surety*

A. Owner will not make final payment or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

A. All amounts not paid when due will bear interest at the maximum legal rate.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

A. The Contract Documents consist of all of the following:

1. This Agreement.

2. Bonds:

a. Performance bond (together with power of attorney).

b. Payment bond (together with power of attorney).

3. Bid Form.

4. General Conditions.

5. Supplementary Conditions.

6. Drawings listed on the attached sheet index.

7. Addenda.

10. Exhibits to this Agreement (enumerated as follows:

a. **Geotechnical Investigation Report**

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

a. Notice to Proceed.

b. Work Change Directives.

c. Change Orders.

d. Field Orders.

e. Warranty Bond, if any.

B. The Contract Documents listed in Paragraph 7.01.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 7.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

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ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:

1. Contractor has examined and carefully studied the Contract Documents, including Addenda.

2. Contractor has had the opportunity to have visited the Site, conduct a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.

4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.

5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

6. Contractor has considered the information known to Contractor itself; 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 Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no 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.

8. 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.

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

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

EJCDC® C-520, Agreement between Owner and Contractor for Construction Contract (Stipulated Price) (Adapted).
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11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *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 8.02:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything 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.

8.03 *Standard General Conditions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on **[indicate date on which Contract becomes effective]** (which is the Effective Date of the Contract).

Owner:

_____
(typed or printed name of organization)

By: _____
(individual's signature)

Date: _____
(date signed)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Attest: _____
(individual's signature)

Title: _____
(typed or printed)

Address for giving notices:

_____

_____

_____

Designated Representative:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address:

_____

_____

_____

Phone: _____

Email: _____

*(If **[Type of Entity]** is a corporation, attach evidence of authority to sign. If **[Type of Entity]** is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)*

Contractor:

_____
(typed or printed name of organization)

By: _____
(individual's signature)

_____

Name: _____
(typed or printed)

Title: _____
(typed or printed)

*(If **[Type of Entity]** is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest: _____
(individual's signature)

Title: _____
(typed or printed)

Address for giving notices:

_____

_____

_____

Designated Representative:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address:

_____

_____

_____

Phone: _____

Email: _____

License No.: _____
(where applicable)

State: _____

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Documentation of Authority to Sign

Complete Section A ***or*** B, as applicable:
Section A.

I _____ certify that I am the Secretary of the corporation named as Contractor herein; that _____ who signed this contract on behalf of the Contractor was then _____ (Title) of said corporation; that said contract was duly signed for and on behalf of the said corporation by authority of its governing body and is within the scope of its corporate powers.

IN WITNESS WHEREOF, I have hereunto affixed my hand and the seal of said corporation this day _____ of _____, _____.

(Corporate Seal)

_____
Corporate Secretary

Section B.

We hereby certify that the undersigned are the sole owners of the company named as Contractor herein; and hereby attest that _____, who signed this Agreement on behalf of said Contractor, is authorized to legally bind the Contractor to the obligations of this Agreement.

By _____

_____

NOTARIZATION

STATE OF NEBRASKA COUNTY OF _____

The foregoing was acknowledged before me this _____ day of _____, _____, by _____.

_____
Notary Public

PERFORMANCE BOND

Contractor Name: **[Full formal name of Contractor]** Address *(principal place of business)*: **[Address of Contractor's principal place of business]**	**Surety** Name: **[Full formal name of Surety]** Address *(principal place of business)*: **[Address of Surety's principal place of business]**
Owner Name: **[Full formal name of Owner]** Mailing address *(principal place of business)*: **[Address of Owner's principal place of business]**	**Contract** Description *(name and location)*: **[Owner's project/contract name, and location of the project]** Contract Price: **[Amount from Contract]** Effective Date of Contract: **[Date from Contract]**

Bond

Bond Amount: **[Amount]**

Date of Bond: **[Date]**

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____ *(Full formal name of Contractor)*	_____ *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature)(Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

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

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:

    3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;

    3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

    3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

    5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

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

    5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

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

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5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

   7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

   7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

   7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

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

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

11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

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statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

    14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

    14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

    14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

    14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

    14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

16. Modifications to this Bond are as follows: **[Describe modification or enter "None"]**

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PAYMENT BOND

Contractor	**Surety**
Name: **[Full formal name of Contractor]** Address *(principal place of business)*: **[Address of Contractor's principal place of business]**	Name: **[Full formal name of Surety]** Address *(principal place of business)*: **[Address of Surety's principal place of business]**
Owner	**Contract**
Name: **[Full formal name of Owner]** Mailing address *(principal place of business)*: **[Address of Owner's principal place of business]**	Description *(name and location)*: **[Owner's project/contract name, and location of the project]** Contract Price: **[Amount, from Contract]** Effective Date of Contract: **[Date, from Contract]**

Bond

Bond Amount: **[Amount]**

Date of Bond: **[Date]**

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____ *(Full formal name of Contractor)*	_____ *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature)(Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

EJCDC® C-615, Payment Bond.
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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.

4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.

5. The Surety's obligations to a Claimant under this Bond will arise after the following:

    5.1. Claimants who do not have a direct contract with the Contractor

        5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and

        5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).

    5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).

6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.

7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

    7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

    7.2. Pay or arrange for payment of any undisputed amounts.

    7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

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8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

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

12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, 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 Construction 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 will be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

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

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

    16.1. *Claim*—A written statement by the Claimant including at a minimum:

        16.1.1. The name of the Claimant;

        16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

        16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

        16.1.4. A brief description of the labor, materials, or equipment furnished;

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16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

16.1.7. The total amount of previous payments received by the Claimant; and

16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the 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.

16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

18. Modifications to this Bond are as follows: **[Describe modification or enter "None"]**

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NOTICE OF AWARD

Date of Issuance:			
Owner:	City of Seward, Nebraska	Owner's Project No.:	N/A
Engineer:	Olsson, Inc.	Engineer's Project No.:	024-05881
Project:	Seward Industrial Substation Expansion		
Contract Name:	Agreement Between Owner and Contractor for Construction Contract		
Bidder:			
Bidder's Address:			

You are notified that Owner has accepted your Bid dated **[date]** for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

- Install 34.5kV and 12.74KV medium voltage equipment and conductor
- Install relevant low voltage signal and power cables and equipment such as potential signals, current signals, and AC power.
- Install foundations, grounding, conduit, and other below grade items as required.
- Install structures and foundations as required.
- Procure contractor supplied equipment and structures to meet engineer specifications.
- All apparatuses shall be field tested in accordance with ANSI/NETA ATS-2025:
    - Optional tests not required, but may be required based on bidders provided justification
    - Reference the one line for the major equipment and relaying items for testing and commissioning

The Contract Price of the awarded Contract is **$[Contract Price]**. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

One (1) copy of unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award or has been transmitted or made available to Bidder electronically.

☐ Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner one (1) of counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any): None.

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

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Owner: **City of Seward, Nebraska**

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

Copy: Engineer

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NOTICE TO PROCEED

Owner:	City of Seward, Nebraska	Owner's Project No.:	N/A
Engineer:	Olsson, Inc.	Engineer's Project No.:	024-05881
Contractor:		Contractor's Project No.:	
Project:	Seward Industrial Substation Expansion		
Contract Name:	Agreement Between Owner and Contractor for Construction Contract		
Effective Date of Contract:			

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on **[date Contract Times are to start]** pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The date by which Substantial Completion of the first mobilization must be achieved is **October 1, 2026, from Agreement**, and the Substantial Completion of the second mobilization must be achieved is **February 12, 2027, from Agreement,** and the date by which readiness for final payment must be achieved is **March 12, 2027, from Agreement**.

Before starting any Work at the Site, Contractor must comply with the following:

[Note any access limitations, security procedures, or other restrictions]

Owner:	**City of Seward, Nebraska**
By *(signature)*:	
Name *(printed)*:	
Title:	
Date Issued:	

Copy: Engineer

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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

EJCDC®
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

ACEC
AMERICAN COUNCIL OF ENGINEERING COMPANIES

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

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Endorsed By

CSI®
Building Knowledge
Improving Project Delivery

NUCA
We Dig America

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

Page

Article 1—Definitions and Terminology 1
1.01 Defined Terms 1
1.02 Terminology 6
Article 2—Preliminary Matters 7
2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance 7
2.02 Copies of Documents 7
2.03 Before Starting Construction 7
2.04 Preconstruction Conference; Designation of Authorized Representatives 8
2.05 Acceptance of Schedules 8
2.06 Electronic Transmittals 8
Article 3—Contract Documents: Intent, Requirements, Reuse 9
3.01 Intent 9
3.02 Reference Standards 9
3.03 Reporting and Resolving Discrepancies 10
3.04 Requirements of the Contract Documents 10
3.05 Reuse of Documents 11
Article 4—Commencement and Progress of the Work 11
4.01 Commencement of Contract Times; Notice to Proceed 11
4.02 Starting the Work 11
4.03 Reference Points 11
4.04 Progress Schedule 12
4.05 Delays in Contractor's Progress 12
Article 5—Site; Subsurface and Physical Conditions; Hazardous Environmental Conditions 13
5.01 Availability of Lands 13
5.02 Use of Site and Other Areas 14
5.03 Subsurface and Physical Conditions 15
5.04 Differing Subsurface or Physical Conditions 16

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5.05 Underground Facilities 17
5.06 Hazardous Environmental Conditions at Site 19
Article 6—Bonds and Insurance 21
6.01 Performance, Payment, and Other Bonds 21
6.02 Insurance—General Provisions 22
6.03 Contractor's Insurance 24
6.04 Builder's Risk and Other Property Insurance 25
6.05 Property Losses; Subrogation 25
6.06 Receipt and Application of Property Insurance Proceeds 27
Article 7—Contractor's Responsibilities 27
7.01 Contractor's Means and Methods of Construction 27
7.02 Supervision and Superintendence 27
7.03 Labor; Working Hours 27
7.04 Services, Materials, and Equipment 28
7.05 "Or Equals" 28
7.06 Substitutes 29
7.07 Concerning Subcontractors and Suppliers 31
7.08 Patent Fees and Royalties 32
7.09 Permits 33
7.10 Taxes 33
7.11 Laws and Regulations 33
7.12 Record Documents 33
7.13 Safety and Protection 34
7.14 Hazard Communication Programs 35
7.15 Emergencies 35
7.16 Submittals 35
7.17 Contractor's General Warranty and Guarantee 38
7.18 Indemnification 39
7.19 Delegation of Professional Design Services 39
Article 8—Other Work at the Site 40
8.01 Other Work 40
8.02 Coordination 41
8.03 Legal Relationships 41

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Article 9—Owner's Responsibilities 42
9.01 Communications to Contractor 42
9.02 Replacement of Engineer 42
9.03 Furnish Data 42
9.04 Pay When Due 42
9.05 Lands and Easements; Reports, Tests, and Drawings 43
9.06 Insurance 43
9.07 Change Orders 43
9.08 Inspections, Tests, and Approvals 43
9.09 Limitations on Owner's Responsibilities 43
9.10 Undisclosed Hazardous Environmental Condition 43
9.11 Evidence of Financial Arrangements 43
9.12 Safety Programs 43
Article 10—Engineer's Status During Construction 44
10.01 Owner's Representative 44
10.02 Visits to Site 44
10.03 Resident Project Representative 44
10.04 Engineer's Authority 44
10.05 Determinations for Unit Price Work 45
10.06 Decisions on Requirements of Contract Documents and Acceptability of Work 45
10.07 Limitations on Engineer's Authority and Responsibilities 45
10.08 Compliance with Safety Program 45
Article 11—Changes to the Contract 46
11.01 Amending and Supplementing the Contract 46
11.02 Change Orders 46
11.03 Work Change Directives 46
11.04 Field Orders 47
11.05 Owner-Authorized Changes in the Work 47
11.06 Unauthorized Changes in the Work 47
11.07 Change of Contract Price 47
11.08 Change of Contract Times 49
11.09 Change Proposals 49
11.10 Notification to Surety 50

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Article 12—Claims 50
12.01 Claims 50
Article 13—Cost of the Work; Allowances; Unit Price Work 51
13.01 Cost of the Work 51
13.02 Allowances 55
13.03 Unit Price Work 55
Article 14—Tests and Inspections; Correction, Removal, or Acceptance of Defective Work 56
14.01 Access to Work 56
14.02 Tests, Inspections, and Approvals 56
14.03 Defective Work 57
14.04 Acceptance of Defective Work 58
14.05 Uncovering Work 58
14.06 Owner May Stop the Work 58
14.07 Owner May Correct Defective Work 59
Article 15—Payments to Contractor; Set-Offs; Completion; Correction Period 59
15.01 Progress Payments 59
15.02 Contractor's Warranty of Title 62
15.03 Substantial Completion 62
15.04 Partial Use or Occupancy 63
15.05 Final Inspection 64
15.06 Final Payment 64
15.07 Waiver of Claims 65
15.08 Correction Period 66
Article 16—Suspension of Work and Termination 67
16.01 Owner May Suspend Work 67
16.02 Owner May Terminate for Cause 67
16.03 Owner May Terminate for Convenience 68
16.04 Contractor May Stop Work or Terminate 68
Article 17—Final Resolution of Disputes 69
17.01 Methods and Procedures 69
Article 18—Miscellaneous 69
18.01 Giving Notice 69
18.02 Computation of Times 69

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18.03 Cumulative Remedies 70
18.04 Limitation of Damages 70
18.05 No Waiver 70
18.06 Survival of Obligations 70
18.07 Controlling Law 70
18.08 Assignment of Contract 70
18.09 Successors and Assigns 70
18.10 Headings 70

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. 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, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. *Bidder*—An individual or entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document 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, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. *Claim*

a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

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requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

d. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.

14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

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recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.

23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

29. *Notice to Proceed*—A written notice 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.

30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

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33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.

36. *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.

37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *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, and such other lands or areas furnished by Owner which are designated for the use of Contractor.

39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

40. *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.

41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *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 of such Work.

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43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.

44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.

45. *Supplier*—A manufacturer, fabricator, supplier, distributor, 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 a Subcontractor.

46. *Technical Data*

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

    c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *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; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

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1.02 *Terminology*

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*: 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 Article 10 or any other provision of the Contract Documents.

C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

3. 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 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means 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.

2. The word "install," when used in connection with services, materials, or equipment, means 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, means to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

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F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. 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 Performance and Payment Bonds; Evidence of Insurance*

A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. *Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), 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;

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

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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.

2.04 *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 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, 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 and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *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 the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will 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.

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 the component parts of the Work.

4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

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ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one Contract Document 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.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will 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.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract 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, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

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inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or 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) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) 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 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

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 part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); 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 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

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B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors and Suppliers shall not:

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 versions, or 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; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract 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 Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *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

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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.

4.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 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 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

A. If Owner, Engineer, 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 Contract Price or Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;

2. Abnormal weather conditions;

3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and

4. Acts of war or terrorism.

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D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.

2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.

3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;

2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;

3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;

4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and

5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor in writing 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.

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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 permanent improvements are to be made and 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.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, 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 any such claim, and against all 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 directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will 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 and adjacent areas all tools, appliances, construction equipment

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and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of 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 structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents*: Except for such reliance on 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;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

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5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;

2. is of such a nature as to require a change in the Drawings or Specifications;

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;

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 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

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Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

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 Paragraph 13.03; and,

c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

a. Contractor knew of the existence of such condition at the time Contractor made a 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 otherwise;

b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

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3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then 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 7.15), notify Owner and Engineer in writing regarding such Underground Facility.

C. *Engineer's Review*: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

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or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. 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 Paragraph 13.03;

b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

c. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on 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

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of construction to be employed by Contractor, and safety precautions and programs incident thereto;

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 removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) 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 permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. 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, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. 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

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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, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. 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, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

J. 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 failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

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Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond 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 must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.

B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

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Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.

F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If either party does not purchase or maintain the insurance required of such party by the Contract, 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.

J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

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L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;

2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

4. apply with respect to the performance of the Work, whether such performance is 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; and

5. include all necessary endorsements to support the stated requirements.

C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

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4. not seek contribution from insurance maintained by the additional insured; and

5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.

C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.

D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.

E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

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Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the 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, risks, 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 Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, 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.
2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

1. 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 all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.

C. The waivers in this Paragraph 6.05 include the waiver of rights 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 insured peril, risk, or cause of loss.

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, 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 fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

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6.06 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *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.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *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 maintain good discipline and order at the Site.

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B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.

C. 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 will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *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, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will 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 must 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.

7.05 *"Or Equals"*

A. *Contractor's Request; Governing Criteria*: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item 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 is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that the proposed item:

1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

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2) 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;

3) has a proven record of performance and availability of responsive service; and

4) is not objectionable to Owner.

b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

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3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:

    a. will certify that the proposed substitute item will:

        1) perform adequately the functions and achieve the results called for by the general design;

        2) be similar in substance to the item specified; and

        3) be suited to the same use as the item specified.

    b. will state:

        1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;

        2) 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

        3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

    c. will identify:

        1) all variations of the proposed substitute item from the item specified; and

        2) available engineering, sales, maintenance, repair, and replacement services.

    d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. 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.

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E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

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H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

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

K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *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 an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed 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.

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7.09 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. 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 the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *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.

7.11 *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. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and 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 such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

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7.13 *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.

B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. 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, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.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 at its expense (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 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).

E. 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.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. 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.

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I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as 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.

7.15 *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 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 by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

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3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

a. Contractor shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must 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 7.16.C.

2. *Samples*

a. Contractor shall submit the number of Samples required in the Specifications.

b. Contractor shall 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 7.16.C.

3. 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. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. 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, comply with the requirements of 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, or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.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 will

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document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. *Resubmittal Procedures for Shop Drawings and Samples*

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.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

   a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

   b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

   c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

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d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *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 is entitled to rely on Contractor's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, 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.

D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:

1. Observations by Engineer;

2. Recommendation by Engineer or payment by Owner of any progress or final payment;

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;

6. The issuance of a notice of acceptability by Engineer;

7. The end of the correction period established in Paragraph 15.08;

8. Any inspection, test, or approval by others; or

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9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, 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 losses, damages, costs, and judgments (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 from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage 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 7.18.A will 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.

7.19 *Delegation of Professional Design Services*

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

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D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;

2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and

3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. 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.

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E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, 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.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

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B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) 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 any such claims, and against all 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 damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

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9.05 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *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 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.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *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 (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

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.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

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ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *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.

10.02 *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 10.07. 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.

10.03 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer's authority as to changes in the Work is set forth in Article 11.

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E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, 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, will 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 Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, 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 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

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ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

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

1. Changes in 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;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

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B. If Owner has issued a Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes 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. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-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. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *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, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Contract Price will be determined as follows:

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1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will 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 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
      b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 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 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
      d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
      e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
      f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

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11.08 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

    a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

    b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

    The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review*: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. *Engineer's Full Review and Action on the Change Proposal*: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

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Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *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.

ARTICLE 12—CLAIMS

12.01 *Claims*

A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:

1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;

2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;

3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and

4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.

B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

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and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.

2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.

E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

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2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will 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 in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will 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 accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will 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, which 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 will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

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

5. Other costs consisting of 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, which are

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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.

1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed 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 builder's risk or other property insurance established in accordance with Paragraph 6.04), 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 include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

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g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as communication 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 that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general 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 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

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

5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:

a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.

b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:

1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.

2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.

2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

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Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 *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*: Contractor agrees that:

1. 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

2. 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 the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's 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 for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 *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. Payments to Contractor for Unit Price Work will be based on actual quantities.

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. 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 on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

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thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction 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 with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

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.

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D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;

3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. 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. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

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losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages 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. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then 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, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages 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 pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. 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, 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, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *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, then Owner may order Contractor to stop the Work,

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or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will 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.

14.07 *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 defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, 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, 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 incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. 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.

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 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *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.

2. 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 must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

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establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, 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 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 13.03, 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; 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.

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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;

    b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

    c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;

    d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; 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 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

    a. the Work is defective, requiring correction or replacement;

    b. the Contract Price has been reduced by Change Orders;

    c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

    d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

    e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

    a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

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b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

c. Contractor has failed to provide and maintain required bonds or insurance;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

f. The Work is defective, requiring correction or replacement;

g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. The Contract Price has been reduced by Change Orders;

i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. 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; or

l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, 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, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *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 and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

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submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

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 preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. 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 punch list.

15.04 *Partial Use or Occupancy*

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

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significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be 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 15.03.A through 15.03.E for that part of the Work.

2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work 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 15.03 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 6.04 regarding builder's risk or other property insurance.

15.05 *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, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *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, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.

2. The final Application for Payment must be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents;

   b. consent of the surety, if any, to final payment;

   c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

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d. a list of all duly pending Change Proposals and Claims; and

e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) 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, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Final Application and Recommendation of Payment*: 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 have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. 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. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

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appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *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 Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such adjacent areas;
2. correct such defective Work;
3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, 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. Contractor shall pay all 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). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. 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.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, 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.

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F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *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 written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and 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);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or

4. Contractor's repeated disregard of the authority of Owner or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.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 the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

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attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds 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.

F. 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, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

A. Upon 7 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; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 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 16.03.

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, 7 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

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provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal 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 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

A. *Disputes Subject to Final Resolution*: The following disputed matters are subject to final resolution under the provisions of this article:

1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and

2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.

B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:

1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;

2. agree with the other party to submit the dispute to another dispute resolution process; or

3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or

3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

A. When any period of time is referred to in the Contract 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.

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18.03 *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. 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.

18.04 *Limitation of Damages*

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is 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.

18.09 *Successors and Assigns*

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

18.10 *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 OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

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—for example, “Paragraph SC-4.05.”

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

SC-1.01 Add the following definition in Paragraph 1.01.A immediately after definition Number 50.

51. *Clarification and Interpretation* – Synonymous with Request for Information (RFI), which is the procedure used to receive written interpretation from the Engineer regarding construction details, specifications, intended end product uses, or notes contained on the contract documents, which the Contractor requires additional information in order to proceed with the work.

ARTICLE 2—PRELIMINARY MATTERS

2.02 *Copies of Documents*

SC-2.02 Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor three printed copies of the Contract Documents (including one fully signed counterpart of the Agreement), and **one copy** in electronic portable document format (PDF).

2.05 *Initial Acceptance of Schedules*

SC-2.05 Add the following paragraph immediately after Paragraph 2.05.A:

B. A meeting specifically to review Contractor’s schedules as referred to in Paragraph 2.05 will not be held unless deemed necessary by Engineer after receipt of the Contractor’s schedules required by Paragraph 2.03.A.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, RUSE

No suggested Supplementary Conditions in this Article.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.03 *Reference Points*

SC-4.03 Add the new following paragraph immediately after Paragraph 4.03.A:

B. Reference Points from which Contractor shall be responsible for laying out the Work are included on the project drawings.

ARTICLE 5 – SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.03 *Subsurface and Physical Conditions*

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely:

Report Title	Date of Report	Technical Data
NONE	N/A	NONE

F. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data, and specifically identifies the Technical Data upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
Civil Drawing Package	05-21-2025	All information in drawings with the exception of substation rocking.
Substation Physical Drawing Package	11-21-2025	All information in drawings.

G. Contractor may examine copies of reports and drawings identified in SC-5.03.E and SC-5.03.F that were not included with the Bidding Documents by request from Engineer.

5.05 *Underground Facilities*

SC-5.05 Delete Paragraph 5.05.A.3 in its entirety and insert the following in its place:

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities in advance of excavating or trenching, by contacting the Owners thereof and prospecting;

SC-5.05 Add the following new paragraphs immediately after Paragraph 5.05.A.5:

6. Existing underground installations such as water mains, sewers, telephone lines, power lines, and buried structures in the vicinity of the work to be done hereunder are indicated on the drawings only to the extent such information has been made available to or discovered by the Engineer in preparing the drawings. There is no guarantee as to the accuracy or completeness of such information, and all responsibility for the accuracy and completeness of such information, and all responsibility for the accuracy and completeness thereof is expressly disclaimed

7. The Contractor shall use his own information and shall not rely solely upon information shown on the drawings concerning existing underground installations.

8. Any delay, additional work, or extra cost to the Contractor caused by locating existing underground facilities not shown on the plans shall not constitute a claim for extra work, additional payment, or damages.

5.06 *Hazardous Environmental Conditions*

SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

Report Title	Date of Report	Technical Data
NONE	N/A	NONE

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
NONE	N/A	NONE

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Amend Paragraph 6.01A by adding the following language at the end of the first sentence:

The Performance Bond and Payment Bond shall guarantee faithful performance and the payment of all bills and obligations arising from the performance of the contract. Such bonds shall be conditioned upon the faithful performance of all the terms and conditions of the Contract Documents, including the holding harmless of Owner, and including the making good of any and all guarantees which the Contract Documents may require; and such bonds shall be further conditioned upon the payment of all laborers and materialmen who provide labor, materials, etc., actually used or rented in the performance of the contract, including insurance premiums and interest. Such bonds shall be approved by Owner.

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2010, 2013, or 2018 edition).

2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2010, 2013, or 2018 edition).

6.02 *Insurance – General Provisions*

SC-6.02 Add the following paragraphs immediately after Paragraph 6.02.N:

O. All certificates of insurance shall be filed with Owner on the standard ACORD CERTIFICATE OF INSURANCE form, or a similar form if acceptable to the Owner, showing the specific limits and provisions of insurance coverage required by the Contract Documents. In addition, Contractor shall provide Owner and Engineer prompt written notice should any required insurance be cancelled, non-renewed, materially changed or coverage or limits reduced for

any reason. Owner will deliver to Contractor evidence of insurance required of Owner, but only if specifically requested in writing by Contractor.

6.03 *Contractor's Insurance*

SC-6.03. Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03C:

D. *Workers' Compensation and Employer's Liability:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	**Policy limits of not less than:**
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Jones Act (if applicable)	
Bodily injury by accident—each accident	NONE
Bodily injury by disease—aggregate	NONE
Employer's Liability	
Each accident	$1,000,000
Each employee	$1,000,000
Policy limit	$1,000,000
Stop-gap Liability Coverage (if applicable)	
For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	NONE

Policy shall include "all states" coverage. Policy shall include a waiver of subrogation in favor of Owner and Engineer.

E. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:

1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
2. damages insured by reasonably available personal injury liability coverage, and
3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

F. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage.
    a. Such insurance must be maintained for three years after final payment.
    b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
2. Blanket contractual liability coverage, including but not limited to, coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
4. Underground, explosion, and collapse coverage.
5. Personal injury coverage.
6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
8. Policy shall include a waiver of subrogation in favor of Owner and Engineer.

G. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
2. Any exclusion for water intrusion or water damage.
3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
4. Any exclusion of coverage relating to earth subsidence or movement.
5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
6. Any limitation or exclusion based on the nature of Contractor's work.
7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

H. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	$2,000,000
Products—Completed Operations Aggregate	$2,000,000
Personal and Advertising Injury	$1,000,000
Bodily Injury and Property Damage—Each Occurrence	$1,000,000

I. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance 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. The automobile liability policy must be written on an occurrence basis. Policy shall include a waiver of subrogation in favor of Owner and Engineer.

Automobile Liability	Policy limits of not less than:
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	$1,000,000

J. *Umbrella or Excess Liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies. Policy shall include a waiver of subrogation in favor of Owner and Engineer.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	$2,000,000
General Aggregate	$2,000,000

K. *Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements:* Contractor may meet the policy limits specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy's policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limit of $2,000,000 after accounting for partial attribution of its limits to underlying policies, as allowed above.

L. *Contractor's Pollution Liability Insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage, including cleanup costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance must be maintained for no less than three years after final completion. Policy shall include a waiver of subrogation in favor of Owner and Engineer.

Contractor's Pollution Liability	Policy limits of not less than:
Each Occurrence/Claim	$1,000,000
General Aggregate	$1,000,000

M. *Contractor's Professional Liability Insurance:* Not required for this project.

6.04 *Builder's Risk and Other Property Insurance*

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provisions:

F. *Builder's Risk Requirements:* The builder's risk insurance must:

1. be written on a builder's risk "all risk" policy form that at a minimum includes insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment stored and in transit, and must not exclude the coverage of the following risks: fire; windstorm; hail; flood; earthquake, volcanic activity, and other earth movement; lightning; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; and water damage (other than that caused by flood).

    a. Such policy will include an exception that results in coverage for ensuing losses from physical damage or loss with respect to any defective workmanship, methods, design, or materials exclusions.

    b. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake, volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance will be provided through other insurance policies acceptable to Owner and Contractor.

2. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.

3. cover expenses incurred in the repair or replacement of any insured property, including but not limited to, fees and charges of contractors, engineers, and architects.

4. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier). This is replacement cost and not the contract price.

5. extend to cover damage or loss to insured property while in transit. This is replacement cost and not the contract price.
6. allow for the waiver of the insurer's subrogation rights, as set forth in this Contract.
7. allow for partial occupancy or use by Owner by endorsement, and without cancellation or lapse of coverage.
8. include performance/hot testing and start-up, if applicable.
9. be maintained in effect until the Work is complete, as set forth in Paragraph 15.06.D of the General Conditions, or until written confirmation of Owner's procurement of property insurance following Substantial Completion, whichever occurs first.
10. include as named insureds the Owner, Contractor, Subcontractors (of every tier), and any other individuals or entities required by this Contract to be insured under such builder's risk policy. For purposes of Paragraphs 6.04, 6.05, and 6.06 of the General Conditions, and this and all other corresponding Supplementary Conditions, the parties required to be insured will be referred to collectively as "insureds." In addition to Owner, Contractor, and Subcontractors of every tier, include as insureds the following:
    a. **NONE**
11. include, in addition to the Contract Price amount, the value of the following equipment and materials to be installed by the Contractor but furnished by the Owner or third parties:
    a. (7) 12.47 Reclosers – $31,000 each
    b. (4) 12.47kV S&C Switchgear – $33,675 each
    c. (1) 34.5-12.47kV 50MVA Transformer – $7,073 each

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.09 *Permits*

SC-7.09 Add the following new paragraph immediately after Paragraph 7.09.A:

B. The Owner is in the process of acquiring or has acquired the following permit(s):
    1. Permits as needed or required
    2. City Construction Permit (Fee Waived)

    The Contractor shall be solely responsible for implementing and maintaining all measures of these permits. To the fullest extent permitted by Laws and Regulations, the Contractor shall indemnify and hold harmless 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.

7.10 *Taxes*

SC-7.10 Add the new paragraphs immediately after Paragraph 7.10A:

1. It is the responsibility of the Contractor to understand the tax laws and pay taxes in accordance with these laws.
2. Refer to the Instruction to Bidders.

ARTICLE 8 – OTHR WORK AT THE SITE

No suggested Supplementary Conditions in this Article.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

SC-9.01 Add the following new paragraph immediately after Paragraph 9.01A:

B. Owner and Contractor will coordinate directly on other work performed on site.

SC-9.13 Add the following new paragraph immediately after Paragraph 9.12 of the General Conditions:

9.13 *Owner's Site Representative*

A. Owner will furnish an "Owner's Site Representative" to represent Owner at the Site and assist Owner in observing the progress and quality of the Work. The Owner's Site Representative is not Engineer's consultant, agent, or employee. Owner's Site Representative will be City of Seward, Nebraska. The authority and responsibilities of Owner's Site Representative follow:

   a. Helping define project goals, timelines, and budgets, ensuring they are consistent with Owner's vision and contribute to effective capital planning.

   b. Monitoring expenses and managing cost control so everything is within the approved construction budget.

   c. Reviewing and negotiating contracts with contractors, vendors, and other stakeholders.

   d. Acting as the main point of contact between Owner, contractors, architects, and other project stakeholders.

   e. Identifying potential risks, delays, cost overruns, and quality issues, and then taking steps to mitigate them.

   f. Monitoring construction progress and seeing to it that work meets quality standards and specifications. This could also involve long-term maintenance and asset lifecycle management considerations.

   g. Keeping the project on track by overseeing timelines and addressing scheduling conflicts.

   h. Ensuring that all work complies with safety regulations, building codes, and contractual obligations.

   i. Conducting regular construction site inspections to verify that the project meets the Owner's expectations and industry standards.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.03 *Resident Project Representative*

SC 10.03 Add the following new subparagraph immediately after Paragraph 10.03.A:

3. On this Project, by Agreement with the Owner, the Engineer will not furnish a Resident Project Representative to represent Engineer at the Site or assist Engineer in observing the progress and quality of the Work.

ARTICLE 11 – CHANGES TO THE CONTRACT

11.02 *Change Orders*

SC-11.02 Add the following paragraph immediately after Paragraph 11.02.B:

C. At the time of execution of a Change Order or Written Agreement, Owner and Contractor expressly acknowledge that said Change Order or Written Agreement provides for a fair and equitable adjustment in Contract Price and/or Contract Time for the additions, deletions, or revisions in the Work as authorized by said Change Order or Written Agreement. Owner and Contractor further expressly acknowledge that later claims for adjustments to the Contract Price and/or Contract Time associated with said Change Order or Written Agreement are not valid.

ARTICLE 12—CLAIMS

No suggested Supplementary Conditions in this Article.

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

13.01 *Cost of the Work*

13.03 *Unit Price Work*

SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

   a. the extended price of a particular item of Unit Price Work amounts to **5** percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than **25** percent from the estimated quantity of such item indicated in the Agreement; and

   b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCCEPTANCE OF DEFECTIVE WORK

No suggested Supplementary Conditions in this Article.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

15.01 *Progress Payments*

SC-15.01 Add the following paragraph immediately after Paragraph 15.01.B.2:

a. Progress Payment shall be accompanied by such data, satisfactory to Owner, as will establish Owner's title to the materials and equipment and protect his interest therein, including applicable insurance. Payments for such materials and equipment shall be based only upon the actual cost of the materials and equipment to Contractor and shall not include any overhead or profit to Contractor.

SC-15.01 Add the following paragraph immediately after Paragraph 15.01.B.4:

5. Each Application for Progress Payment shall be accompanied by Contractor's updated schedule of operations, or progress report, with such shop drawings schedules, procurement schedules, value of material on hand included in application, and other data or reasonably required by Engineer.

15.03 *Substantial Completion*

SC-15.03 Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

SC-15.03 Add the following new paragraph immediately after Paragraph 15.03.F:

G. Portions of the Work, which can be completed without interruption of the intended operation, may be completed after the Work is accepted as substantially complete.

Those items include:

a. Seeding and minor grade restoration

b. Final painting or labeling

c. Minor corrections or adjustments to equipment

d. Documentation updates

e. Other items that do not prevent safe energization.

15.04 *Partial Use or Occupancy*

SC-15.04 Add the following paragraphs immediately after Paragraph 15.04.A:

B. Owner has the right to take possession of or use any completed or substantially completed portions of the Work at any time, but such taking possession or use will not be deemed an acceptance of any Work not completed in accordance with the Contract Documents.

Owner's use of any facilities so identified in the Contract Documents will not be grounds for extension of the Contract Time or change in the Contract Price.

Owner's use of any facilities not specifically identified in the Contract Documents will be in accordance with conditions agreed to prior to such use, and any extra costs or delays in completion incurred and properly claimed by Contractor will be equitably adjusted with a Change Order.

Facilities substantially completed in accordance with the Contract Documents which are occupied or used by Owner prior to Substantial Completion of the entire Work will be defined by Engineer in a written notice to Owner and Contractor fixing the responsibility for insurance and maintenance on that part of the Work and including a tentative list of items to be completed or corrected before final acceptance.

Guarantee periods for accepted or substantially completed Work, including mechanical and electrical equipment, will commence upon the start of continuous use by Owner.

All tests and instruction of Owner's personnel must be satisfactorily completed, and Owner shall assume responsibility for, and operation of all facilities occupied or used except as may arise through portions of the Work not yet completed by Contractor.

SC-15.08 Delete the word “Substantial” in Paragraph 15.08.A and replace it with the word “Final”.

SC-15.08 Add the following paragraph immediately after Paragraph 15.08.F:

G. Nothing in the General Conditions Article 14 concerning the correction period shall establish a period of limitation with respect to any other obligation which Contractor has under the Contract Documents. The establishment of time periods relates only to the specific obligations of Contractor to correct the Work and has no relationship to the time within which his obligations under the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish his liability with respect to his obligations other than to specifically correct the Work.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No suggested Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

17.01 *Final Resolution of Disputes*

SC-17.01 Delete Paragraph 17.01.B in its entirety and insert the following paragraphs in its place:

B. *Final Resolution of Disputes*: For any dispute subject to resolution under this Article, the Owner shall have the right, within its sole discretion, to choose one of the following dispute

resolution processes and Contractor shall submit to and be bound by the process chosen by the Owner:

1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
2. submit the dispute to a court of competent jurisdiction in the state in which the Project is located; or
3. agree with the Contractor to submit the dispute to another dispute resolution process.

ARTICLE 18—MISCELLANEOUS

SC-18.10 Add the following paragraphs immediately following Paragraphs 18.10:

18.11 *Record Drawings*

A. The Contractor shall keep one copy of all specifications, drawings, addenda, modifications, and shop drawings at the site in good order and annotated to show all changes made during the construction process. These shall be available to the Engineer and shall be delivered to him for the Owner upon completion of the Project with final Application for Payment.

18.12 *Liquidated Damages*

A. Should Contractor fail to achieve milestones, Substantial Completion or Final Completion of the Work within the periods of time stipulated in the Agreement, Contractor shall pay to Owner, as liquidated damages and not as a penalty, the amounts stipulated in the Agreement per day of delay unless Contract Time is extended by Owner. Owner shall deduct the liquidated damages from the Contractor's Final Payment; rates shall be as stated in the Agreement.

18.13 *Historical or Archaeological Deposits*

A. If, during the course of construction, evidence of deposits of historical or archaeological interest is found, the Contractor shall cease operations affecting the find and shall notify the Owner who shall notify the appropriate State Agencies including the State Historical Preservation Office. No further disturbance of the deposits shall ensue until the Contractor has been notified by the Owner that he may proceed. The Owner will issue a notice to proceed only after the state official has surveyed the find and make a determination to the appropriate State Agencies and Owner. Compensation to the Contractor, if any, for lost time or change in construction to avoid the find, shall be determined in accordance with changed site conditions or change order provisions of the specifications.

18.14 *New Employee Work Eligibility Status*

A. 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.

18.17 *Equal Employment Opportunity*

A. Contractor and any sub-consultant or subcontractor shall abide by the requirements of 41 CFR 60-1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability or veteran status.

APPENDIX A
GEOTECHNICAL REPORT AND ADDENDUM NO.

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GEOTECHNICAL EXPLORATION REPORT

Project Name:

Seward Industrial Substation

Seward, Nebraska

Prepared for:

City of Seward, Nebraska



March 25, 2019

Olsson Project No. 018-1509

olsson

TABLE OF CONTENTS

1. Project Understanding 1
1.1. Geotechnical Scope 1
1.2. Site Location and Description 1
1.3. Project Information 2
2. Exploration and test procedures 3
2.1. Field Exploration 3
2.2. Laboratory Testing 3
3. Subsurface Conditions 5
3.1. Subsurface Profile 5
3.2. Groundwater Summary 7
4. Site Preparation 8
4.1. General Site Preparation 8
4.2. Structural Fill 8
4.3. Drainage and Groundwater Considerations 10
4.4. Construction Equipment Mobility 11
4.5. Temporary Slopes and Excavations 12
5. Structures 13
5.1. Shallow Foundation Design 13
5.2. Drilled Shaft Foundation Design 14
5.3. Slabs-on-Grade 15
5.4. Lateral Earth Pressures 15
5.5. Seismic Site Classification 17
6. Soil Chemistry Testing 18
7. Report Limitations and Closure 19

LIST OF FIGURES

Figure 1. 2016 Aerial Photograph 2

LIST OF TABLES

Table 1. Altered Alluvium Laboratory Test Results. 5
Table 2. Altered Alluvium Standard Proctor Results. 5
Table 3. Cohesive Alluvium Laboratory Test Results. 6
Table 4. Cohesionless Alluvium Laboratory Test Results. 6
Table 5. Nebraskan Age Glacial Till Laboratory Test Results. 7
Table 6. Groundwater Measurements. 7
Table 7. Structural Fill Placement Guidelines. 10
Table 8. Drilled Shaft Design Parameters. 14
Table 9. Earth Pressure Parameters. 16
Table 10. Soil Corrosivity Evaluation. 18
Table 11. Sulfate and Chloride Testing. 18

APPENDICES

Appendix A: Site Location Plan, Boring Location Map

Appendix B: Symbols and Nomenclature, Boring Logs

Appendix C: Summary of Laboratory Test Results

March 25, 2019

City of Seward, Nebraska
Attn: Larry Ruether
PO Box 38
Seward, Nebraska 68434

RE: Geotechnical Exploration
Seward Industrial Substation
Seward, Nebraska
Olsson Project No. 018-1509

Dear Mr. Ruether:

Olsson, Inc. has completed the authorized geotechnical exploration for the above referenced project. The geotechnical exploration was conducted to evaluate physical characteristics of subsurface conditions with respect to design and construction of the project. The enclosed report summarizes the project characteristics as we understand them, presents the findings of the borings and laboratory tests, discusses the observed subsurface conditions, and provides our geotechnical engineering recommendations.

We appreciate the opportunity to provide our geotechnical engineering services for this project. We are prepared to provide construction testing and inspection services on this project as well. If you have any questions or need further assistance, please contact us at your convenience.

Respectfully submitted,
Olsson, Inc.





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1. PROJECT UNDERSTANDING

1.1. Geotechnical Scope

This report presents the results of the geotechnical exploration performed for the proposed substation located northwest of the intersection of Highway 15 and Walker Road near Seward, Nebraska.

The purpose of this exploration was to evaluate the subsurface conditions encountered at the site and based on these conditions, provide geotechnical design recommendations for the proposed substation structures. Our scope of services generally included the following tasks:

- Perform visual site observations and review available information regarding general geologic conditions.
- Drill four (4) soil test borings to a depth of 40 feet within the proposed substation.
- Conduct a geotechnical engineering evaluation using information obtained from our field observations, soil test borings, laboratory tests, and information available regarding the proposed construction.
- Prepare this Geotechnical Exploration Report containing the soil test boring logs, laboratory test results, and a summary of our engineering evaluations and recommendations.

1.2. Site Location and Description

The proposed substation will be located approximately 0.4 miles northwest of the intersection of Highway 15 and Walker Road in Seward, Nebraska. At the time of our field exploration, the site surface comprised grass and was accessible to a truck-mounted drilling rig. The approximate location of the proposed substation is shown in Figure 1.



Figure 1. 2016 Aerial Photograph.

1.3. Project Information

We understand the proposed project will consist of the construction of a new electrical substation near Seward, Nebraska. We anticipate the majority of the substation structures will consist of H-frame structures, circuit breakers, and transformers. We anticipate the new substation structures and equipment will be supported on shallow mat or drilled shaft foundations. We anticipate the shallow mat foundation for the transformer will have dimensions of approximately 10.5 feet by 6.5 feet and have an applied pressure of 1,500psf.

Spot elevations completed by the ***Olsson*** drilling team indicated approximately 1.5 feet of grade change across the substation site. The finished grade for the proposed substation was assumed to be an elevation of 100.0. As such, up to 1.5 feet of fill and minimal excavation (less than one foot) may be required to achieve the design site grade.

2. EXPLORATION AND TEST PROCEDURES

2.1. Field Exploration

Our drill crew advanced four test borings for this exploration with a truck-mounted drilling rig using continuous-flight augers. Boring locations were selected by an ***Olsson*** geotechnical engineer and located in the field by the drill crew using a hand-held GPS unit. The approximate locations of the borings are shown on the Boring Location Map presented in Appendix A.

The borings extended to depths of 40 feet below site grade at the time of our exploration. Soil samples were obtained at the intervals indicated on the boring logs presented in Appendix B. Samples designated “U” samples on the boring logs were obtained by hydraulically advancing a thin-walled tube sampler. Soil samples designated “SS” samples were obtained with a split-spoon barrel sampler while performing Standard Penetration Tests (SPT). Recovered samples were sealed in containers, labeled, and protected for transportation to the laboratory for testing.

Our drill crew obtained ground surface elevations at the boring locations with an automatic level using the finished floor of the existing building east of the proposed substation as a benchmark. We assigned the FFE of the existing building an arbitrary elevation of 100.0. The location of the benchmark is shown on the Boring Location Map presented in Appendix A. The surface elevations at the boring locations, rounded to the nearest half-foot, are presented on the boring logs.

The drill crew prepared field boring logs during drilling operations. The field logs include drilling and sampling methods, sampling intervals, groundwater measurements, and general descriptions of the observed soil conditions. The final boring logs presented in Appendix B represent our engineering interpretation of the field logs based on visual classification and laboratory testing of the collected samples.

2.2. Laboratory Testing

The soils encountered in the borings were visually classified and described in general accordance with the Unified Soil Classification System (USCS). We also performed laboratory tests to evaluate the engineering properties of the recovered soil samples. The testing program included moisture content, density/unit weight, P200 sieve wash, unconfined compressive strength, unconsolidated-undrained compressive strength, Atterberg limits, consolidation, standard proctor

testing, and soil chemistry. Laboratory test results are included on the soil boring logs presented in Appendix B and are summarized in Appendix C.

3. SUBSURFACE CONDITIONS

3.1. Subsurface Profile

The subsurface soils at this site comprised alluvial deposits and Nebraskan Age glacial till. The general characteristics of each soil stratum are summarized below, with more detailed descriptions provided on the boring logs in Appendix B.

Please note that the boring logs represent subsurface conditions at the specific boring locations at the time of our field exploration; variations may occur between or beyond the borings. The stratification lines shown on the logs represent the approximate boundary between material types. However, the transition between layers may be gradual. The depths referenced in the following paragraphs are relative to the site grade at the time of our exploration.

Surfacing and Topsoil

We encountered a 4- to 6-inch thick topsoil zone in each of the borings.

Altered Alluvium

We encountered altered alluvium in each of the borings, underlying the topsoil and extending to a depth of 3 feet. Altered alluvium soils generally comprised fat clay (CH) and were described as stiff to hard, dark brown to very dark brown, and moist to very moist.

Table 1. Altered Alluvium Laboratory Test Results.

USCS Classification	Moisture Content (%)	Dry Density (pcf)	Unconfined Strength (tsf)	Atterberg Limits			% Passing P200	SPT "N" Values (bpf)
				Liquid Limit (%)	Plastic Limit (%)	Plastic Index (%)		
CH	23.1 – 29.0	90.4 – 100.7	1.2 – 5.7	51 – 62	21 – 25	30 – 37	--	--

Table 2. Altered Alluvium Standard Proctor Results.

Sample Description	Sample Depth (feet)	Maximum Dry Density (pcf)	Optimum Moisture Content (%)	% passing P200
Very dark brown clay from B-4	1.0 – 3.0	101.0	20.5	--

Cohesive Alluvium

We encountered cohesive alluvium in each of the borings, underlying the existing fill and extending to depths of 18.0 to 23.5 feet. Cohesive alluvium generally comprised lean clay (CL) to sandy lean clay (CL) and was described as soft to stiff, light grayish brown to grayish brown, and moist to wet.

Table 3. Cohesive Alluvium Laboratory Test Results.

USCS Classification	Moisture Content (%)	Dry Density (pcf)	Unconfined Strength (tsf)	Atterberg Limits			% Passing P200	SPT "N" Values (bpf)
				Liquid Limit (%)	Plastic Limit (%)	Plastic Index (%)		
CL	21.1 – 37.3	86.9 – 96.8	0.6 – 2.0	39	21	18	--	3 – 9

Cohesionless Alluvium

We encountered cohesionless alluvium in each of the borings, underlying the cohesive alluvium and extending to a depth of 31.0 feet to 40.0 feet. Cohesionless alluvium generally comprised fine to coarse sand and was described as medium dense to dense, light brown, and wet.

Table 4. Cohesionless Alluvium Laboratory Test Results.

USCS Classification	Moisture Content (%)	Dry Density (pcf)	Unconfined Strength (tsf)	Atterberg Limits			% Passing P200	SPT "N" Values (bpf)
				Liquid Limit (%)	Plastic Limit (%)	Plastic Index (%)		
SP, SC, SM, SP/SM	16.3 – 22.8	--	--	--	--	--	6.5 – 35.8	11 – 41

Nebraskan Age Glacial Till

We encountered Nebraskan Age glacial till in borings B-1, B-2, and B-3, underlying the cohesionless alluvium and extending to at least the boring depths of 40.0 feet. Nebraskan Age glacial till generally comprised fat clay (CH) and was described as stiff to very stiff, dark gray, and wet.

Table 5. Nebraskan Age Glacial Till Laboratory Test Results.

USCS Classification	Moisture Content (%)	Dry Density (pcf)	Unconfined Strength (tsf)	Atterberg Limits			% Passing P200	SPT "N" Values (bpf)
				Liquid Limit (%)	Plastic Limit (%)	Plastic Index (%)		
CH	20.5 – 21.6	--	--	--	--	--	--	11 – 26

3.2. Groundwater Summary

We encountered groundwater in our soil borings as summarized in Table 6 and as indicated on the boring logs presented in Appendix B.

Table 6. Groundwater Measurements.

Boring No.	Ground-water Depth While Drilling (feet)	Ground-water Elevation While Drilling	Ground-water Depth Immediately After Drilling (feet)	Ground-water Elevation Immediately After Drilling	Ground-water Depth After Drilling (feet)	Ground-water Elevation After Drilling
B-1	22.0	79.0	14.2	86.8	15.0	86.0
B-2	19.5	80.0	13.0	86.5	14.8	84.7
B-3	19.0	81.5	14.1	86.4	14.2	86.3
B-4	23.5	75.5	13.0	86.0	12.7	86.3

The above groundwater measurements provide an indication of the on-site groundwater conditions at the time the borings were drilled but should not be construed to represent a permanent or absolute condition. Variations and uncertainties exist with relatively short-term water level observations in boreholes.

Groundwater levels will fluctuate with variations in precipitation, site grading, drainage, and adjacent land use. Perched groundwater conditions can also develop in seams of loose or granular soil. Long-term monitoring with piezometers generally provides a more representative indication of the potential range of groundwater conditions. Recommendations for addressing potential groundwater concerns during design and construction are presented in **Section 4.3** of this report.

4. SITE PREPARATION

4.1. General Site Preparation

Vegetation, topsoil, roots, and other deleterious materials deemed unsuitable by a qualified field observer should be removed from the proposed construction area and replaced with controlled fill. We recommend site clearing, grubbing, and stripping be performed during dry weather conditions. Operation of heavy equipment on the site during wet conditions could result in excessive rutting and mixing of organic debris with the underlying soils.

At the base of stripping operations and prior to the placement of structural fill, we recommend the top 9 inches of the exposed subgrade soils be scarified and recompacted in accordance with **Section 4.2** of this report.

Based on laboratory testing, the altered alluvial soils have a moderate swell potential. Therefore, we recommend that the existing fat clay altered alluvial soils be overexcavated in areas of slabs-on-grade and replaced with properly compacted structural fill to a depth of 24 inches in accordance with **Section 4.2.**

Soils which cannot be adequately densified in-place should be removed or stabilized under the direction of an ***Olsson*** representative. The extent of areas requiring removal or stabilization will depend on the conditions observed at the time of construction. Undercut areas should be backfilled with stable fill material similar in composition to the surrounding soils. If necessary, crushed stone may be used to stabilize areas where wet soil or water is present. Geogrid or geosynthetic fabric may be used in conjunction with the crushed stone to provide additional stabilization. Chemical stabilization methods such as fly ash, cement kiln dust (CKD), or Portland cement could also be used.

4.2. Structural Fill

We recommend that fill materials placed within 24 inches of the base of slabs-on-grade have a liquid limit of less than 45 and a plasticity index of less than 25. Soils with Atterberg limits greater than these values will require removal or blending with less plastic materials. All structural fill soils should also be relatively free of organic materials (less than about 2 percent by weight), debris, and particles larger than 3 inches in nominal diameter.

Based on our site observations and Atterberg limits testing performed as part of this exploration, the on-site soils generally appear suitable for reuse as structural fill as noted below. Samples of all proposed structural fill, including on-site soils, should be submitted to ***Olsson*** at least three days before placement for testing and approval.

- Alluvium
    - Suitable for reuse in all areas
- Altered Alluvium
    - Suitable for reuse at depths greater than 24 inches below the bottom of slabs-on-grade.

Proper lift thickness depends on the type of compaction equipment used, but in general, we recommend a maximum lift thickness of 8 inches in loose measurement. The soil should be compacted using equipment of appropriate type and size to achieve the recommendations presented in this report. In general, sheepsfoot or padfoot type compactors should be utilized on cohesive soils, while granular soils should be compacted using smooth-drum vibratory compactors. Water flooding is not an acceptable compaction method for any soil type.

Walk-behind rollers, vibrating plate compactors, or tamping rammers (commonly referred to as “jumping jacks”) can be used to achieve the specified compaction around manholes, behind retaining walls, or within footing and utility trenches. Lift thickness should be reduced to 4 inches in fill areas requiring such compaction equipment.

We recommend that structural fill and backfill be compacted in accordance with the criteria stated in Table 7. An ***Olsson*** field representative should periodically observe fill placement operations and perform field moisture-density tests to evaluate whether moisture content and compaction requirements are being achieved.

The moisture content of suitable borrow soils should be within the ranges specified in Table 7. More stringent moisture limits may be necessary with certain soils. Adjustment of moisture content may be necessary to allow compaction in accordance with project specifications.

Table 7. Structural Fill Placement Guidelines.

Area of Fill Placement	Compaction Recommendation (ASTM D698-Standard Proctor)	Moisture Content (Percent of Optimum)
Granular cushion beneath slabs (if used)	98%*	As necessary to obtain density
Slab Subgrade - 24 in. below base of slabs-on-grade	98%	Optimum to +3 percent
Other Structural Fill	98%	-1 to +3 percent
Utility trenches	98%	Optimum to +3 percent
Non-loaded landscaped/grass areas	92%**	As necessary to obtain density

* Or 70 percent Relative Density as described below. **Minor subsidence should be expected in these areas.

Granular fill materials may not produce a definable moisture-density curve when tested in accordance with ASTM D698 (Standard Proctor). Such materials could alternatively be compacted to a minimum of 70 percent relative density as determined by ASTM D4253 (Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table) and D4254 (Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculations of Relative Density).

Controlled low strength material (CLSM) or flowable fill may be used for utility or other small backfills. We recommend designing flowable fill with a compressive strength between 50 and 300 pounds per square inch (psi). CLSM with a maximum compressive strength less than 300 psi can be readily excavated with a backhoe. CLSM can be placed in a single lift, without personnel entering the excavation and without the need for compaction equipment.

4.3. Drainage and Groundwater Considerations

We encountered groundwater at the time of our exploration as indicated in Table 6. While we do not anticipate groundwater will affect slab-on-grade or shallow foundation construction activities, groundwater will likely be encountered in drilled shaft excavations. Please note that variations in groundwater elevations can be expected from seasonal changes in rainfall, temperature, snowmelt, runoff, localized irrigation demand, or other factors.

During construction, provisions should be made to quickly remove seepage water or storm water from excavations. Water should not be allowed to collect near foundations, floor slabs, pavements, or retaining walls either during or after construction. Undercut or excavated areas should be sloped toward one corner to facilitate the collection and removal of rainwater or surface runoff.

The performance of the proposed structures depends on maintaining the moisture content of the subgrade soils throughout the life of the facility. To reduce the effects of moisture fluctuations in and around the structure, we recommend providing efficient drainage of rainfall or surface runoff away from the proposed structures. Provide efficient drainage of rainfall or surface runoff away from structures.

4.4. Construction Equipment Mobility

Some of the soils encountered at this site are susceptible to softening under the action of construction equipment traffic in combination with wet weather. Mitigation of equipment mobility problems and management of soft surficial soils will depend on the severity of the problem, the season in which construction is performed, and prevailing weather conditions.

General guidelines for reducing equipment mobility problems are as follows:

- Optimize surface water drainage at the site.
- Allow for rain days in the construction schedule and wait for dry weather conditions to prevail whenever possible. Avoid operating construction equipment on the site during wet conditions. Rutting the surface will aggravate mobility problems.
- Use construction equipment that is suited for the intended job under the site conditions. Heavy rubber-tired equipment typically requires better site conditions than light, track-mounted equipment.

Ultimately, it may be necessary to take steps to aggressively improve construction mobility if construction must proceed under unfavorable conditions. More aggressive methods for addressing equipment mobility problems may range from removing several feet of soft wet soils to utilizing crushed stone materials and/or appropriate stabilization fabrics or geogrids. Other methods include chemical stabilization with Portland cement, fly ash, or cement kiln dust (CKD).

The stabilization approach should be determined at the time of construction in consultation with a geotechnical engineer from ***Olsson***.

Any soils that are disturbed by construction activity or adverse weather conditions should be corrected by the contractor to conform with project specifications and this report. Site grading should provide rapid drainage of water away from the building and pavement areas throughout construction.

4.5. Temporary Slopes and Excavations

The contractor or others performing work on the site are responsible for the means, methods, techniques, sequencing, and operations used during construction. Slope height, slope inclination, and excavation depths (including utility trench excavations) should in no case exceed those specified in local, state, or federal safety regulation; e.g., *OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926,* or successor regulations.

5. STRUCTURES

Based on the results of the soil test borings, laboratory testing, and our engineering evaluation, it is our opinion that the subsurface conditions are suitable for supporting the proposed structures on either shallow mat or drilled shaft foundations. Each foundation option is covered in more detail in the sections below.

5.1. Shallow Foundation Design

Based on the results of our exploration and engineering evaluation, the proposed structure may be supported on a conventional shallow foundation system. Assuming the recommendations in **Section 4** are implemented and that the finished grade for the substation is 100.0, the mat foundations will be supported on structural fill or alluvial soils. We recommend shallow foundations supported on alluvial soils or properly placed fill material be designed for a maximum net allowable soil bearing pressure of 2,000 pounds per square foot (psf).

The net allowable bearing pressure is the bearing pressure in excess of the minimum surrounding overburden pressure at the foundation level. Mat foundations in unheated areas should bear at a minimum depth of 3.5 feet below the lowest adjacent final ground surface. In no case should footings have dimensions smaller than allowed by local building codes.

An ultimate soil-concrete friction coefficient of 0.35 may be used to evaluate sliding resistance of shallow foundations supported on undisturbed native soils or properly compacted structural fill. Please see **Section 5.4** for information regarding lateral earth pressures.

Soft or otherwise unsuitable soils could be encountered during foundation construction. Therefore, foundation subgrades should be observed by an ***Olsson*** representative to identify such soils and provide recommendations as necessary. After foundation subgrades have been observed and any required remedial measures are performed, concrete should be placed as quickly as possible to avoid exposure of the foundation subsoils to wetting, drying or freezing. If foundation soils are subjected to such conditions, ***Olsson*** should be contacted to reevaluate the foundation bearing materials.

Provided shallow foundations are designed and constructed in accordance with the recommendations contained in this report, total post-construction settlements are anticipated to be less than 1 inch with differential settlements of less than 0.5 inch.

5.2. Drilled Shaft Foundation Design

Based on the existing site conditions, the proposed structures could also be supported on a drilled shaft foundation system. Drilled shaft foundation design should be based on the following:

- Drilled shafts should be designed using the allowable design parameters provided in Table 8. Allowable skin friction and end bearing values were determined using a factor of safety of 2.0. Skin friction should be neglected in the upper 3.5 feet from the adjacent ground surface due to frost penetration and desiccation. Drilled shafts should bear into the alluvial sands at an elevation of 77.0 or lower.

Table 8. Drilled Shaft Design Parameters.

Elevation (feet)	Soil Type	Allowable Compressive Skin Friction (psf)	Allowable End Bearing (psf)	Allowable Tension Skin Friction (psf)	Soil Unit Weight (pcf)	Cohesion (psf)	Static Lateral Modulus k* (pci)	Strain Factor E_{50}*
100 – 90	Clay	400	2,000	300	120	1,200	500	0.007
90 – 77	Clay	250	2,000	180	120	550	100	0.010
77 – 67	Sand	950	15,000	700	120	--	60	--
67 – 60	Clay	380	6,000	280	120	1,500	500	0.007

*Parameters for P-Y curve analysis of lateral pile response.

- The entire drilled shaft foundation should be placed in a single continuous pour; no construction joints should be allowed within the shaft.

- We encountered saturated sands which could result in caving or sloughing of a drilled shaft excavation. Drilling fluids, casing (either temporary or permanent), or both will likely be required to maintain a serviceable shaft excavation.

- Drilled shaft construction should include appropriate tools capable of removing loose, soft, or spalled material from the excavation base. Drilling equipment must also be capable of cutting a clean and plane bearing surface for the full shaft diameter.

- Concrete for drilled shafts should be placed as soon as reasonably possible after excavation. Concrete placed in drilled shaft excavations stabilized with temporary casing or drilling fluids should be placed by tremie and should typically exhibit a slump between 7 and 9 inches.

- An ***Olsson*** representative should be present full-time to observe drilled shaft installation.

- Total post-construction settlements of properly-installed drilled shaft foundations are anticipated to be 1-inch or less with minimal, if any, differential settlements.

5.3. Slabs-on-Grade

Based on a finished grade elevation of the substation of 100.00 and the recommendations outlined in **Section 4**, the slab-on-grade subgrade will comprise a minimum of 24 inches of lean clay structural fill.

Care should be taken to maintain the recommended subgrade moisture content and density between site grading operations and placement of the slab-on-grade. Periodic applications of water may be necessary to maintain the proper moisture content of the subgrade.

In many construction projects, slab-on-grade areas are disturbed by construction equipment traffic and are exposed to the elements between completion of grading operations and placement of the slab. Therefore, we recommend that the final slab subgrade be proofrolled and evaluated for moisture content and density immediately prior to placement of the granular leveling course or slab concrete. Unsuitable soils should be moisture conditioned and recompacted in accordance with Table 7 or be stabilized in accordance with **Section 4.2**.

Provided the recommendations presented in this report are implemented, a subgrade modulus of 100 pounds per square inch per inch (psi/in or pci) may be used to design the slab.

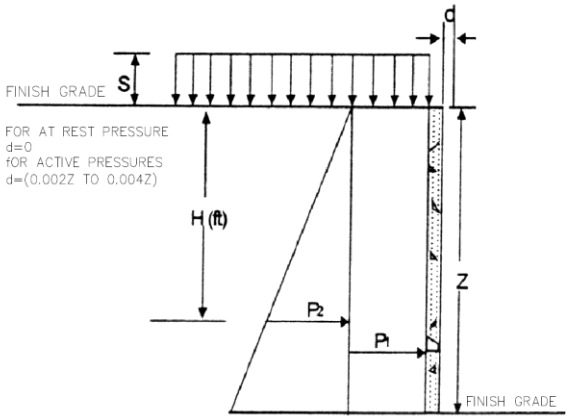
5.4. Lateral Earth Pressures

The following soil parameters are provided for designing grade retaining walls and/or foundation walls subject to lateral earth pressures. These parameters are based on the assumption that retained soils will be similar in composition to the on-site soils encountered during this investigation.

Walls which are rigidly restrained at the top and are essentially unable to deflect or rotate should be designed for at rest earth pressure conditions. Walls that are unrestrained at the top and are free to deflect or rotate slightly may be designed for active earth pressure conditions. The passive earth pressure condition is used to evaluate the resistance of soil to lateral loads. Table 9 presents recommended values of earth pressure coefficients and equivalent fluid densities based on our experience with soils in the area.

Table 9. Earth Pressure Parameters.

LEGEND OF SYMBOLS	
Z	Wall Height (ft)
H	Depth Below Surface (ft)
d	Wall Displacement (ft)
S	Surcharge Load (psf)
P_1	Surcharge Pressure (psf)
P_2	Earth Load (psf)
K	Coefficient of Earth Pressure
G	Equivalent Fluid Density (psf)
PRESSURE CALCULATIONS	
SURCHARGE PRESSURE	P_1 (psf) = K x S (psf)
EARTH PRESSURE	P_2 (psf) = G (pcf) x H (ft)



BACKFILL TYPE			FRICTION ANGLE	TOTAL SOIL DENSITY (pcf)
COHESIVE	Lean Clay (CL)		26°	120
GRANULAR*	Clean Sand or Gravel (SP, GP)		32°	120
EARTH PRESSURE COEFFICIENT (K)			**EQUIVALENT FLUID DENSITY (G)**	
			DRAINED CONDITION (pcf)	**UNDRAINED CONDITION (pcf)**
AT REST (K_0)	Cohesive	**0.56**	68	95
	Granular*	**0.47**	56	--
ACTIVE (K_a)	Cohesive	**0.39**	47	85
	Granular*	**0.31**	37	--
PASSIVE (K_p)	Cohesive	**2.00**	240	170
	Granular*	**3.00**	360	--

* We recommend granular backfill be permanently drained.

We developed the above parameters based on the following considerations:

- Equivalent fluid densities in Table 9 do not include a factor of safety or consider the effects of hydrostatic pressure, surcharge loading (P_1), point loads, or construction equipment loads.
- Mobilization of active pressure requires the wall rotate about the base, with top-of-wall movements (d) on the order of 0.002*Z to 0.004*Z (granular) or 0.010*Z to 0.020*Z (cohesive), where Z is the wall height.
- Mobilization of passive pressure requires a lateral wall movement (d) on the order of 0.020*Z to 0.060*Z (granular) or 0.020*Z to 0.040*Z (cohesive), where Z is the wall height.

- Drained earth pressure parameters assume a permanent drainage system is installed behind the wall to prevent the development of hydrostatic pressure.
- Backfill has a maximum unit weight of 120 pcf.
- The ground surface in front of and behind the wall is horizontal.

Backfill soils placed within a lateral distance from the face of the wall to 70 percent of the wall height should consist of granular material or select lean clay with a liquid limit less than 45. To utilize earth pressure parameters for granular materials, the granular backfill must extend out from the base of the wall at angles of 45 and 60 degrees from the vertical for the active and passive cases, respectively.

Sliding resistance along the base of a wall supported on suitable native soils or crushed limestone may be evaluated using ultimate sliding friction values of 0.30 or 0.45, respectively. Appropriate factors of safety should be applied to the calculated lateral earth pressures and sliding friction resistance. This factor of safety typically ranges from 1.5 to 2.0. Passive earth pressure resistance should be neglected within the frost zone (typically 3.5 feet).

5.5. Seismic Site Classification

We have reviewed the subsurface data collected as part of this exploration as well as other available geologic data to evaluate the subsurface materials to a depth of 100 feet. Based on these data, we recommend the site be assigned a Site Class of D as defined in Chapter 20 of ASCE 7-10 and the 2015 International Building Code.

6. SOIL CHEMISTRY TESTING

A series of chemical tests was performed as part of our laboratory testing program to evaluate soil corrosivity in accordance with AWWA C105/A21.5-93. Tests were performed on a representative sample collected from within the proposed substation. The test results are presented in Appendix C of this report, while soil corrosivity point totals are presented in Table 10.

Table 10. Soil Corrosivity Evaluation.

Sample Location	B-2 U-1 (1.0 – 2.5')
Resistivity	1
pH	0
Redox	0
Sulfides	0
Moisture	2
Total Points	3

Based on the above total, we expect the soils are minimally corrosive to steel and ductile iron piping.

We also performed sulfate and chloride ion tests in accordance with AASHTO T-290 and AASHTO T-291 to evaluate potential chemical attack on buried concrete. We performed tests on one representative sample of the subsurface soils. The test results—in units of parts per million (ppm)—are presented in Table 11. Table 11 also includes the allowable threshold values for chemical attack of concrete.

Table 11. Sulfate and Chloride Testing.

Sample Location	Sulfates (ppm)		Chlorides (ppm)	
	Test Results	Allowable	Test Results	Allowable
B-2 U-1 (1.0 -2.5')	5.7	Max. 200	4	Max. 100

Based on the results of the chemical tests, sulfate resistant cement is not required for concrete exposed to the on-site soils. Therefore, we recommend that either a Type I or Type II cement be used.

7. REPORT LIMITATIONS AND CLOSURE

The conclusions and recommendations presented in this report are based on the information available regarding the proposed construction, the results obtained from our soil test borings and sampling procedures, the results of the laboratory testing program, and our experience with similar projects. The soil test borings represent a limited statistical sampling of subsurface soils and it is possible that conditions may be encountered during construction that are substantially different from those indicated by the soil test borings. In these instances, adjustments to design and construction may be necessary.

This geotechnical report is based on the site plan and information provided to ***Olsson*** and our understanding of the project as noted in this report. Changes in the location or design of new structures could significantly affect the conclusions and recommendations presented in this geotechnical report. ***Olsson*** should be contacted in the event of such changes to determine if the recommendations of this report remain appropriate for the revised site design.

The scope of this exploration did not include any environmental assessment for the presence of wetlands and/or hazardous or toxic materials in the soil or groundwater on or near the site. Any statements in this report regarding odors, discoloration, or suspicious conditions are strictly for the information of our client.

This report was prepared by the firm ***Olsson, Inc.*** under the direction of a Professional Engineer registered in the State of Nebraska. The conclusions and recommendations contained herein are based on generally accepted professional geotechnical engineering practice at the time of this report, within this geographic area. No other warranty is expressed or implied. This report has been prepared for the exclusive use of the ***City of Seward, Nebraska*** for specific application to the proposed project.

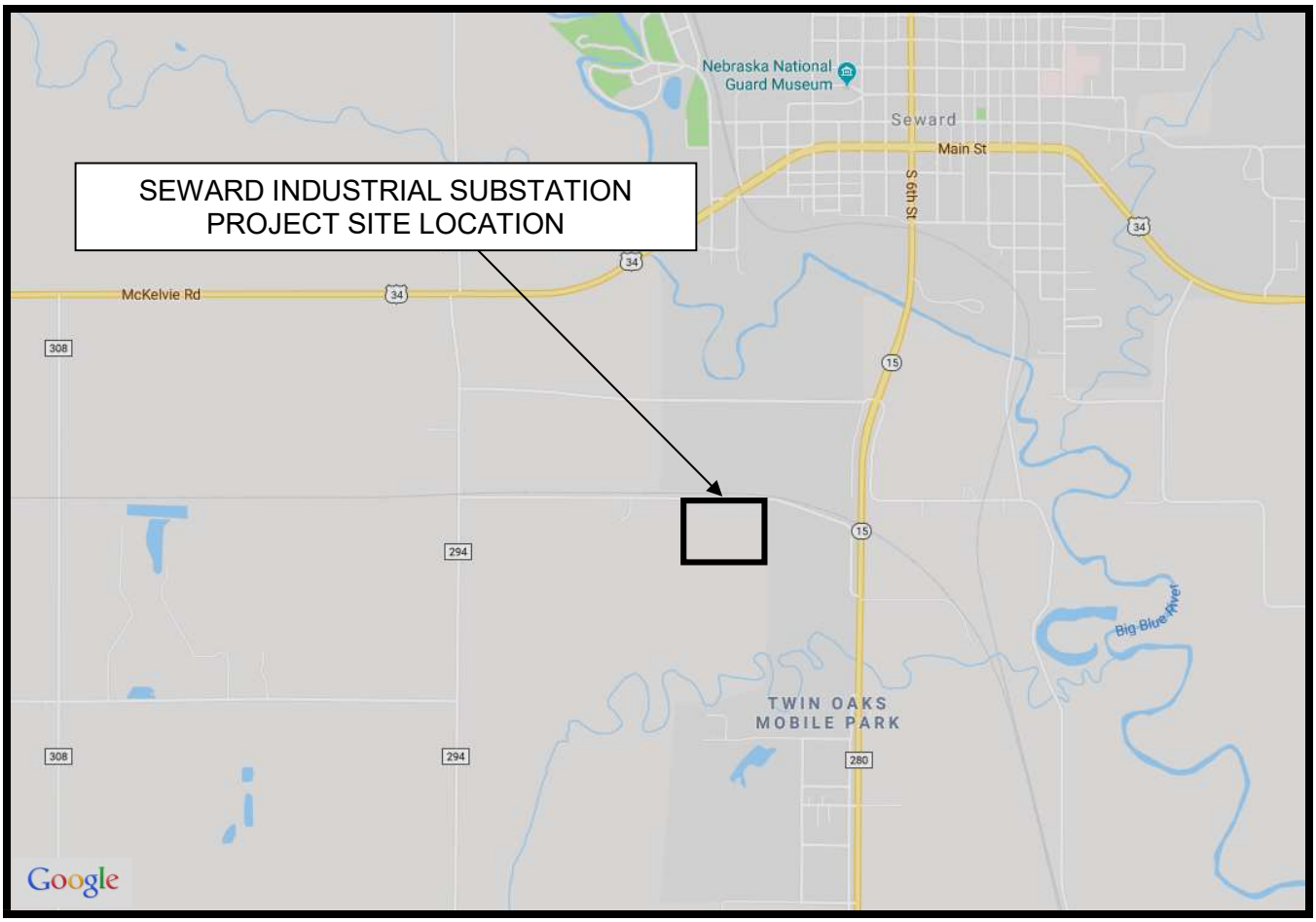
We trust that this report will assist you in the design and construction of the proposed project. ***Olsson*** appreciates the opportunity to provide our services on this project and looks forward to working with you during construction and on future projects. Should you have any questions, please do not hesitate to contact us.

\\oa.ad.oaconsulting.com\fnts-ns1\projects\2018\1501-2000\018-1509\40-Design\Reports\FOPS\Report\Seward Substation_181509.docx

APPENDIX A

Site Location Plan

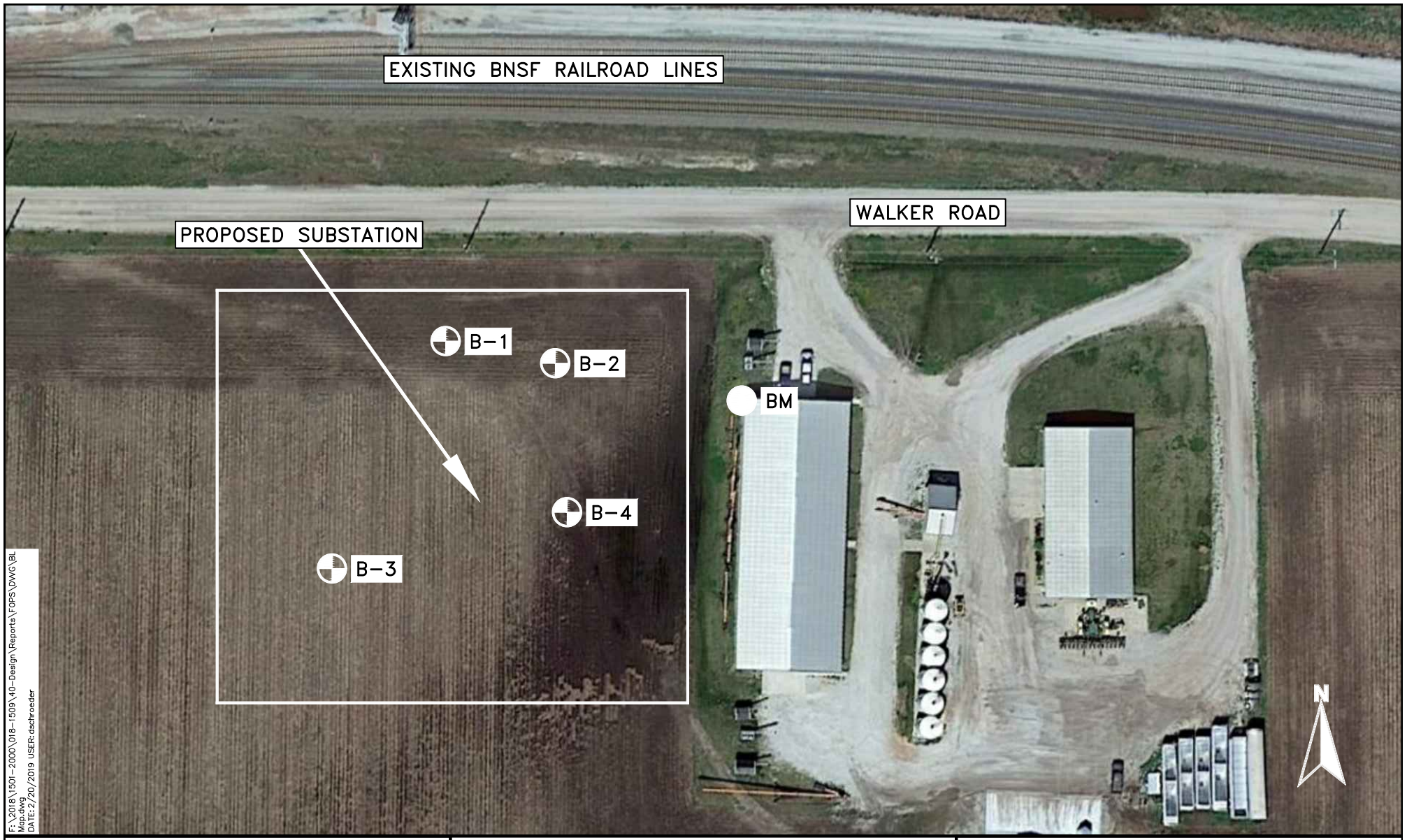
Boring Location Map



N

SITE LOCATION PLAN

SEWARD INDUSTRIAL SUBSTATION
SEWARD, NEBRASKA
OLSSON PROJECT NO. 018-1509



F:\2018\1501-2000\018-1509\40-Design\Reports\FOPS\DWG\BL Map.dwg
DATE: 2/20/2019 USER: dschroeder

LEGEND

SOIL BORING LOCATION

BENCHMARK LOCATION

0 50 100 200

SCALE IN FEET

PROJECT: 018-1509

DATE: 02/12/19 | DRAWN BY: ALN

BORING LOCATION MAP

NEAR SEWARD, NEBRASKA

olsson

3800 South 6th Street
Lincoln, NE 68502

TEL 402.474.6311
www.olsson.com

APPENDIX B

Symbols and Nomenclature
Boring Logs

SYMBOLS AND NOMENCLATURE

DRILLING NOTES

DRILLING AND SAMPLING SYMBOLS

SS:	Split-Spoon Sample (1.375" ID, 2.0" OD)	HSA:	Hollow Stem Auger	NE:	Not Encountered
U:	Thin-Walled Tube Sample (3.0" OD)	CFA:	Continuous Flight Auger	NP:	Not Performed
CS:	Continuous Sample	HA:	Hand Auger	NA:	Not Applicable
BS:	Bulk Sample	CPT:	Cone Penetration Test	% Rec:	Percent of Recovery
MC:	Modified California Sampler	WB:	Wash Bore	WD:	While Drilling
GB:	Grab Sample	RB:	Rock Bit	IAD:	Immediately After Drilling
SPT:	Standard Penetration Test Blows per 6.0"	PP:	Pocket Penetrometer	AD:	After Drilling

DRILLING PROCEDURES

Soil samples designated as "U" samples on the boring logs were obtained in using Thin-Walled Tube Sampling techniques. Soil samples designated as "SS" samples were obtained during Penetration Test using a Split-Spoon Barrel sampler. The standard penetration resistance 'N' value is the number of blows of a 140 pound hammer falling 30 inches to drive the Split-Spoon sampler one foot. Soil samples designated as "MC" were obtained in using Thick-Walled, Ring-Lined, Split-Barrel Drive sampling techniques. Recovered samples were sealed in containers, labeled, and protected for transportation to the laboratory for testing.

WATER LEVEL MEASUREMENTS

Water levels indicated on the boring logs are levels measured in the borings at the times indicated. In relatively high permeable materials, the indicated levels may reflect the location of groundwater. In low permeability soils, the accurate determination of groundwater levels is not possible with only short-term observations.

SOIL PROPERTIES & DESCRIPTIONS

Descriptions of the soils encountered in the soil test borings were prepared using Visual-Manual Procedures for Descriptions and Identification of Soils.

PARTICLE SIZE

Boulders	12 in. +	Coarse Sand	4.75mm-2.0mm	Silt	0.075mm-0.005mm
Cobbles	12 in.-3 in.	Medium Sand	2.0mm-0.425mm	Clay	<0.005mm
Gravel	3 in.-4.75mm	Fine Sand	0.425mm-0.075mm		

COHESIVE SOILS

Consistency	Unconfined Compressive Strength (Qu) (tsf)
Very Soft	<0.25
Soft	0.25 – 0.5
Firm	0.5 – 1.0
Stiff	1.0 – 2.0
Very Stiff	2.0 – 4.0
Hard	> 4.0

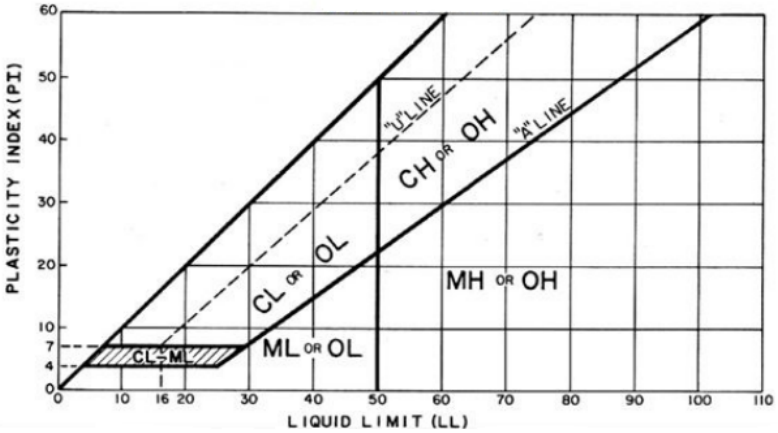
COHESIONLESS SOILS

Relative Density	'N' Value
Very Loose	0 – 3
Loose	4 – 9
Medium Dense	10 – 29
Dense	30 – 49
Very Dense	≥ 50

COMPONENT %

Description	Percent (%)
Trace	<5
Few	5 - 10
Little	15 - 25
Some	30 - 45
Mostly	50 - 100

PLASTICITY CHART



ROCK QUALITY DESIGNATION (RQD)

Description	RQD (%)
Very Poor	0 – 25
Poor	25 – 50
Fair	50 – 75
Good	75 – 90
Excellent	90 – 100

BOREHOLE REPORT NO. B-1

PROJECT NAME: **Seward Industrial Substation**	CLIENT: **City of Seward, Nebraska**
PROJECT NUMBER: **018-1509**	LOCATION: **Seward, Nebraska**

Shelby Tube ■ Split Spoon ⊠

APPROX. SURFACE ELEV. (ft): 101.0

ELEVATION (ft)	MATERIAL DESCRIPTION	GRAPHIC LOG	DEPTH (ft)	SAMPLE TYPE NUMBER	CLASSIFICATION (USCS)	BLOWS/6" N-VALUE	UNC. STR. (tsf)	MOISTURE (%)	DRY DENSITY (pcf)	LL/PI (%)	ADDITIONAL DATA/ REMARKS
	TOPSOIL 0.5'		0								
100	***ALTERED ALLUVIUM***										
	Fat clay (CH): Very stiff, dark brown, moist, trace fine sand			U 1	CH		2.8	23.1	100.5	62/37	
	3.0'										
	ALLUVIUM										
	Lean clay (CL): Stiff, grayish brown, moist, trace fine sand, iron staining, manganese, calcium			U 2			1.9	24.8	94.4		
95			5								
	Lean clay (CL): Firm, grayish brown, very moist, trace fine sand, iron staining, manganese, calcium			SS 3		2-3-4 N=7		28.9			
	Lean clay (CL): Firm, grayish brown, very moist, trace fine sand, iron staining, manganese, calcium			U 4	CL			28.9	86.9	39/18	
90			10								
	Lean clay (CL): Soft, grayish brown, wet, trace fine sand, iron staining, manganese, calcium			SS 5		2-1-2 N=3					
			15								
85											
	Lean clay (CL): Soft, grayish brown, wet, trace fine sand, iron staining, manganese, calcium			U 6				37.3	88.4		
			20								
	CONTINUED NEXT PAGE										

WATER LEVEL OBSERVATIONS	
WD	▽ 22.0 ft
IAD	▼ 14.2 ft after 0 Hrs
AD	▼ 15.0 ft after 24Hrs

OLSSON, INC.
3800 SOUTH 6TH STREET
LINCOLN, NEBRASKA 68502

STARTED:	1/17/19	FINISHED:	1/18/19
DRILL CO.:	OLSSON	DRILL RIG:	CME 45C
DRILLER:	C. MILLER	LOGGED BY:	S. BURKE
METHOD: HOLLOW STEM AUGER			

BOREHOLE REPORT NO. B-1

PROJECT NAME	CLIENT
Seward Industrial Substation	City of Seward, Nebraska
PROJECT NUMBER	**LOCATION**
018-1509	Seward, Nebraska

Shelby Tube ▭ Split Spoon ⊠

ELEVATION (ft)	MATERIAL DESCRIPTION	GRAPHIC LOG	DEPTH (ft)	SAMPLE TYPE NUMBER	CLASSIFICATION (USCS)	BLOWS/6" N-VALUE	UNC. STR. (tsf)	MOISTURE (%)	DRY DENSITY (pcf)	LL/PI (%)	ADDITIONAL DATA/ REMARKS
80	***ALLUVIUM***		20								
	▽										
	23.5'										
	Poorly graded sand (SP): Dense, light brown, wet, mostly fine to coarse sand, trace silt		25	SS 7		9-16-20 N=36					
75											
	28.5'										
	Clayey sand (SC): Medium dense, light brown, wet, mostly fine to medium sand, little clay, few silt		30	SS 8		9-12-14 N=26					
70	***31.0'***										
	GLACIAL TILL - NEBRASKA AGE										
	Fat clay (CH): Stiff, dark gray, wet, trace fine to coarse sand		35	SS 9		6-6-6 N=12		20.5			
65											
	Fat clay (CH): Stiff, dark gray, wet, trace fine to coarse sand		40	SS 10		6-7-8 N=15					
	40.0'										
	BASE OF BORING AT 40.0 FEET										

WATER LEVEL OBSERVATIONS	
WD	▽ 22.0 ft
IAD	▼ 14.2 ft after 0 Hrs
AD	▼ 15.0 ft after 24Hrs

OLSSON, INC.
3800 SOUTH 6TH STREET
LINCOLN, NEBRASKA 68502

STARTED:	1/17/19	FINISHED:	1/18/19
DRILL CO.:	OLSSON	DRILL RIG:	CME 45C
DRILLER:	C. MILLER	LOGGED BY:	S. BURKE
METHOD: HOLLOW STEM AUGER			

BOREHOLE REPORT NO. B-2

PROJECT NAME	CLIENT
Seward Industrial Substation	City of Seward, Nebraska
PROJECT NUMBER	**LOCATION**
018-1509	Seward, Nebraska

Shelby Tube ▮ Split Spoon ⊠

APPROX. SURFACE ELEV. (ft): 99.5

ELEVATION (ft)	MATERIAL DESCRIPTION	GRAPHIC LOG	DEPTH (ft)	SAMPLE TYPE NUMBER	CLASSIFICATION (USCS)	BLOWS/6" N-VALUE	UNC. STR. (tsf)	MOISTURE (%)	DRY DENSITY (pcf)	LL/PI (%)	ADDITIONAL DATA/ REMARKS
	TOPSOIL — ***0.5'***		0								
	ALTERED ALLUVIUM										
	Fat clay (CH): Hard, dark brown, moist, trace fine sand			U 1			5.7	24.0	100.7		
	3.0'										
	ALLUVIUM										
95	*Lean clay (CL): Firm, light grayish brown, moist, trace fine sand, iron staining, manganese, calcium*		5	SS 2		3-3-4 N=7		21.1			
	Lean clay (CL): Stiff, light grayish brown, moist, trace fine sand, iron staining, manganese			U 3			1.6	25.0	94.8		
90	*Lean clay (CL): Firm, light grayish brown, very moist, trace fine sand, iron staining, manganese*		10	SS 4		3-3-3 N=6		27.8			
	▼										
85	*Lean clay (CL): Firm, light grayish brown, wet, trace fine sand, iron staining, manganese* ▼		15	U 5			0.6	32.6	93.6		
	18.0'										
80	*Silty sand (SM): Medium dense, light brown, wet, mostly fine sand, little silt* ▽		20	SS 6		5-12-13 N=25		16.3			P-200 = 35.8%
	CONTINUED NEXT PAGE										

WATER LEVEL OBSERVATIONS	
WD	▽ 19.5 ft
IAD	▼ 13.0 ft after 0 Hrs
AD	▼ 14.8 ft after 24Hrs

OLSSON, INC.
3800 SOUTH 6TH STREET
LINCOLN, NEBRASKA 68502

STARTED:	1/17/19	FINISHED:	1/18/19
DRILL CO.:	OLSSON	DRILL RIG:	CME 45C
DRILLER:	C. MILLER	LOGGED BY:	S. BURKE
METHOD: HOLLOW STEM AUGER			

olsson

BOREHOLE REPORT NO. B-2

PROJECT NAME	CLIENT
Seward Industrial Substation	City of Seward, Nebraska
PROJECT NUMBER	**LOCATION**
018-1509	Seward, Nebraska

Shelby Tube ▭ Split Spoon ☒

ELEVATION (ft)	MATERIAL DESCRIPTION	GRAPHIC LOG	DEPTH (ft)	SAMPLE TYPE NUMBER	CLASSIFICATION (USCS)	BLOWS/6" N-VALUE	UNC. STR. (tsf)	MOISTURE (%)	DRY DENSITY (pcf)	LL/PI (%)	ADDITIONAL DATA/ REMARKS
	ALLUVIUM		20								
	23.5'										
75	*Poorly graded sand (SP): Medium dense, light brown, wet, mostly fine to medium sand, trace silt*		25	SS 7		8-12-17 N=29					
70	*Poorly graded sand (SP): Medium dense, light brown, wet, mostly fine to medium sand, trace silt*		30	SS 8		8-10-8 N=18					
	33.5'										
65	***GLACIAL TILL - NEBRASKA AGE*** *Fat clay (CH): Very stiff, dark gray, wet, trace fine to coarse sand*		35	SS 9		7-8-11 N=19					
60	*Fat clay (CH): Stiff, dark gray, wet, trace fine to coarse sand*		40	SS 10		3-5-6 N=11		20.9			
	40.0'										
	BASE OF BORING AT 40.0 FEET										

WATER LEVEL OBSERVATIONS	
WD	▽ 19.5 ft
IAD	▼ 13.0 ft after 0 Hrs
AD	▼ 14.8 ft after 24Hrs

OLSSON, INC.
3800 SOUTH 6TH STREET
LINCOLN, NEBRASKA 68502

STARTED:	1/17/19	FINISHED:	1/18/19
DRILL CO.:	OLSSON	DRILL RIG:	CME 45C
DRILLER:	C. MILLER	LOGGED BY:	S. BURKE
METHOD: HOLLOW STEM AUGER			

BOREHOLE REPORT NO. B-3

PROJECT NAME	CLIENT
Seward Industrial Substation	City of Seward, Nebraska
PROJECT NUMBER	**LOCATION**
018-1509	Seward, Nebraska

Shelby Tube ▮ Split Spoon ⊠

APPROX. SURFACE ELEV. (ft): 100.5

ELEVATION (ft)	MATERIAL DESCRIPTION	GRAPHIC LOG	DEPTH (ft)	SAMPLE TYPE NUMBER	CLASSIFICATION (USCS)	BLOWS/6" N-VALUE	UNC. STR. (tsf)	MOISTURE (%)	DRY DENSITY (pcf)	LL/PI (%)	ADDITIONAL DATA/ REMARKS
100	***TOPSOIL*** ***0.5'***		0								
	ALTERED ALLUVIUM										
	Fat clay (CH): Stiff, dark brown, very moist, trace fine sand			U 1			1.7	29.3	90.6		
	3.0'										
	ALLUVIUM										
	Lean clay (CL): Firm, grayish brown, moist, trace fine sand, iron staining, manganese, calcium		5	SS 2		3-3-3 N=6		24.8			
95											
	Lean clay (CL): Stiff, grayish brown, very moist, trace fine sand, iron staining, manganese			U 3			1.1	29.8	92.8		
	Lean clay (CL): Firm, grayish brown, very moist, trace fine sand, iron staining, manganese		10	SS 4		3-3-3 N=6		31.8			
90											
	Lean clay (CL): Soft, grayish brown, wet, trace fine sand, iron staining, manganese		15	U 5			0.5*	32.4	89.0		*UU Compressive Strength
85											
	18.0'										
	Sandy lean clay (CL): Stiff, light brown, wet, some fine sand		20	SS 6		2-4-5 N=9		23.8			P-200 = 60.3%
	CONTINUED NEXT PAGE										

WATER LEVEL OBSERVATIONS	
WD	▽ 19.0 ft
IAD	▼ 14.1 ft after 0 Hrs
AD	▼ 14.2 ft after 24Hrs

OLSSON, INC.
3800 SOUTH 6TH STREET
LINCOLN, NEBRASKA 68502

STARTED:	1/17/19	FINISHED:	1/18/19
DRILL CO.:	OLSSON	DRILL RIG:	CME 45C
DRILLER:	C. MILLER	LOGGED BY:	S. BURKE
METHOD: HOLLOW STEM AUGER			

BOREHOLE REPORT NO. B-3

PROJECT NAME	CLIENT
Seward Industrial Substation	City of Seward, Nebraska
PROJECT NUMBER	**LOCATION**
018-1509	Seward, Nebraska

Shelby Tube ▭ Split Spoon ⊠

ELEVATION (ft)	MATERIAL DESCRIPTION	GRAPHIC LOG	DEPTH (ft)	SAMPLE TYPE NUMBER	CLASSIFICATION (USCS)	BLOWS/6" N-VALUE	UNC. STR. (tsf)	MOISTURE (%)	DRY DENSITY (pcf)	LL/PI (%)	ADDITIONAL DATA/ REMARKS
80	***ALLUVIUM***		20								
	23.5'										
	Poorly graded sand (SP): Dense, light brown, wet, mostly fine sand, trace silt		25	SS 7		8-15-26 N=41					
75											
	Poorly graded sand (SP): Medium dense, light brown, wet, mostly fine sand, trace silt		30	SS 8		4-8-12 N=20					
70											
	33.5'										
	GLACIAL TILL - NEBRASKA AGE										
	Fat clay (CH): Stiff, dark gray, wet, trace fine to coarse sand		35	SS 9		5-6-8 N=14		21.6			
65											
	Fat clay (CH): Very stiff, dark gray, wet, trace fine to coarse sand		40	SS 10		11-12-14 N=26					
	40.0'										
	BASE OF BORING AT 40.0 FEET										

WATER LEVEL OBSERVATIONS	
WD	▽ 19.0 ft
IAD	▼ 14.1 ft after 0 Hrs
AD	▼ 14.2 ft after 24Hrs

OLSSON, INC.
3800 SOUTH 6TH STREET
LINCOLN, NEBRASKA 68502

STARTED:	1/17/19	FINISHED:	1/18/19
DRILL CO.:	OLSSON	DRILL RIG:	CME 45C
DRILLER:	C. MILLER	LOGGED BY:	S. BURKE
METHOD: HOLLOW STEM AUGER			

BOREHOLE REPORT NO. B-4

PROJECT NAME	CLIENT
Seward Industrial Substation	City of Seward, Nebraska
PROJECT NUMBER	**LOCATION**
018-1509	Seward, Nebraska

Shelby Tube ▪ Split Spoon

APPROX. SURFACE ELEV. (ft): 99.0

ELEVATION (ft)	MATERIAL DESCRIPTION	GRAPHIC LOG	DEPTH (ft)	SAMPLE TYPE NUMBER	CLASSIFICATION (USCS)	BLOWS/6" N-VALUE	UNC. STR. (tsf)	MOISTURE (%)	DRY DENSITY (pcf)	LL/PI (%)	ADDITIONAL DATA/ REMARKS
	TOPSOIL ***0.3'***		0								
	ALTERED ALLUVIUM										
	Fat clay (CH): Stiff, very dark brown, very moist, trace fine sand			U 1			1.2	29.0	90.4		
	3.0'										
	ALLUVIUM										
95	*Lean clay (CL): Stiff, grayish brown, very moist, trace fine sand, iron staining, manganese*		5	U 2			1.9	25.8	96.6		
	Lean clay (CL): Stiff, grayish brown, very moist, trace fine sand, iron staining, manganese			SS 3		3-4-5 N=9		28.0			
90	*Lean clay (CL): Stiff, grayish brown, very moist, trace fine sand, iron staining, manganese*		10	U 4			2.0	27.8	96.8		
	▼										
85	*Lean clay (CL): Soft, grayish brown, wet, trace fine sand, iron staining, manganese*		15	SS 5		2-2-2 N=4		33.3			
80	*Lean clay (CL): Firm, grayish brown, wet, trace fine sand, iron staining, manganese*		20	U 6			0.9	30.2	95.6		
	CONTINUED NEXT PAGE										

WATER LEVEL OBSERVATIONS	
WD	▽ 23.5 ft
IAD	▼ 13.0 ft after 0 Hrs
AD	▼ 12.7 ft after 24Hrs

OLSSON, INC.
3800 SOUTH 6TH STREET
LINCOLN, NEBRASKA 68502

STARTED:	1/17/19	FINISHED:	1/18/19
DRILL CO.:	OLSSON	DRILL RIG:	CME 45C
DRILLER:	C. MILLER	LOGGED BY:	S. BURKE
METHOD: HOLLOW STEM AUGER			

BOREHOLE REPORT NO. B-4

PROJECT NAME	CLIENT
Seward Industrial Substation	City of Seward, Nebraska
PROJECT NUMBER	**LOCATION**
018-1509	Seward, Nebraska

Shelby Tube ▪ Split Spoon

ELEVATION (ft)	MATERIAL DESCRIPTION	GRAPHIC LOG	DEPTH (ft)	SAMPLE TYPE NUMBER	CLASSIFICATION (USCS)	BLOWS/6" N-VALUE	UNC. STR. (tsf)	MOISTURE (%)	DRY DENSITY (pcf)	LL/PI (%)	ADDITIONAL DATA/ REMARKS
	ALLUVIUM		20								
	▽ 23.5'										
75	*Poorly graded sand with silt (SP/SM): Medium dense, light brown, wet, mostly fine sand, few silt*		25	SS 7		5-8-12 N=20					
70	*Poorly graded sand with silt (SP/SM): Medium dense, light brown, wet, mostly fine sand, few silt*		30	SS 8		4-5-6 N=11		22.8			P-200 = 6.5%
65	*Poorly graded sand with silt (SP/SM): Medium dense, light brown, wet, mostly fine sand, few silt*		35	SS 9		4-6-11 N=17					
60	*Poorly graded sand with silt (SP/SM): Medium dense, light brown, wet, mostly fine sand, few silt*		40	SS 10		4-6-10 N=16					
	40.0'										
	BASE OF BORING AT 40.0 FEET										

WATER LEVEL OBSERVATIONS	
WD	▽ 23.5 ft
IAD	▼ 13.0 ft after 0 Hrs
AD	▼ 12.7 ft after 24Hrs

OLSSON, INC.
3800 SOUTH 6TH STREET
LINCOLN, NEBRASKA 68502

STARTED:	1/17/19	FINISHED:	1/18/19
DRILL CO.:	OLSSON	DRILL RIG:	CME 45C
DRILLER:	C. MILLER	LOGGED BY:	S. BURKE
METHOD: HOLLOW STEM AUGER			

APPENDIX C

Summary of Laboratory Test Results

OLSSON, INC.
3800 SOUTH 6TH STREET
LINCOLN, NEBRASKA 68502

SUMMARY OF LABORATORY RESULTS

PROJECT NAME: Seward Industrial Substation
PROJECT NUMBER: 018-1509
CLIENT: City of Seward, Nebraska
PROJECT LOCATION: Seward, Nebraska

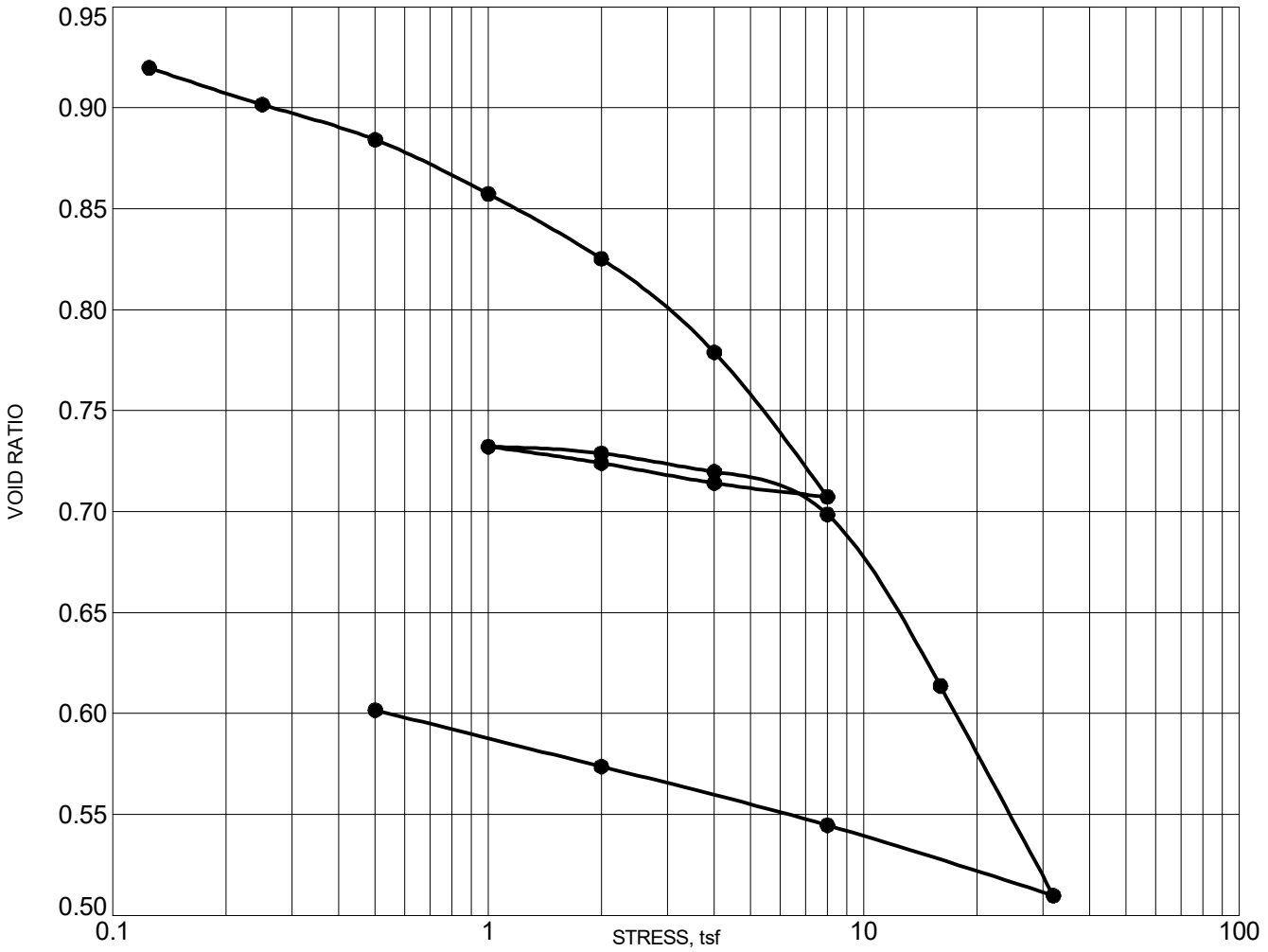
BORING NUMBER	SAMPLE I.D.	SAMPLE DEPTH (ft)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	VOID RATIO	SATURATION (%)	UNCONFINED STRENGTH (tsf)	STRAIN (%)	ATTERBERG LIMITS			P-200	USCS CLASS.
									LIQUID LIMIT	PLASTIC LIMIT	PLASTIC INDEX		
B-1	U-1	1.0 - 2.5'	23.1	100.5	0.678	91.9	2.8	9.8	62	25	37		CH
B-1	U-2	3.5 - 5.0'	24.8	94.4	0.785	85.2	1.9	4.1					
B-1	SS-3	6.0 - 7.5'	28.9										
B-1	U-4	8.5 - 10.0'	28.9	86.9	0.939	83.1			39	21	18		CL
B-1	U-6	18.5 - 20.0'	37.3	88.4	0.906	100.0							
B-1	SS-9	33.5 - 35.0'	20.5										
B-2	U-1	1.0 - 2.5'	24.0	100.7	0.674	96.2	5.7	5.9					
B-2	SS-2	3.5 - 5.0'	21.1										
B-2	U-3	6.0 - 7.5'	25.0	94.8	0.777	87.0	1.6	4.9					
B-2	SS-4	8.5 - 10.0'	27.8										
B-2	U-5	13.5 - 15.0'	32.6	93.6	0.801	100.0	0.6	2.3					
B-2	SS-6	18.5 - 20.0'	16.3									35.8	
B-2	SS-10	38.5 - 40.0'	20.9										
B-3	U-1	1.0 - 2.5'	29.3	90.6	0.861	91.8	1.7	7.0					
B-3	SS-2	3.5 - 5.0'	24.8										
B-3	U-3	6.0 - 7.5'	29.8	92.8	0.816	98.6	1.1	4.8					
B-3	SS-4	8.5 - 10.0'	31.8										
B-3	U-5	13.5 - 15.0'	32.4	89.0	0.893	97.8	0.5 (UU)	13.6					
B-3	SS-6	18.5 - 20.0'	23.8									60.3	
B-3	SS-9	33.5 - 35.0'	21.6										
B-4	U-1	1.0 - 2.5'	29.0	90.4	0.865	90.6	1.2	5.6					
B-4	U-2	3.5 - 5.0'	25.8	96.6	0.744	93.8	1.9	11.3					
B-4	SS-3	6.0 - 7.5'	28.0										
B-4	U-4	8.5 - 10.0'	27.8	96.8	0.741	100.0	2.0	2.8					
B-4	SS-5	13.5 - 15.0'	33.3										
B-4	U-6	18.5 - 20.0'	30.2	95.6	0.763	100.0	0.9	9.3					
B-4	SS-8	28.5 - 30.0'	22.8									6.5	

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CONSOLIDATION TEST

PROJECT NAME: Seward Industrial Substation **CLIENT:** City of Seward, Nebraska

PROJECT NUMBER: 018-1509 **PROJECT LOCATION:** Seward, Nebraska



Boring No: B-1

Sample ID: U-4

Sample Depth: 8.5 - 10.0'

Start Date: 1/31/19

Technician: D. KOWALSKI

Apparatus: LT II - 22

Specific Gravity: 2.7

Initial Water Content (%): 32.3

Final Water Content (%): 24.6

Initial Dry Density (pcf): 86.9

Initial Void Ratio: 0.940

Final Void Ratio: 0.600

Initial Degree of Saturation (%): 93.0

Final Degree of Saturation (%): 100.0

Est. Preconsolidation Stress (tsf): 3.6

Laboratory Water Type: Distilled Water

Test Procedure Method: NA

Interpretation Procedure: NA

Stress at Inundation (psf): 50.0

Specimen Trimming Method: Turntable

ATTERBERG LIMITS

LL	PL	PI	Classification
39	**21**	**18**	**CL**

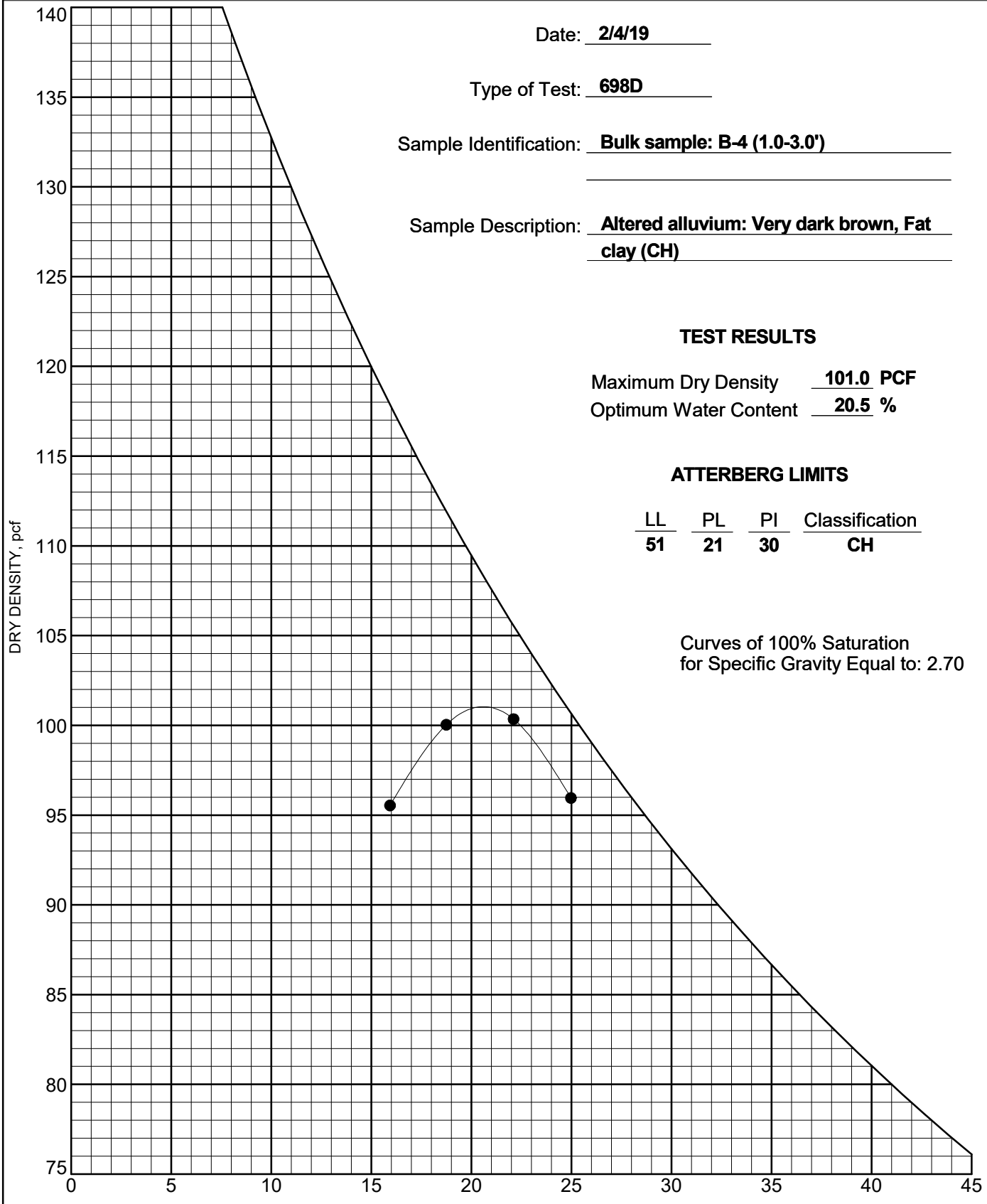
Sample Description: Alluvium: Grayish brown, Lean clay (CL)

Notes:

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MOISTURE-DENSITY RELATIONSHIP

PROJECT NAME: Seward Industrial Substation
CLIENT: City of Seward, Nebraska
PROJECT NUMBER: 018-1509
PROJECT LOCATION: Seward, Nebraska



Date: **2/4/19**

Type of Test: **698D**

Sample Identification: **Bulk sample: B-4 (1.0-3.0')**

Sample Description: **Altered alluvium: Very dark brown, Fat clay (CH)**

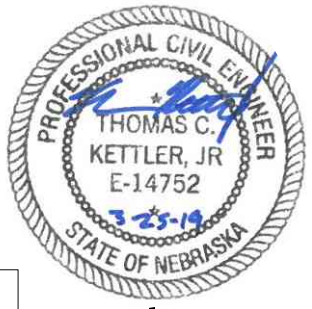
TEST RESULTS

Maximum Dry Density **101.0** **PCF**
Optimum Water Content **20.5** **%**

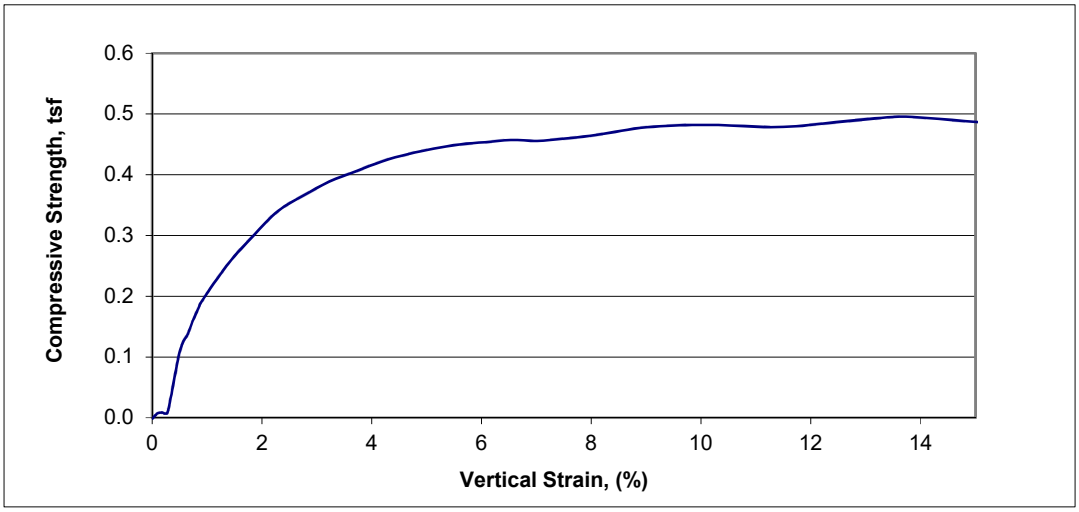
ATTERBERG LIMITS

LL	PL	PI	Classification
51	**21**	**30**	**CH**

Curves of 100% Saturation
for Specific Gravity Equal to: 2.70



Unconsolidated Undrained Triaxial Test



Boring		B-3			
Sample		U-5			
Initial	**Diameter (in)**	2.843			
	Height, (in)	4.765			
	Water Content, (%)	32.4			
	Dry Density, (pcf)	88.97			
	Saturation, (%)	97.7			
	Void Ratio	0.895			
Compressive Strength, (tsf)		0.5			
Undrained Shear Strength, (tsf)		0.2			
Time to Failure, (min)		14.3			
Strain Rate, (%/min)		1.0			
Assumed Specific Gravity		2.7			
Liquid Limit		N/A			
Plastic Limit		N/A			
Plasticity Index		N/A			
Failure Sketch		N/A			

olsson

Project:	Seward Industrial Substation
Location:	Seward, Nebraska
Project Number:	018-1509
Boring No:	B-3 U-5 (13.5-15.0')
Sample Type:	Shelby Tube
Description:	Alluvium: Grayish brown, Lean clay (CL)
Remarks:	Consolidated to 11.28 psi (0.81 tsf)

Platte Valley Agricultural and Environmental Laboratories, Inc.

OLSSON ASSOCIATES, L
601 P ST
LINCOLN NE 68508

ATTN: Tom Kettler

BATCH 19020408
page 1

PROJECT Seward Industrial Substation
LOCATION

DATE SAMPLED 1/0/1900
DATE RECEIVED 2/4/2019
DATE REPORTED 2/6/2019

SAMPLE ID		B2 U1
LAB NUMBER		**76712**
SAMPLE TYPE		**SOIL**
reporting limit		
Sulfate-Sulfur	mg/kg S	1.9
Method 4500-SO42- E		
Sulfate	mg/kg SO4	5.7
Method 4500-SO42- E		
Sulfide	mg/kg	Neg
Method 376.1		
Chloride	mg/kg	4
Method 325.2		
pH		6.7
Method 4500-H		
RESISTIVTY	ohm-cm	1930
REDOX	mV	471

REVIEWED BY:

P.O Box 807 ◆ 914 Highway 30 ◆ Gibbon, NE 68840 ◆ Phone: (308) 468-5975 ◆ Fax: (308) 468-6018 ◆ E-mail: info@soillab.com

ADDENDUM NO. 1

☐ Overnight
☐ Regular Mail
☐ Hand Delivery
☒ Other: Email

To:	City of Seward, Nebraska Attn: Greg Butcher PO Box 38 Seward, Nebraska 68434
From:	Jordan K. Malleck, PE – Olsson, Inc. Nicholas A. Menefee, PE – Olsson, Inc.
RE:	34.5 – 12.47kV Industrial Substation Expansion Addendum No. 1
Date:	April 3, 2025
Project Number:	024-05881
Project Location:	Seward, Nebraska



Project Information

This addendum summarizes the results of an additional geotechnical exploration performed for the proposed expansion of the existing Seward Substation located northwest of the intersection of Highway 15 and Walker Road near Seward, Nebraska. This addendum accompanies the Geotechnical Exploration Report as “Seward Industrial Substation” dated March 25, 2019, Olsson Project No. 018-1509.

Based on available project information, we understand the proposed expansion will include the construction of the following structures:

- Switchgear Enclosure—Plan dimensions of approximately 8 feet x 8 feet
- Transformer Foundation—Plan dimensions of approximately 14.5 feet x 14.5 feet
- 12.47 to 34.5kV Structure—Structure height of approximately 20 feet with center-to-center pier distance ranging from 2.33 feet to 6.5 feet

We also understand the Switchgear Enclosure and Transformer Foundation will be supported on mat slabs while the 12.47 to 34.5kV Structure will be supported by drilled, straight-shaft piers.

1101 Libra Drive / Suite 2 / Lincoln, NE 68512
O 402.458.5052 / olsson.com

A visual reference of the proposed structure locations is provided on the Boring Location Map in **Attachment A**.

Field Exploration

Our drill crew advanced the boring for this exploration with a truck-mounted drill rig using continuous-flight augers. The boring location was located in the field by the drill crew using a hand-held GPS unit. The approximate location of the boring is shown on the Boring Location Map in **Attachment A**.

Soil samples from the boring were obtained using the methods and at the depths shown on the log. Recovered samples were sealed in containers, labeled, and protected for transportation to the laboratory for testing.

Our drill crew obtained the ground surface elevation at the boring location with an automatic level using the northwest corner of an existing metal building, located east of the existing substation, as a benchmark, which is shown in **Figure 1**. We assigned the benchmark an arbitrary elevation of 100.0. The surface elevation at the boring location, rounded to the nearest half-foot, is presented on the log.



Figure 1. Benchmark—NWC of Existing Metal Building.

The drill crew prepared a field log during drilling operations. The field log includes drilling and sampling methods, sampling intervals, subsurface water measurements, and general descriptions of the observed soil conditions. The final log represents our engineering

interpretation of the field log based on visual classification and laboratory testing of the collected samples.

Subsurface Conditions

Subsurface Profile

The subsurface soils in our boring comprised existing fill materials overlying cohesive and cohesionless alluvial soils followed by Nebraska-age glacial till. The general characteristics of each soil stratum are summarized below, with more detailed descriptions provided on the log in **Attachment A**.

Topsoil

We encountered an approximately 6-inch-thick topsoil zone at the surface of the boring.

Existing Fill

We encountered existing fill in our boring beneath the topsoil, extending to a depth of approximately 4 feet. Existing fill soils generally comprised fat clay (CH), and were described as firm, light brown to brown, and moist.

Alluvium

We encountered cohesive alluvial soils overlying cohesionless alluvial soils beneath the existing fill soils in our boring, extending to a depth of approximately 38 feet. Cohesive alluvial soils generally comprised fat clay (CH), and were described as firm to stiff, brown, and moist to very moist. Cohesionless alluvial soils generally comprised clayey sand (SC), and were described as medium dense, brown, and wet.

Nebraska-age Glacial Till

We encountered Nebraska-age glacial till beneath the cohesionless alluvial soils, extending to our 40-foot boring termination depth. Nebraska-age glacial till soils generally comprised fat clay with sand (CH), and were described as very stiff, dark gray, and wet.

Subsurface Water Level Observations

We observed subsurface water levels in our boring as summarized below in **Table 1**, and as indicated on the log presented in **Attachment A**.

Table 1. Subsurface Water Level Observations.

Boring No.	Surface Elevation at Boring Location	Subsurface Water Level Depth While Drilling (feet)	Subsurface Water Elevation While Drilling	Subsurface Water Level Depth Immediately After Drilling (feet)	Subsurface Water Elevation Immediately After Drilling
B-1	96.0	23.0	73.0	23.0	73.0

Structures Design

Mat Slabs

Based on the results of our exploration and engineering evaluation, the proposed substation structures may be supported on conventional shallow foundation systems (mat slabs). Assuming the recommendations provided in the referenced Geotechnical Exploration Report as well as the recommendations provided herein are implemented and that the finished pad elevations (FPEs) of the proposed substation structures are near existing grade, the mat slabs will be supported on existing fill or alluvial soils. Based on this assumption, mat slabs may be designed for a maximum net allowable soil bearing pressures of 2,000 pounds per square foot (psf) with maximum dimensions as listed in the **Project Information** section.

The net allowable bearing pressure is the bearing pressure in excess of the minimum surrounding overburden pressure at the foundation level. The net allowable soil bearing pressure may be increased by 1/3 for transient loads such as wind or seismic loads.

Mat slabs should bear at a minimum depth of 3.5 feet (frost depth) below the lowest adjacent final ground surface. Minimum foundation depth is measured from the lowest adjacent final ground surface. In no case should shallow foundations have dimensions smaller than allowed by local building codes.

If the bottom of the mat slabs do not extend to the bottom of the 3.5-foot frost depth, some movement related to freeze/thaw action in the underlying soils should be expected. The risk of freeze/thaw action can be reduced by supporting the mat slab below the frost zone.

The thickness and reinforcement for mat slabs should be designed by the project structural engineer. We recommend a unit modulus of subgrade reaction of 125 pounds per cubic inch (pci) for the design of the mat foundation bearing on properly prepared subgrade. The unit modulus is representative of a 1-foot by 1-foot foundation and should be reduced in accordance with the following equation when used with larger foundations:

$$K_{(BXB)} = K_1\left(\frac{1}{B}\right)$$

where $K_{(BXB)}$ is the subgrade modulus for a mat foundation (dimensions B x B), K_1 is the unit subgrade modulus (dimensions 1 foot by 1 foot), and B is the foundation width (in feet).

The following equation can be used to correct the modulus value for a rectangular mat foundation having dimensions B by L:

$$K_{(BXL)} = \frac{K_{(BXB)}\left(1 + 0.5 * \left(\frac{B}{L}\right)\right)}{1.5}$$

Provided mat slabs are designed and constructed in accordance with the recommendations of this report, total post-construction settlements are anticipated to be less than 1 inch with differential settlements of less than ½ inch.

Drilled, Straight-Shaft Piers

Drilled, straight-shaft piers should be designed using the allowable capacities provided in **Table 2**. Allowable skin friction and end bearing values were determined using a factor of safety of 2. Uplift capacity represents 75 percent of the compressive skin friction and does not include foundation self-weight. Skin friction should be neglected in the upper 3.5 feet from the adjacent ground surface due to frost penetration and desiccation.

Table 2. Drilled, Straight-Shaft Pier Design Parameters—Vertical Loading.

Layer No.	Elevation	Depth to Bottom of Layer (feet)	Soil/Rock Description	Allowable Compressive Skin Friction (psf)	Allowable Uplift Skin Friction (psf)	Allowable End Bearing (psf)
1	96.0 – 92.5	0 – 3.5	Frost	--	--	--
2	92.5 – 72.5	3.5 – 23.5	Fat clay (CH)	175	130	2,000
3	72.5 – 58.0	23.5 – 38.0	Clayey sand (SC)	750	560	11,500
4	58.0 – 56.0	38.0 – 40.0	Fat clay (CH)	380	280	6,000

Actual pier capacities should be determined based on final pier lengths and bottom-of-pile cap elevations. The structural capacity of the piers should be determined using applicable building codes. In no case should the load applied to the pier exceed the allowable structural capacity of the pier—typically 1/3 of the nominal grout strength. Center-to-center pier spacing should be greater than three pier diameters. No reduction in individual pile capacity for group action is needed for this spacing.

Total post-construction settlements of properly installed deep foundations are anticipated to be 1 inch or less with minimal, if any, differential settlements.

Lateral pile response using the MFAD design program may be evaluated using the lateral loading design parameters provided in **Table 3**. An effective friction angle of 38 degrees and a unit weight of 125 pounds per cubic foot (pcf) may be used in the MFAD design program for crushed rock annulus backfill.

Please contact Olsson if additional lateral loading parameters or analysis are required.

Table 3. Drilled, Straight-Shaft Pier Design Parameters—Lateral Loading (MFAD).

Layer No.	Elevation	Depth to Bottom of Layer (feet)	LPile Soil Type	Total Soil Unit Weight (pcf)[1]	Deformation Modulus (ksi)	Friction Angle (deg)	Undrained Shear Strength (ksf)
Depth to Subsurface Water = 23 feet							
1	96.0 – 92.5	0 – 3.5	Frost	--	--	--	
2	92.5 – 72.5	3.5 – 23.5	Fat clay (CH)	120	0.4	--	0.6
3	72.5 – 58.0	23.5 – 38.0	Clayey sand (SC)	120	1.0	32	--
4	58.0 – 56.0	38.0 – 40.0	Fat clay (CH)	120	0.9	--	1.5

[1]Effective soil unit weight should be used below the subsurface water table.

As previously discussed in the referenced Geotechnical Exploration Report, we encountered saturated sands, which could result in caving or sloughing of the drilled, straight-shaft pier excavation. During the most recent field exploration, we encountered subsurface water at a depth of approximately 23 feet (elevation 73) below the existing ground surface as discussed above in **Table 1**. Drilling fluids, casing (either temporary or permanent), or both will likely be required to maintain a serviceable excavation.

Soil Physical Properties

Corrosion Protection

A series of chemical tests were performed as part of our laboratory testing program to evaluate soil corrosivity in accordance with AWWA C105/A21.5-93. Chemical tests were performed on representative samples collected from the boring to evaluate the potential for corrosion on buried, uncoated ductile iron or steel. The test results are presented in **Attachment B**, while the

soil corrosivity point totals are presented in **Table 4**. In summary, the results of the chemical tests indicate the point total for the sample is 3.

Table 4. Soil Corrosivity Evaluation.

Sample Location	B-101 (8.5–10.0')
Resistivity	1
pH	0
Redox	0
Sulfides	0
Moisture	2
Total Points	**3**

In addition, in-situ soil electrical resistivity tests performed using the Wenner 4-point method indicate a moderate to high corrosivity risk to buried, uncoated ductile iron or steel structures. In-situ soil electrical resistivity test results are presented in **Attachment C**.

Based on these data, we expect the soils to pose a moderate to high corrosivity risk to buried, uncoated ductile iron or steel structures. Therefore, we recommend consulting a corrosion engineer for further recommendations.

We also performed sulfate and chloride ion tests in accordance with AASHTO T-290 and AASHTO T-291 to evaluate potential chemical attack on buried, uncoated concrete structures. The test results and the allowable threshold values for chemical attack of concrete are presented in **Table 5**.

Table 5. Sulfate and Chloride Testing.

Sample Location	Sulfates (ppm)		Chlorides (ppm)	
	Test Results	Allowable	Test Results	Allowable
B-101 (8.5–10.0')	11.1	1,000	7	100

Based on the results of the sulfate ion tests, sulfate resistant cement is not required for buried, uncoated concrete exposed to the on-site soils and Type I or Type II cement may be used. However, if corrosion of buried, uncoated concrete structures is of concern, we recommend consulting a corrosion engineer for further recommendations.

Thermal Resistivity

We selected samples from one location to evaluate the thermal resistivity of the on-site soils. Thermal resistivity was determined from a bulk sample collected from 1.0 to 4.0 feet of boring B-

101. The sample was remolded to 98 percent of the maximum dry density as determined by ASTM D698 (Standard Proctor). In addition to optimum moisture content, thermal resistivity was evaluated at 0, 5, and 10 percent moisture to establish a thermal dry out curve. The Thermal resistivity values and thermal dry out curves are provided in **Attachment B.**

Limitations and Closure

Unless otherwise stated herein, the recommendations provided in the referenced Geotechnical Exploration Report remain valid.

We appreciate the opportunity to provide our geotechnical engineering services for this project. If you have any additional questions or need further assistance, please contact us at your convenience.

Respectfully submitted,
Olsson, Inc.



Jordan K. Malleck, PE
Geotechnical Engineer
531.365.4639
jmalleck@olsson.com

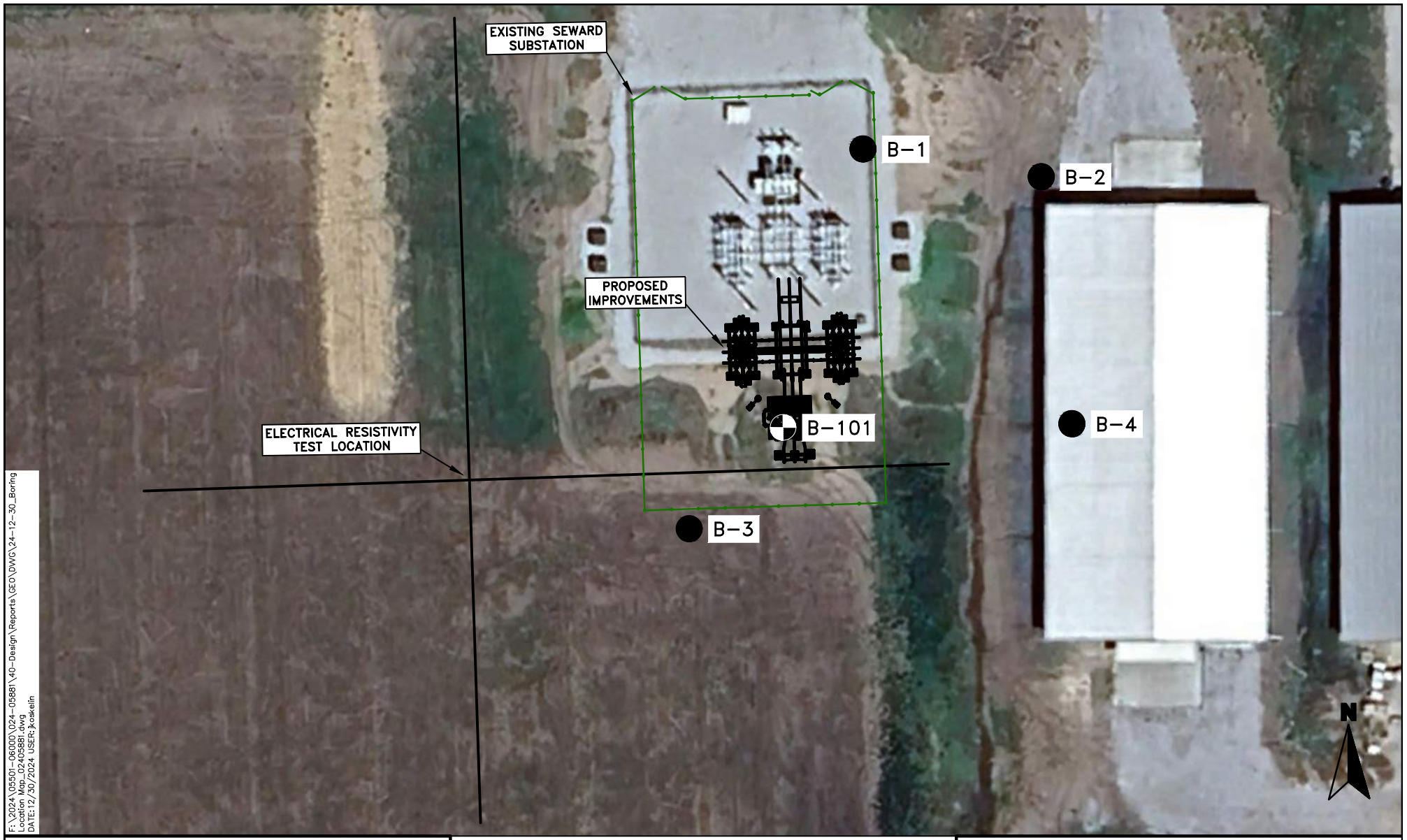


Nicholas A. Menefee, PE
Geotechnical Engineer
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Attachment A: Boring Location Map and Log
Attachment B: Laboratory Test Results
Attachment C: In-Situ Soil Electrical Resistivity Results

ATTACHMENT A

Boring Location Map and Log



F:\2024\05501-06000\024-05881\40-Design\Reports\GEO\DWG\24-12-30_Boring Location Map_02405881.dwg
DATE:12/30/2024 USER:jkoskelin

LEGEND

- SOIL BORING LOCATION
- SOIL BORING LOCATION: DRILLED JANUARY 2019

PROJECT: 024-05881

DATE: 12/30/2024 | DRAWN BY: JNK

0 25 50 100
SCALE IN FEET

BORING LOCATION MAP

SEWARD, NEBRASKA

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Lincoln, NE 68512

TEL 402.458.5052
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SYMBOLS AND NOMENCLATURE

DRILLING NOTES

DRILLING AND SAMPLING SYMBOLS

SS:	Split-Spoon Sample (1.375" ID, 2.0" OD)	HSA:	Hollow Stem Auger	NE:	Not Encountered
U:	Thin-Walled Tube Sample (3.0" OD)	CFA:	Continuous Flight Auger	NP:	Not Performed
CS:	Continuous Sample	HA:	Hand Auger	NA:	Not Applicable
BS:	Bulk Sample	CPT:	Cone Penetration Test	% Rec:	Percent Recovery
MC:	Modified California Sampler	WB:	Wash Bore	WD:	While Drilling
GB:	Grab Sample	RB:	Rock Bit	IAD:	Immediately After Drilling
SPT:	Standard Penetration Test Blows per 6.0"	PP:	Pocket Penetrometer	AD:	After Drilling

DRILLING PROCEDURES

Soil samples designated as "U" samples on the boring logs were obtained using thin-walled tube sampling techniques. Soil samples designated as "SS" samples were obtained using a split-spoon barrel sampler while performing Standard Penetration Tests (SPT). The standard penetration resistance 'N' value is the number of blows to drive the split-spoon sampler 1 foot using a 140-pound hammer falling 30 inches. Soil samples designated as "MC" were obtained in using thick-walled, ring-lined, split-barrel drive sampling techniques (Modified California sampler). Recovered samples were sealed in containers, labeled, and protected for transportation to the laboratory for testing.

WATER LEVEL MEASUREMENTS

Water levels indicated on the boring logs are levels measured in the borings at the times indicated. In highly permeable materials, the indicated levels may reflect the location of groundwater. In low permeability soils, the accurate determination of groundwater levels is not possible with only short-term observations.

SOIL PROPERTIES & DESCRIPTIONS

Descriptions of the soils encountered in the soil test borings were prepared using Visual-Manual Procedures for Descriptions and Identification of Soils.

PARTICLE SIZE

Boulders	12 in. +	Coarse Sand	4.75mm-2.0mm	Silt	0.075mm-0.002mm
Cobbles	12 in.-3 in.	Medium Sand	2.0mm-0.425mm	Clay	<0.002mm
Gravel	3 in.-4.75mm	Fine Sand	0.425mm-0.075mm		

COHESIVE SOILS

Consistency	Unconfined Compressive Strength (Qu) (tsf)
Very Soft	<0.25
Soft	0.25 – 0.5
Firm	0.5 – 1.0
Stiff	1.0 – 2.0
Very Stiff	2.0 – 4.0
Hard	> 4.0

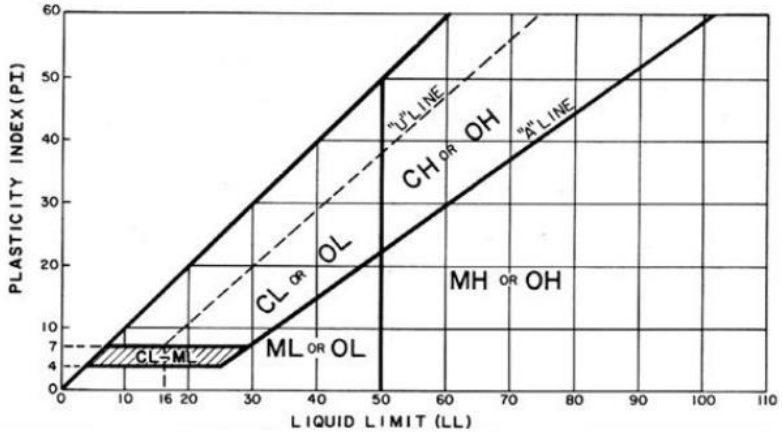
COHESIONLESS SOILS

Relative Density	'N' Value
Very Loose	0 – 3
Loose	4 – 9
Medium Dense	10 – 29
Dense	30 – 49
Very Dense	≥ 50

COMPONENT %

Description	Percent (%)
Trace	<15

PLASTICITY CHART



ROCK QUALITY DESIGNATION (RQD)

Description	RQD (%)
Very Poor	0 – 25
Poor	25 – 50
Fair	50 – 75
Good	75 – 90
Excellent	90 – 100

BOREHOLE REPORT NO. B-101

PROJECT NAME: **34.5 - 12.47kV Industrial Substation Expansion**	CLIENT: **City of Seward, Nebraska**
PROJECT NUMBER: **024-05881**	LOCATION: **Seward, Nebraska**

■ Shelby Tube ⊠ Split Spoon

APPROX. SURFACE ELEV. (ft): 96.0

ELEVATION (ft)	MATERIAL DESCRIPTION	GRAPHIC LOG	DEPTH (ft)	SAMPLE TYPE NUMBER	CLASSIFICATION (USCS)	BLOWS/6" N-VALUE	UNC. STR. (tsf)	MOISTURE (%)	DRY DENSITY (pcf)	LL/PI (%)	ADDITIONAL DATA/ REMARKS
	TOPSOIL *0.5'*		0								
95	***FILL***										
	Fat clay (CH): Firm, light brown to brown, moist, trace fine to medium gravel, trace iron staining			U 1				22.3	103.0		
	4.0'			U 2	CH			24.5	99.0	54/30	
	ALLUVIUM		5								
	Fat clay (CH): Firm, light brown, moist, trace iron staining										
90	*Fat clay (CH): Firm, light brown, moist, trace iron staining*			SS 3		4-3-4 N=7		23.3			
	Fat clay (CH): Firm, brownish gray, very moist, trace iron staining		10	U 4			0.6	28.2	87.6		
85	*Fat clay (CH): Firm, brown, very moist, trace iron staining*			SS 5		2-2-3 N=5					
	Fat clay (CH): Firm, brown, very moist, trace iron staining		15	U 6			0.6	36.3	84.1		
80											
	Fat clay (CH): Stiff, brown, very moist, trace iron staining		20	SS 7		2-4-6 N=10					
	CONTINUED NEXT PAGE										

WATER LEVEL OBSERVATIONS	
WD	▽ 23.0 ft
IAD	▼ 23.0 ft
AD	▼ Not Performed

OLSSON, INC.
1101 LIBRA DRIVE, STE 2
LINCOLN, NEBRASKA 68512

STARTED:	12/13/24	FINISHED:	12/13/24
DRILL CO.:	OLSSON	DRILL RIG:	CME 75
DRILLER:	T. KUJATH	LOGGED BY:	J. HAMMETT
METHOD: CONTINUOUS FLIGHT AUGER			

olsson

BOREHOLE REPORT NO. B-101

PROJECT NAME: **34.5 - 12.47kV Industrial Substation Expansion**

CLIENT: **City of Seward, Nebraska**

PROJECT NUMBER: **024-05881**

LOCATION: **Seward, Nebraska**

Shelby Tube ▬ Split Spoon ⊠

ELEVATION (ft)	MATERIAL DESCRIPTION	GRAPHIC LOG	DEPTH (ft)	SAMPLE TYPE NUMBER	CLASSIFICATION (USCS)	BLOWS/6" N-VALUE	UNC. STR. (tsf)	MOISTURE (%)	DRY DENSITY (pcf)	LL/PI (%)	ADDITIONAL DATA/ REMARKS
75	***ALLUVIUM***		20								
	▼ 23.5'										
	Clayey sand (SC): Medium dense, brown, wet, mostly fine sand		25	SS 8		12-14-14 N=28		19.1			P-200 = 18.5%
70											
	Clayey sand (SC): Medium dense, brown, wet, mostly fine to coarse sand		30	SS 9		3-4-6 N=10					
65											
	Clayey sand (SC): Medium dense, dark gray, wet, mostly fine to medium sand		35	SS 10		6-9-11 N=20		13.4			P-200 = 18.2%
60											
	38.0'										
	GLACIAL TILL - NEBRASKA AGE										
	Fat clay with sand (CH): Very stiff, dark gray, wet		40	SS 11		7-7-12 N=19		21.3			P-200 = 71.5%
	40.0'										
	BASE OF BORING AT 40.0 FEET										

WATER LEVEL OBSERVATIONS	
WD	▽ 23.0 ft
IAD	▼ 23.0 ft
AD	▼ Not Performed

OLSSON, INC.
1101 LIBRA DRIVE, STE 2
LINCOLN, NEBRASKA 68512

STARTED:	12/13/24	FINISHED:	12/13/24
DRILL CO.:	OLSSON	DRILL RIG:	CME 75
DRILLER:	T. KUJATH	LOGGED BY:	J. HAMMETT
METHOD: CONTINUOUS FLIGHT AUGER			

ATTACHMENT B

Laboratory Test Results

OLSSON, INC.
1101 LIBRA DRIVE, STE 2
LINCOLN, NEBRASKA 68512

SUMMARY OF LABORATORY RESULTS

PROJECT NAME: 34.5 - 12.47kV Industrial Substation Expansion

CLIENT: City of Seward, Nebraska

PROJECT NUMBER: 024-05881

PROJECT LOCATION: Seward, Nebraska

BORING NUMBER	SAMPLE I.D.	SAMPLE DEPTH (ft)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	VOID RATIO	SATURATION (%)	UNCONFINED STRENGTH (tsf)	STRAIN (%)	ATTERBERG LIMITS			P-200	USCS CLASS.
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
B-101	U-1	1.0 - 2.5'	22.3	103.0	0.637	94.6							
B-101	U-2	3.5 - 5.0'	24.5	99.0	0.703	94.3			54	24	30		CH
B-101	SS-3	6.0 - 7.5'	23.3										
B-101	U-4	8.5 - 10.0'	28.2	87.6	0.925	82.5	0.6	1.8					
B-101	U-6	13.5 - 15.0'	36.3	84.1	1.003	97.7	0.6	2.4					
B-101	SS-8	23.5 - 25.0'	19.1									18.5	
B-101	SS-10	33.5 - 35.0'	13.4									18.2	
B-101	SS-11	38.5 - 40.0'	21.3									71.5	

OLSSON, INC.
1101 LIBRA DRIVE, STE 2
LINCOLN, NEBRASKA 68512

SUMMARY OF LABORATORY RESULTS

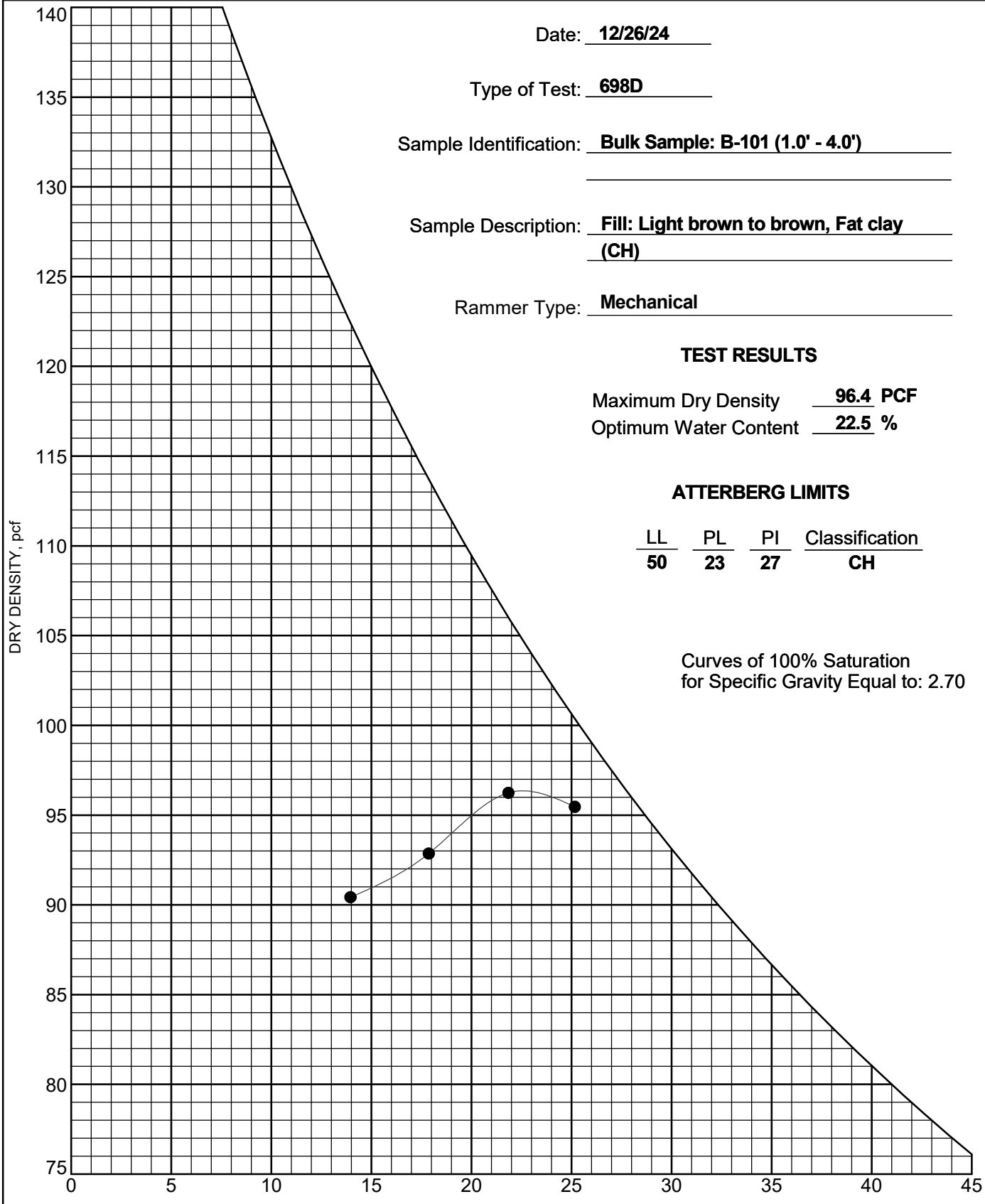
PROJECT NAME: 34.5 - 12.47kV Industrial Substation Expansion
PROJECT NUMBER: 024-05881
CLIENT: City of Seward, Nebraska
PROJECT LOCATION: Seward, Nebraska

BORING NUMBER	SAMPLE I.D.	SAMPLE DEPTH (ft)	DESCRIPTION/LOCATION	MAXIMUM DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	ATTERBERG LIMITS			P-200	USCS CLASS.
						LIQUID LIMIT	PLASTIC LIMIT	PLASTIC INDEX		
Bulk 1	**AU-1**	1.0 - 4.0'	B-101-Fill: Light brown to brown, Fat clay (CH)	96.4	22.5	50	23	27	92.9	CH

OLSSON, INC.
1101 LIBRA DRIVE, STE 2
LINCOLN, NEBRASKA 68512

MOISTURE-DENSITY RELATIONSHIP

PROJECT NAME: 34.5 - 12.47kV Industrial Substation Expansion
CLIENT: City of Seward, Nebraska
PROJECT NUMBER: 024-05881
PROJECT LOCATION: Seward, Nebraska



Date: **12/26/24**

Type of Test: **698D**

Sample Identification: **Bulk Sample: B-101 (1.0' - 4.0')**

Sample Description: **Fill: Light brown to brown, Fat clay (CH)**

Rammer Type: **Mechanical**

TEST RESULTS

Maximum Dry Density **96.4** **PCF**
Optimum Water Content **22.5** **%**

ATTERBERG LIMITS

LL	PL	PI	Classification
50	**23**	**27**	**CH**

Curves of 100% Saturation
for Specific Gravity Equal to: 2.70

Platte Valley Laboratories, Inc.

Analysis Report

Submission #:	**11435**
Date Entered:	01/03/25
Date Sampled:	NA
Date Received:	01/03/25
Date Reported:	01/06/25
Project:	34.5-12.47kV Industrial Substation Expansion
Location:	NA

Mail To: OLSSON-L
ATTN: NICHOLAS MENEFEE
1101 LIBRA DRIVE SUITE 2
LINCOLN, NE 68512

Sample ID: B-101 U-4 (8.5-10.0') **Lab #: 34067**

Analysis	Result	Units	Expression	Reporting Limit	Method
Sulfate	11.1	mg/kg	SO4	0.2	EPA 375.2
Sulfate-Sulfur	3.7	mg/kg	SO4-S	0.1	EPA 375.2
Sulfide	negative	mg/kg	S^{2-}	0.1	SM 376.1
Chloride	7	mg/kg	Cl-	1	EPA 325.2
pH	8.1	N/A	pH	0	SM 4500-H
Resistivity	2750	ohm-cm	-		NA
Redox	266	mV	-	0	NA

914 Highway 30 PO Box 807 Gibbon, NE 68840
Phone: (308) 468-5975 Fax: (308) 468-6018
E-mail: info@soillab.com

Reviewed By:

Geotherm

21239 FM529 Rd., Bldg F
Cypress, TX 77433
Office: 291-985-9344
info@geothermusa.com
http://www.geothermusa.com

January 22, 2025

Olsson
1101 Libra Drive, Suite 2
Lincoln, NE 68512
Attn: Jordan Koskelin

Thermal Resistivity Report (Project No. 024-05881)
34.5 - 12.47kV Industrial Substation Expansion – Seward, Nebraska

The following is the report of thermal dryout characterization tests conducted on one (1) native soil sample from the referenced project sent to our laboratory.

Thermal Resistivity Tests: The sample was tested at the 'optimum' moisture content and at 98% of the standard Proctor dry density ***provided by Olsson***. The tests were conducted in accordance with the **IEEE standard 442-2017.** The results are tabulated below and the thermal dry out curve is presented in **Figure 1.**

Sample ID, Description, Thermal Resistivity, Moisture Content and Density

Sample ID	Depth (ft)	Effort (%)	Description (Olsson)	Thermal Resistivity (°C-cm/W)		Moisture Content (%)	Dry Density (lb/ft^3)
				Wet	Dry		
B-101	1 – 4	98	Fill - Fat clay (CH), Light Brown to Brown	76	182	23	95

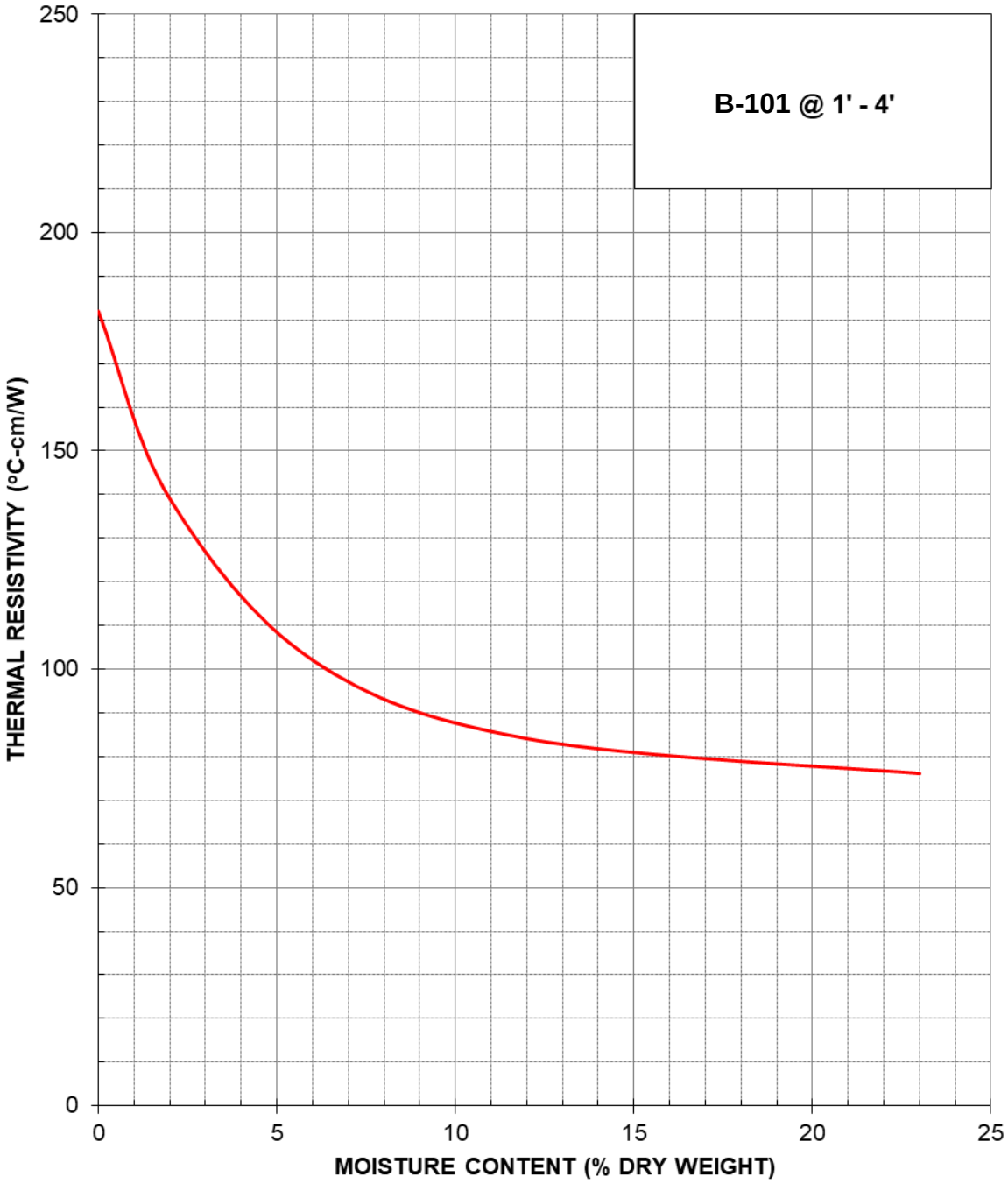
Please contact us if you have any questions or if we can be of further assistance.

Geotherm USA, LLC

Nimesh Patel

Geotherm

THERMAL DRYOUT CURVE



Olsson (Project No. 024-05881)

34.5 - 12.47kV Industrial Substation Expansion – Seward, Nebraska

Thermal Resistivity Report

January 2025 **Figure 1**

ATTACHMENT C

In-Situ Soil Electrical Resistivity Results

In-Situ Soil Electrical Resistivity (Wenner Four-Point Method)

Conditions: Dry

Soil Type: Agricultural Zone: Cornfield, Clay

Project: 34.5 - 12.47kV Industrial Substation Expansion

Project No.: 024-05881

Date: 3/12/2025

Completed By: Kevin Whitla, Jerry Yeager, Mike Wentland

Test Results

Test Location	Probe Spacing (ft)	Meter Reading (Ω)	Soil Resistivity (Ω - cm)
1 North-South	1.5	6.68	1,919
	3	2.83	1,626
	5	1.51	1,446
	10	0.63	1,206
	25	0.25	1,197
	50	0.13	1,245
	75	0.08	1,149
	100	0.05	958

Test Results

Test Location	Probe Spacing (ft)	Meter Reading (Ω)	Soil Resistivity (Ω - cm)
1 East-West	1.5	6.16	1,769
	3	2.50	1,436
	5	1.48	1,417
	10	0.65	1,245
	25	0.25	1,197
	50	0.14	1,341
	75	0.09	1,293
	100	0.05	958

Notes: NA

ISSUED FOR BID PRELIMINARY DESIGN SEWARD, NE 34.5 – 12.47KV INDUSTRIAL SUBSTATION EXPANSION

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34.5 - 12.47 KV INDUSTRIAL SUBSTATION
SEWARD, NEBRASKA - 2025

INDEX OF DRAWINGS

SHEET	REV	TITLE	STATUS
1	3	COVER	IFB
2	R	ONE-LINE DIAGRAM	IFB
2	4	ONE-LINE DIAGRAM	IFB
3	3	GRADING PLAN	FR
4	R	SITE PLAN	IFB
4	4	SITE PLAN	IFB
5	R	SUBSTATION PLAN	IFB
5	3	SUBSTATION PLAN	IFB
6	3	MATERIAL LIST	IFB
7	R	FOUNDATION AND CONDUIT PLAN	IFB
7	3	FOUNDATION PLAN	IFB
8	R	GROUNDING PLAN	IFB
8	3	GROUNDING PLAN	IFB
9	3	LIGHTING PLAN	IFB
10	3	ELEVATIONS (1 OF 3)	IFB
11	R	ELEVATIONS (2 OF 3)	IFB
11	3	ELEVATIONS (2 OF 3)	IFB
12	3	ELEVATIONS (3 OF 3)	IFB
13	2	34.5 KV STRUCTURE DETAILS	FR
14	R	12.47 KV SWITCH & BUS SUPPORT STRUCTURE DETAIL (1 OF 2)	IFB
14	3	12.47 KV SWITCH & BUS SUPPORT STRUCTURE DETAIL (1 OF 2)	IFB
15	R	12.47 KV SWITCH & BUS SUPPORT STRUCTURE DETAIL (2 OF 2)	IFB
15	3	12.47 KV SWITCH & BUS SUPPORT STRUCTURE DETAIL (2 OF 2)	IFB
16	3	12.47 KV RECLOSER BAY STRUCTURE DETAIL	IFB
17	3	FOUNDATION DETAILS	IFB
18	3	MISCELLANEOUS DETAILS (1 OF 6)	IFB
19	2	MISCELLANEOUS DETAILS (2 OF 6)	FR
20	3	MISCELLANEOUS DETAILS (3 OF 6)	IFB
21	3	MISCELLANEOUS DETAILS (4 OF 6)	IFB
22	3	MISCELLANEOUS DETAILS (5 OF 6)	IFB
23	2	STRUCTURAL REINFORCEMENT DETAILS	FR
24	2	FENCE DETAILS	FR
25	0	THREE LINE DIAGRAM NORTH	IFB
26	0	THREE LINE DIAGRAM SOUTH	IFB
27	0	PIER FOUNDATION DETAILS	IFB
28	0	TRANSFORMER FOUNDATION AND CONTAINMENT PIT DETAILS (1 OF 2)	IFB
29	0	TRANSFORMER FOUNDATION AND CONTAINMENT PIT DETAILS (2 OF 2)	IFB
30	0	EQUIPMENT FOUNDATION DETAILS	IFB
31	0	CONDUIT PLAN	IFB
32	0	LV POWER AND CONTROL CONDUIT SCHEDULE	IFB
33	0	12.47KV PORTAL STRUCTURE DETAIL	IFB
34	0	MISCELLANEOUS DETAILS (6 OF 6)	IFB



PROJECT LOCATION

MAYOR

JOSHUA EICKMEIER

COUNCIL MEMBERS

MEGAN KAHLER
JESSICA KOLTERMAN
MATT STRYSON
TATUM TONNIGES
JOHN SINGLETON
RICH WERGIN
ZANE FRANCESCATO
KARL MILLER

CITY ADMINISTRATOR

GREG BUTCHER

CITY CLERK/HR DIRECTOR

DEREK BARGMANN

FINANCE DIRECTOR/TREASURER

CYDNEE GOLDEN

ELECTRIC SUPERINTENDENT

JARED HOCHSTEIN

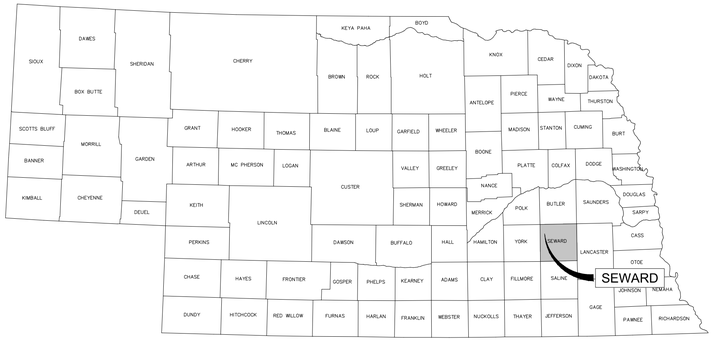
ATTORNEY

KELLY HOFFSCHNEIDER

COLOR LEGEND

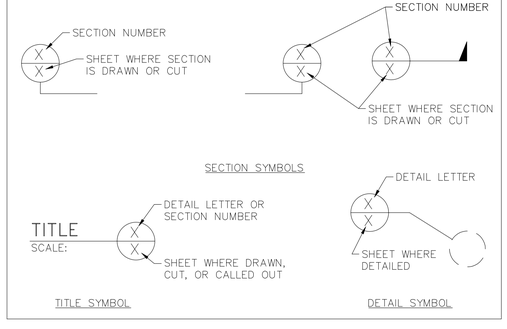
INSTALL
REMOVAL
DRAFTING CHANGE

PRINT STATUS LEGEND
IFB – ISSUED FOR BID
FR – FOR REFERENCE



KEY TO COUNTIES

SYMBOLS LEGEND



ISSUED FOR BID
NOT FOR CONSTRUCTION
7-30-2025

WHEN THIS DRAWING IS PRINTED TO THE SCALE SHOWN, THE BAR SHOWN BELOW WILL BE 1" LONG.

olsson
601 P Street, Suite 200
P.O. Box 84608
Lincoln, NE 68508
TEL 402.474.6311
www.olsson.com

PROFESSIONAL ELECTRICAL ENGINEER
JEREMY DUANE CALLOWAY
E-21354
STATE OF NEBRASKA
7/30/2025

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
0	5-28-2019	95% OWNER REVIEW
1	6-07-2019	ISSUED FOR BID
2	11-21-2019	ISSUED FOR CONSTRUCTION
3	07-30-2025	SUBSTATION EXPANSION

COVER

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

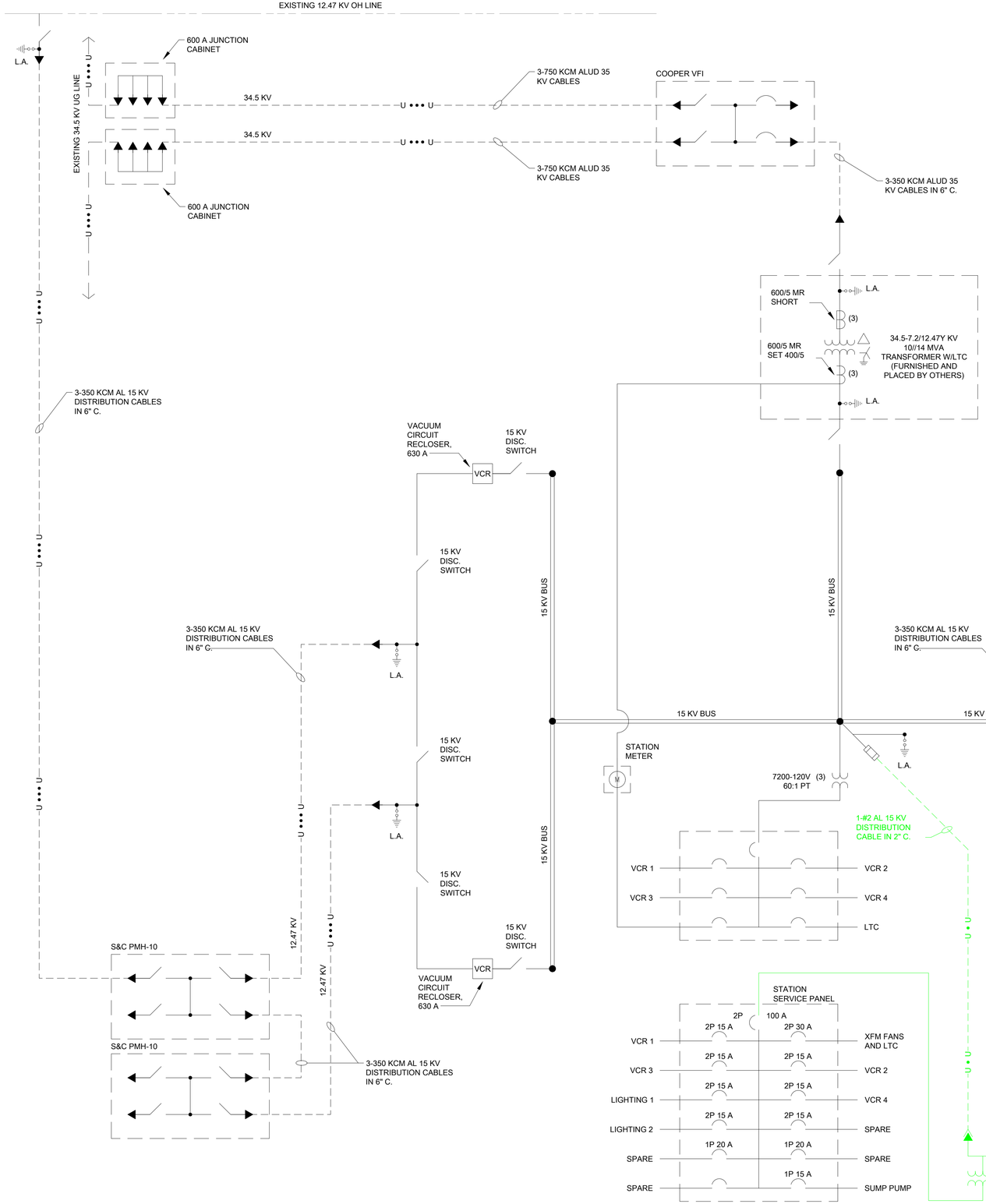
SEWARD, NEBRASKA

2025

drawn by: NF
checked by: NF/GK
approved by: EE
QA/QC by: NF/GK
project no.: 018-1509
drawing no.: 1
date: 2019-11-14

SHEET 1 of 34

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SYMBOLS LEGEND	
U • U	1-PHASE UNDERGROUND CIRCUIT
U ••• U	3-PHASE UNDERGROUND CIRCUIT
	TRANSFORMER
	DISCONNECT SWITCH
	LIGHTNING ARRESTER
	POTENTIAL TRANSFORMER
	CURRENT TRANSFORMER
	SWITCHED RISER
VCR	VACUUM CIRCUIT RECLOSER
	FUSE
M	METER
	CIRCUIT BREAKER 120/240 V

NOTES:

1. REFER TO SPECIFICATIONS, AND MATERIAL LIST NOTES FOR OWNER-FURNISHED ITEMS.
2. CONNECTIONS AT SWITCHGEAR NOT INTENDED TO SHOW SPECIFIC BAY FOR TERMINATIONS. COORDINATE WITH OWNER FOR PREFERRED CONNECTIONS.

ISSUED FOR BID
NOT FOR CONSTRUCTION
7-30-2025

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
0	05-29-2019	95% OWNERS REVIEW
1	06-07-2019	ISSUED FOR BID
2	11-21-2019	ISSUED FOR CONSTRUCTION
3	07-30-2025	CONFORMED TO CONSTRUCTION RECORD
R	07-30-2025	SUBSTATION EXPANSION

ONE LINE DIAGRAM REMOVAL

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

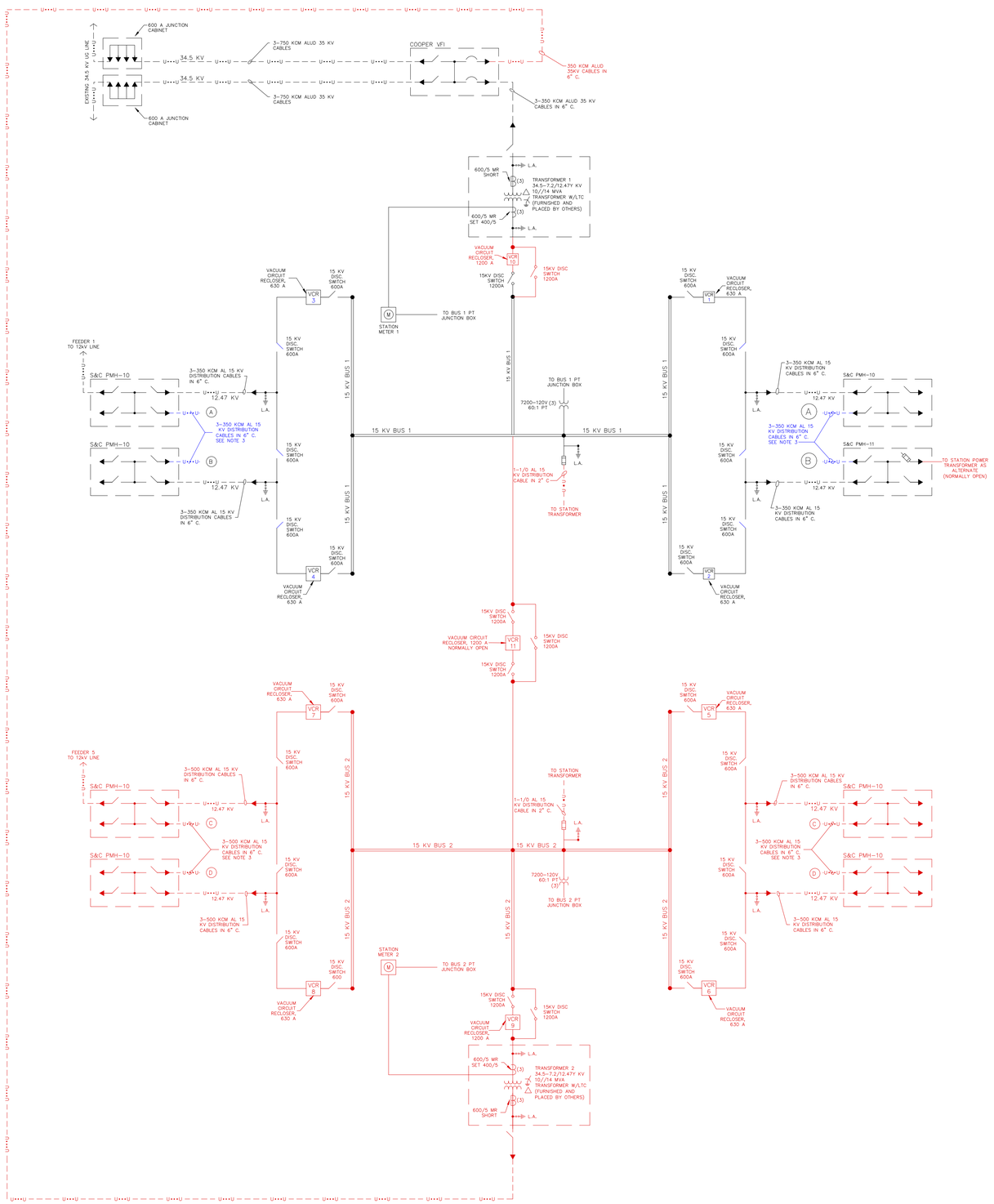
SEWARD, NEBRASKA

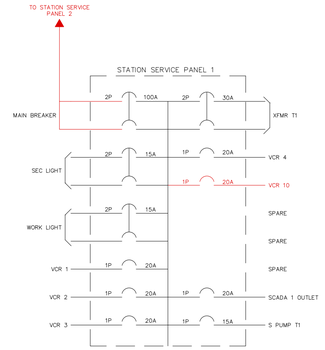
2025

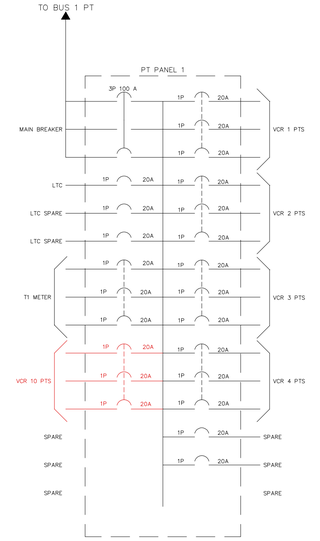
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checked by:
approved by:
QA/QC by:
project no.: 024-05881
drawing no.: 2R
date: 2019-11-14

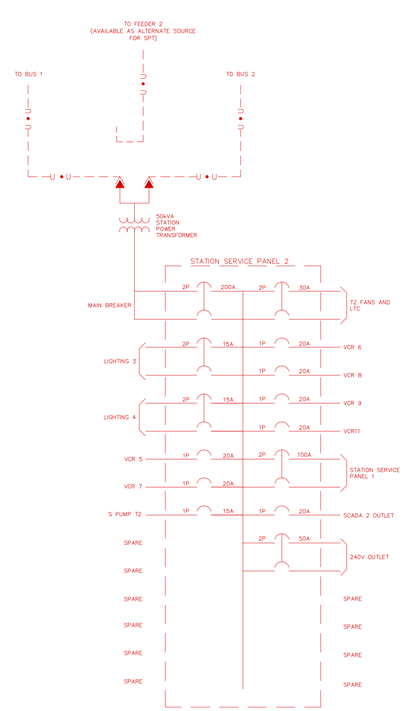
SHEET 2R of 34

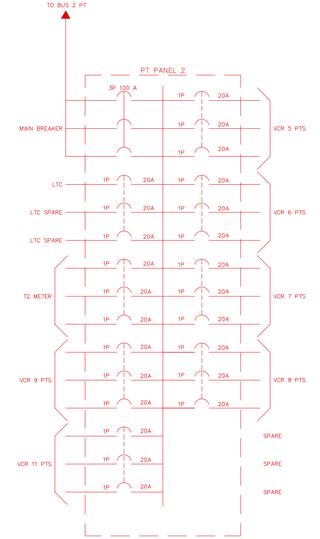
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SYMBOLS LEGEND	
	1-PHASE UNDERGROUND CIRCUIT
	3-PHASE UNDERGROUND CIRCUIT
	TRANSFORMER
	DISCONNECT SWITCH
	LIGHTNING ARRESTER
	POTENTIAL TRANSFORMER
	CURRENT TRANSFORMER
	SWITCHED RISER
VCR	VACUUM CIRCUIT RECLOSER
	FUSE
M	METER
	CIRCUIT BREAKER 120/240 V

NOTES:

1. REFER TO SPECIFICATIONS, AND MATERIAL LIST NOTES FOR OWNER-FURNISHED ITEMS.
2. CONNECTIONS AT SWITCHGEAR NOT INTENDED TO SHOW SPECIFIC BAY FOR TERMINATIONS. COORDINATE WITH OWNER FOR PREFERRED CONNECTIONS.
3. UNDERGROUND ROUTING NOT SHOWN FOR CLARITY. SEE CORRESPONDING WIRE ID FOR CONNECTION.
4. TESTING AND COMMISSIONING TO BE PERFORMED BY A THIRD PARTY AS PART OF THE 2025 SUBSTATION EXPANSION PROJECT.

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REVISIONS

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0	05-28-2019	95% OWNER REVIEW
1	06-07-2019	ISSUED FOR BID
2	11-21-2019	ISSUED FOR CONSTRUCTION
3	02-20-2021	ISSUED FOR CONSTRUCTION RECORD
4	07-09-2025	SUBSTATION EXPANSION

ONE LINE DIAGRAM

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

2025

drawn by: NE
checked by:
approved by:
QA/QC by:
project no.: 024-05881
drawing no.: 2
date: 2019-11-14

SHEET 2 of 34

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DATE: Oct 22, 2025 8:35am XREFS:

SEWARD INDUSTRIAL SUBSTATION
GRADING PLAN

LEGEND

- CONTROL POINT
- POWER POLE
- SIGN
- 1455 — EXISTING CONTOUR LINE
- 1455 — PROPOSED CONTOUR LINE
- GRAVEL PAVEMENT EDGE
- PROPERTY LINE
- EXISTING CHAIN LINK FENCE
- CHAIN LINK FENCE
- SS — EXISTING SANITARY SEWER LINE
- P-OH — EXISTING OVERHEAD POWER
- P-UG — EXISTING UNDERGROUND POWER
- LIMITS OF GRADING
- SLOPE ARROW

FG=1450.00 FINISH GRADE
ME=1450.00 MATCH EXISTING

Diggers Hotline Of Nebraska
Statewide (800) 331-5666
www.ne-diggers.com
Call Before You Dig... Its The Law

ISSUED FOR REFERENCE
NOT FOR CONSTRUCTION
10-22-2025

SITE PLAN AND GRADING CALLOUTS:

(1) CONTRACTOR TO INSTALL 4" COMPACTED ROCK SURFACING ON COMPACTED SUBGRADE AFTER CONSTRUCTON INCLUDING AREAS WITHIN 5' OF PROPOSED SWITCHGEARS AND OUTSIDE OF THE SUBSTATION FENCE.

CONTROL POINTS:

PNT.	NORTHING	EASTING	ELEV.	DESC.
100	143583.60	170910.33	1453.55	SET 3/4" REBAR W/CAP
101	143635.64	170889.29	1453.76	FD. REBAR W/LS865 CAP
102	143440.33	170889.17	1452.18	FD. REBAR W/ALPHA SURVEY CAP
104	143440.32	171112.17	1451.32	FD. REBAR W/ALPHA SURVEY CAP
105	143634.60	171113.13	1452.62	FD. REBAR W/LS610 CAP

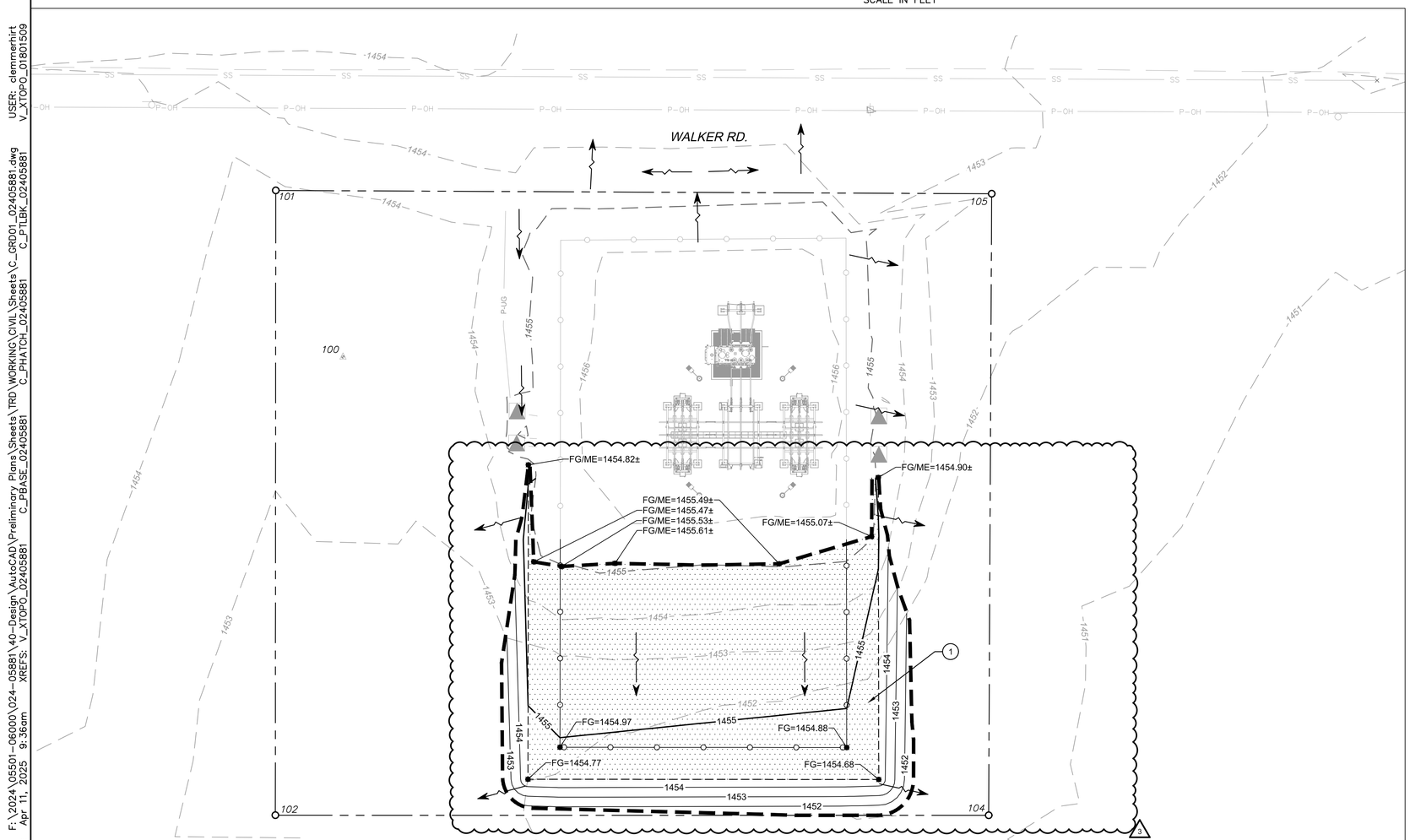
N

0' 10' 20' 40'
SCALE IN FEET

SCHEDULE OF APPROXIMATE QUANTITIES*

ITEM	UNIT	QTY
CONSTRUCTION ROCK	CY	281
STRIPPINGS (4" DEPTH)	CY	94
IMPORT SOIL FILL	CY	763
30% COMPACTION COEFFICIENT	CY	230
SEEDING	SF	2512

* CONTRACTOR SHALL VERIFY ALL QUANTITIES



GENERAL NOTES

1. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THIS INCLUDES PRIVATE AND PUBLIC UTILITIES.
2. HORIZONTAL CONTROL IS: CITY OF SEWARD

ROCK NOTES

1. AFTER THE SUBSTATION PAD AND ENTRANCE HAVE BEEN GRADED TO THEIR FINAL ELEVATIONS, THE CONTRACTOR SHALL SPREAD AND COMPACT CRUSHED ROCK TO A DEPTH OF 2 INCHES TO PROVIDE A GOOD WORKING SURFACE FOR THE REMAINING SUBSTATION CONSTRUCTION. WHEN THE SUBSTATION IS COMPLETE, THE CONTRACTOR SHALL SPREAD AND COMPACT THE FINAL SURFACE ROCK TO A DEPTH OF AT LEAST 2 INCHES TO PROVIDE THE FINISHED SURFACE.

GRADING NOTES

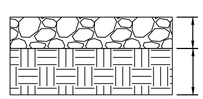
1. THE PROPOSED CONTOURS REPRESENT TOP OF FINISHED GROUND SURFACE. THE CONTRACTOR SHALL ACCOUNT FOR SUBGRADE ELEVATIONS IN AREAS TO RECEIVE ROCK SURFACING.
2. CONTRACTOR WILL BE HELD RESPONSIBLE FOR SETTLEMENT DUE TO IMPROPER COMPACTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS.
4. PRIOR TO PLACEMENT OF FILL, TOPSOIL AND VEGETATION SHALL BE STRIPPED FROM THE GRADING LIMITS TO SUBSOIL ELEVATIONS.
5. SUFFICIENT TOPSOIL SHOULD BE SALVAGED AND STOCKPILED BY THE CONTRACTOR FOR RE-SPREADING IN PERMANENT GREENSPACE AREAS.
6. TOPSOIL SALVAGED AS PART OF THE EXCAVATION SHALL BE PLACED TO A MINIMUM DEPTH OF 6 INCHES OVER ALL AREAS DISTURBED BY THE WORK. LARGE STONES, STICKS AND LUMPS SHALL BE REMOVED OR BROKEN UP, AND THE TOPSOIL SHALL BE LEVELED AND RAKED TO MATCH ADJACENT GRADES, READY FOR SEEDING. ANY ROCK OR SAND FROM SURFACING ACTIVITIES SHALL BE REMOVED PRIOR TO PLACEMENT OF TOPSOIL.
7. THE CONTRACTOR SHALL FINISH GRADE SLOPES AS SHOWN NO STEEPER THAN 1 FOOT VERTICAL IN 3 FEET HORIZONTAL, EXCEPT WHERE INDICATED.
8. CONTRACTOR SHALL GRADE ALL LOW SPOTS TO DRAIN.
9. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE ON THE SUBSTATION PAD ROCK SURFACE AREAS.
10. CONTRACTOR SHALL GRADE TO CONTOURS SHOWN IN GREENSPACES.
11. AT THE COMPLETION OF GRADING, THE CONTRACTOR SHALL REMOVE ANY EXCESS EXCAVATION FROM THE SITE.
12. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSPECTIONS PRIOR TO COMMENCING CONSTRUCTION.
13. CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES, IF NECESSARY.
14. SOIL MATERIAL FROM OFF-SITE BORROW SOURCES SHALL BE PROVIDED BY CONTRACTOR. BORROW MATERIAL SHALL BE TESTED AS PER SPECIFICATION TO VERIFY COMPLIANCE WITH FILL MATERIAL REQUIREMENTS.
15. ANY GEOTECHNICAL/TESTING REPORTS SOLICITED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE OWNER AND THE ENGINEER.
16. FULL TIME OBSERVATION AND TESTING BY A QUALIFIED TESTING LAB OR PROFESSIONAL GEOTECHNICAL ENGINEER SHALL OCCUR TO MONITOR SITE STRIPPING, PROOFROLLING AND FILL PLACEMENT.
17. PROPOSED FOOTING TOPS OF CONCRETE TO MATCH EXISTING TRANSFORMER "T1" FOOTING FOUNDATION TOP.

SEEDING NOTES

1. FINAL SEEDING AND STABILIZATION SHALL OCCUR ON ALL DISTURBED AREAS WHICH DO NOT RECEIVE ROCK SURFACING.
2. BROME/RYE SEEDING SHALL OCCUR WITHIN 7 DAYS OF THE COMPLETION OF FINAL GRADING. THE CONTRACTOR SHALL APPLY THE INTIAL WATERING OF THE SEED MIXTURE.

CONSTRUCTION ROCK GRADATION AND PLASTICITY

PERCENT RETAINED ON SQUARE MESH SIEVES						PLAST. INDEX	LIQUID LIMIT (MAX.)
1"	3/4"	NO. 4	NO. 8	NO. 40	NO. 200		
0-5	5-30	40-60	45-70	60-84	85-92	2-6	30



ROCK SURFACING DETAIL

MASS GRADING TO BE COMPLETED BEFORE CONSTRUCTION BY EARTHWORK CONTRACTOR. EARTHWORK CONTRACTOR TO PROVIDE ROCK. SUBSTATION CONTRACTOR TO COORDINATE ROCK DELIVERY WITH EARTHWORK CONTRACTOR (P:402-432-2168) AND SPREAD ROCK AS SHOWN ON THIS PLAN.

WHEN THIS DRAWING IS PRINTED TO THE SCALE SHOWN, THE BAR SHOWN BELOW WILL BE 1" LONG.

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FOR REFERENCE
SEE GRADING PACKAGE FOR MORE INFORMATION

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
0	5-28-2019	95% OWNER REVIEW
1	6-07-2019	ISSUED FOR BID
2	11-12-2019	ISSUED FOR CONSTRUCTION
3	5-21-2025	SUBSTATION GRADING EXPANSION

GRADING PLAN

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

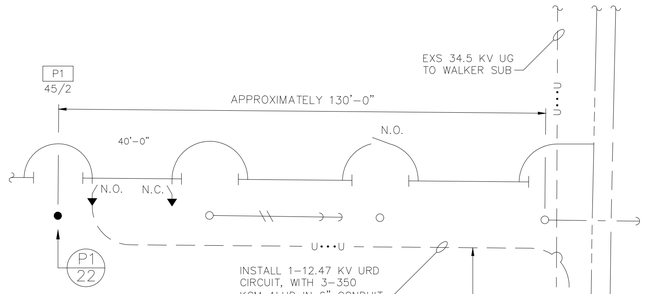
SEWARD, NEBRASKA

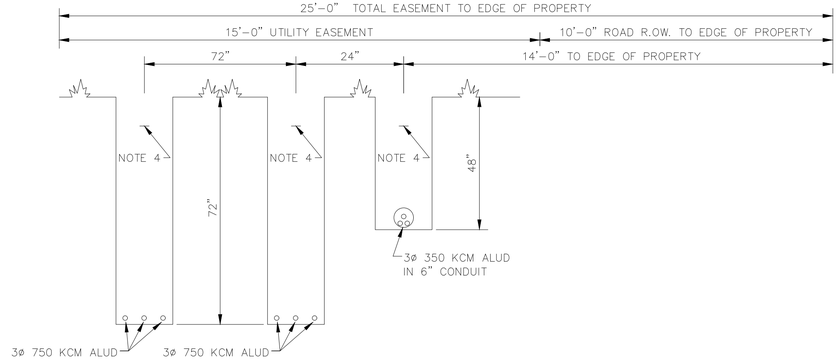
2019 - 2025

drawn by: NF
checked by: NF/GK
approved by: EE
QA/QC by: NF/GK
project no.: 018-1509
drawing no.:
date: 2025-5-22

SHEET 3 of 34

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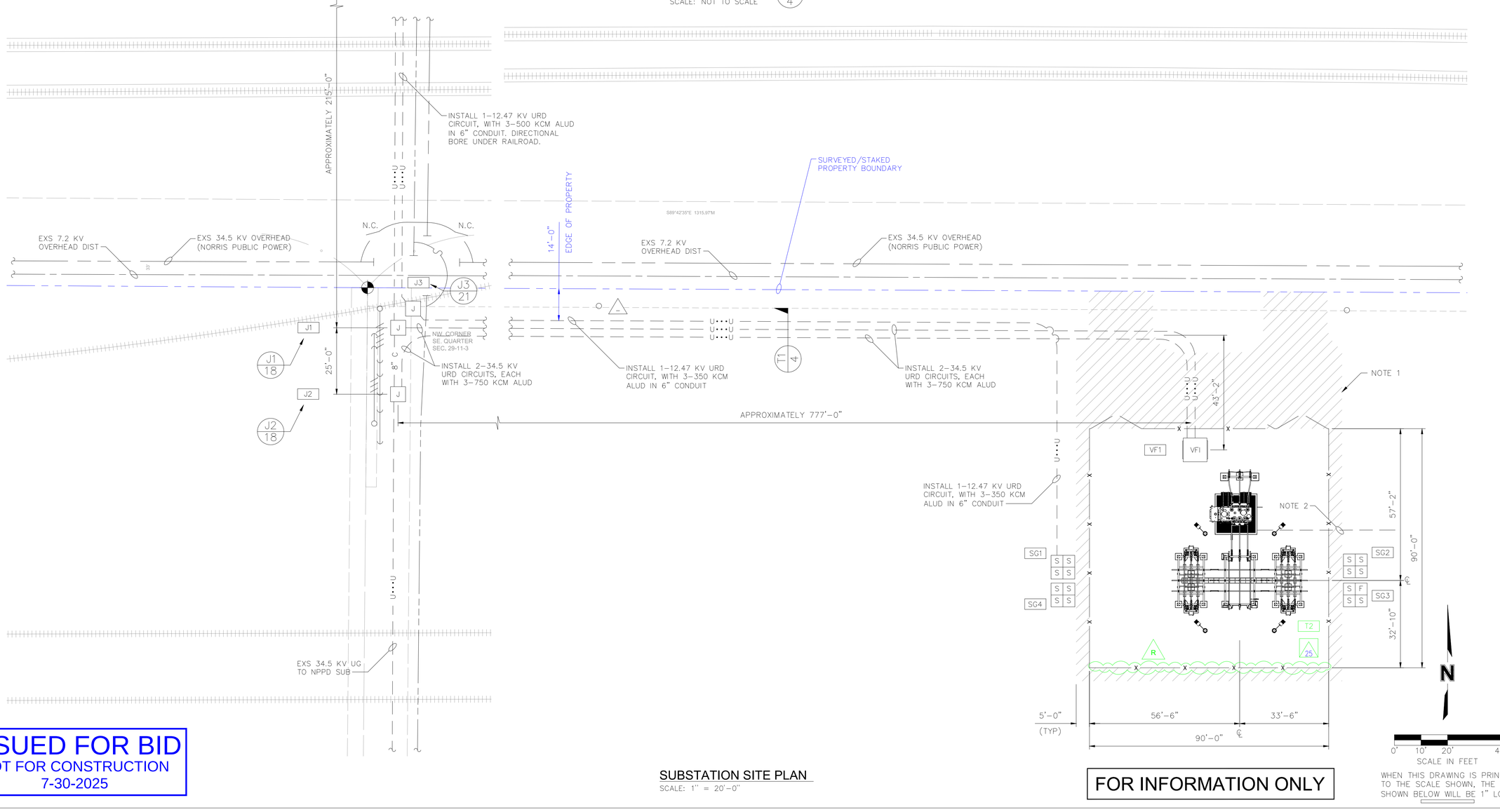
TRENCH DETAIL

SCALE: NOT TO SCALE

T1 / 4

NOTES:

1. FURNISH AND SPREAD 6" LAYER OF CRUSHED ROCK SURFACING. INCLUDES FENCE INTERIOR AREA PLUS EXTERIOR AREAS AS SHOWN ON THIS SHEET AND SHEET 5. TOTAL ROCK QUANTITY = 260 CYD.
2. INSTALL 2" PVC DRAIN PIPE TO APPROXIMATELY 25'-0" OUTSIDE SUBSTATION FENCE.
3. LOCATION OF EXISTING 34.5 KV UNDERGROUND LINE IS APPROXIMATE. LOCATE PRIOR TO TRENCHING, BORING OR EXCAVATING.
4. INSTALL METALLIC WARNING TAPE IN ALL TRENCHES AT A DEPTH OF 12" ± 3".



WHEN THIS DRAWING IS PRINTED TO THE SCALE SHOWN, THE BAR SHOWN BELOW WILL BE 1" LONG.

SUBSTATION SITE PLAN

SCALE: 1" = 20'-0"

ISSUED FOR BID
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7-30-2025

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7/30/2025

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
0	5-29-2019	95% OWNER REVIEW
1	6-07-2019	ISSUED FOR BID
2	11-21-2019	ISSUED FOR CONSTRUCTION
3	01-23-2020	CONSTRUCTION REFERENCE
R	07-30-2025	SUBSTATION EXPANSION

SITE PLAN

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

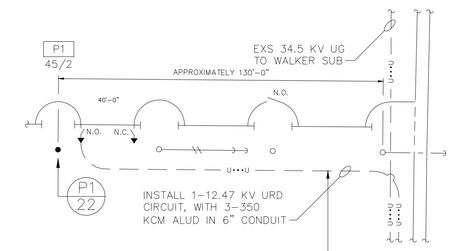
SEWARD, NEBRASKA

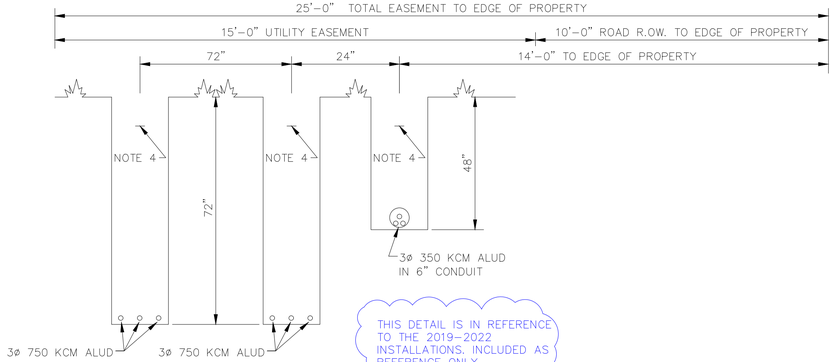
2025

drawn by: NF
checked by: NF/GK
approved by: EE
QA/QC by: NF/GK
project no.: 018-1509
drawing no.: 4R
date: 2019-11-14

SHEET
4R of 34

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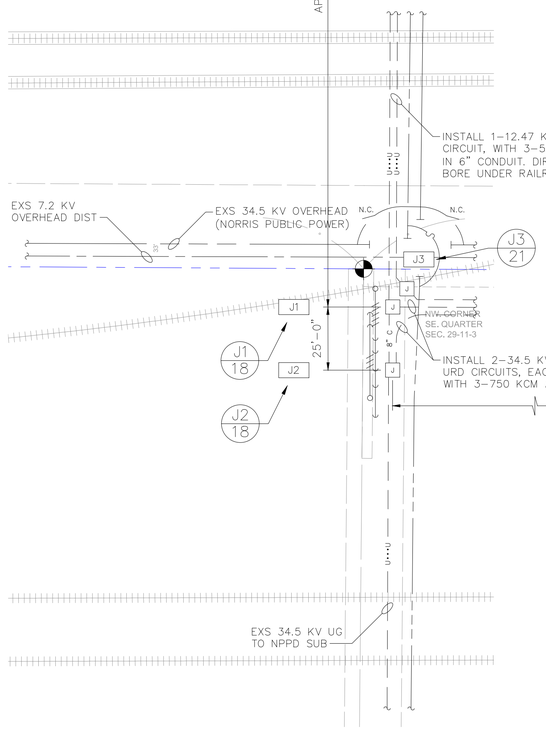


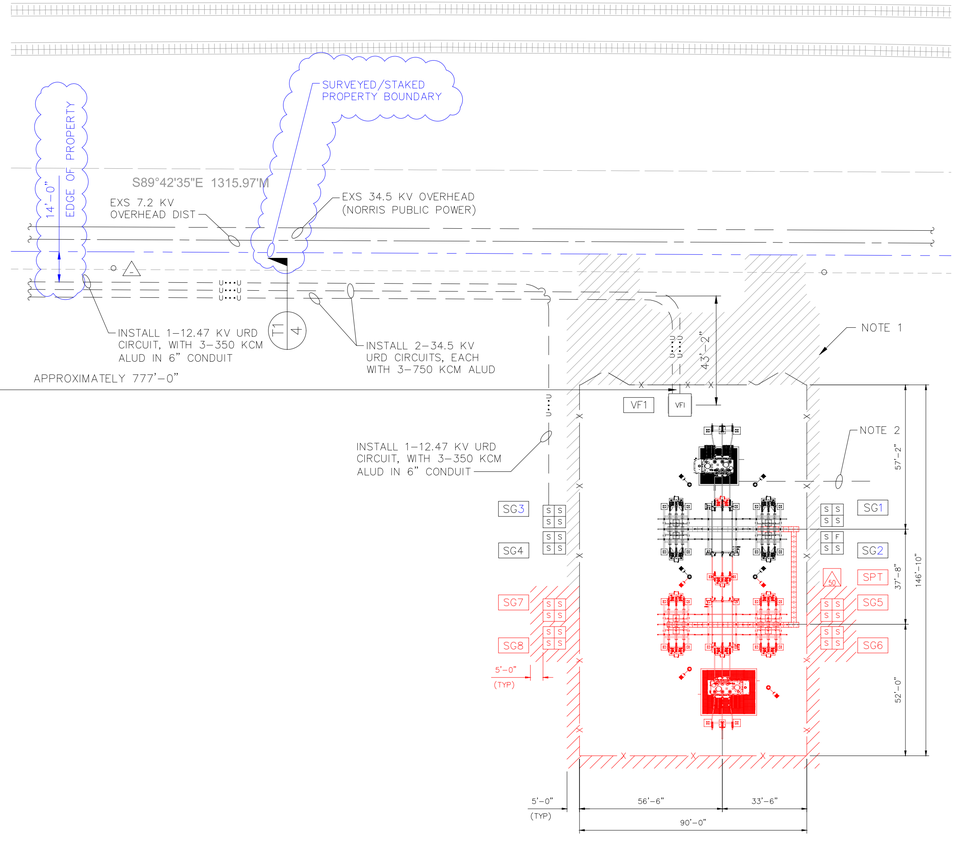


TRENCH DETAIL (T1 / 4)
SCALE: NOT TO SCALE

NOTES:

1. FURNISH AND SPREAD 6" LAYER OF CRUSHED ROCK SURFACING. INCLUDES FENCE INTERIOR AREA PLUS EXTERIOR AREAS AS SHOWN ON THIS SHEET AND SHEET 5. TOTAL ROCK QUANTITY = 260 + 281 CYD.
2. INSTALL 2" PVC DRAIN PIPE TO APPROXIMATELY 25'-0" OUTSIDE SUBSTATION FENCE.
3. LOCATION OF EXISTING 34.5 KV UNDERGROUND LINE IS APPROXIMATE. LOCATE PRIOR TO TRENCHING, BORING OR EXCAVATING.
4. INSTALL METALLIC WARNING TAPE IN ALL TRENCHES AT A DEPTH OF 12" ± 3".
5. SEE 2025 DISTRIBUTION DELIVERABLES FOR PROPOSED CIRCUITS OUTSIDE OF SUBSTATION FENCE.





SUBSTATION SITE PLAN
SCALE: 1" = 30'-0"

ISSUED FOR BID
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N

0' 15' 30' 60'
SCALE IN FEET

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7/30/2025

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REVISIONS

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0	5-29-2019	95% OWNER REVIEW
1	6-07-2019	ISSUED FOR BID
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3	01-23-2020	ISSUED FOR CONSTRUCTION REFERENCE
4	07-30-2025	SUBSTATION EXPANSION

SITE PLAN

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

2025

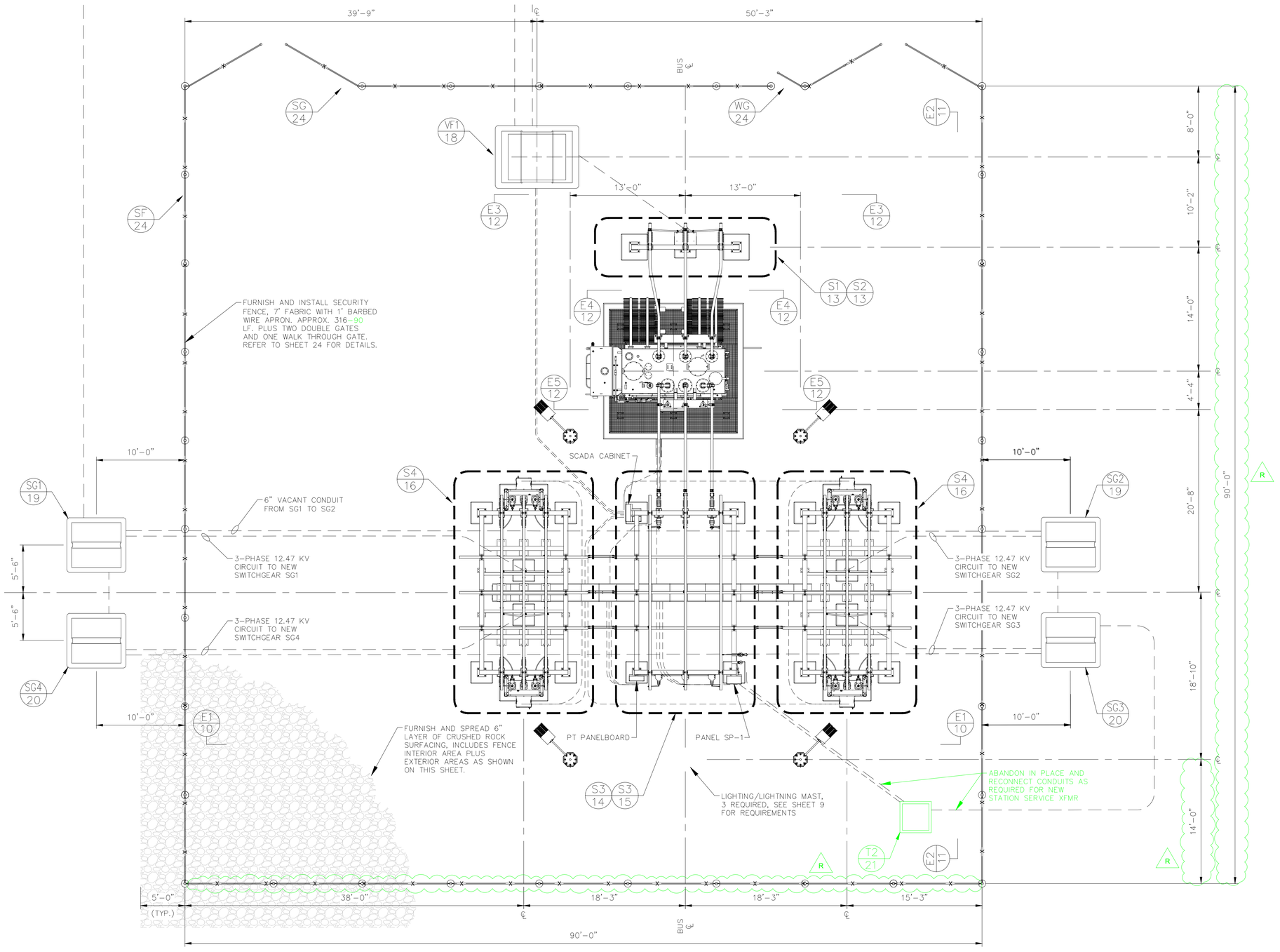
drawn by:	NF
checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	4
date:	2019-11-14

SHEET
4 of 34

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NOTES:

1. SEE SHEET 7 FOR CONDUIT ROUTING.



SUBSTATION PLAN
SCALE: 1" = 6'-0"

ISSUED FOR BID
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N

0" 3" 6" 12"
SCALE IN FEET

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7/30/2025

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SUBSTATION PLAN

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

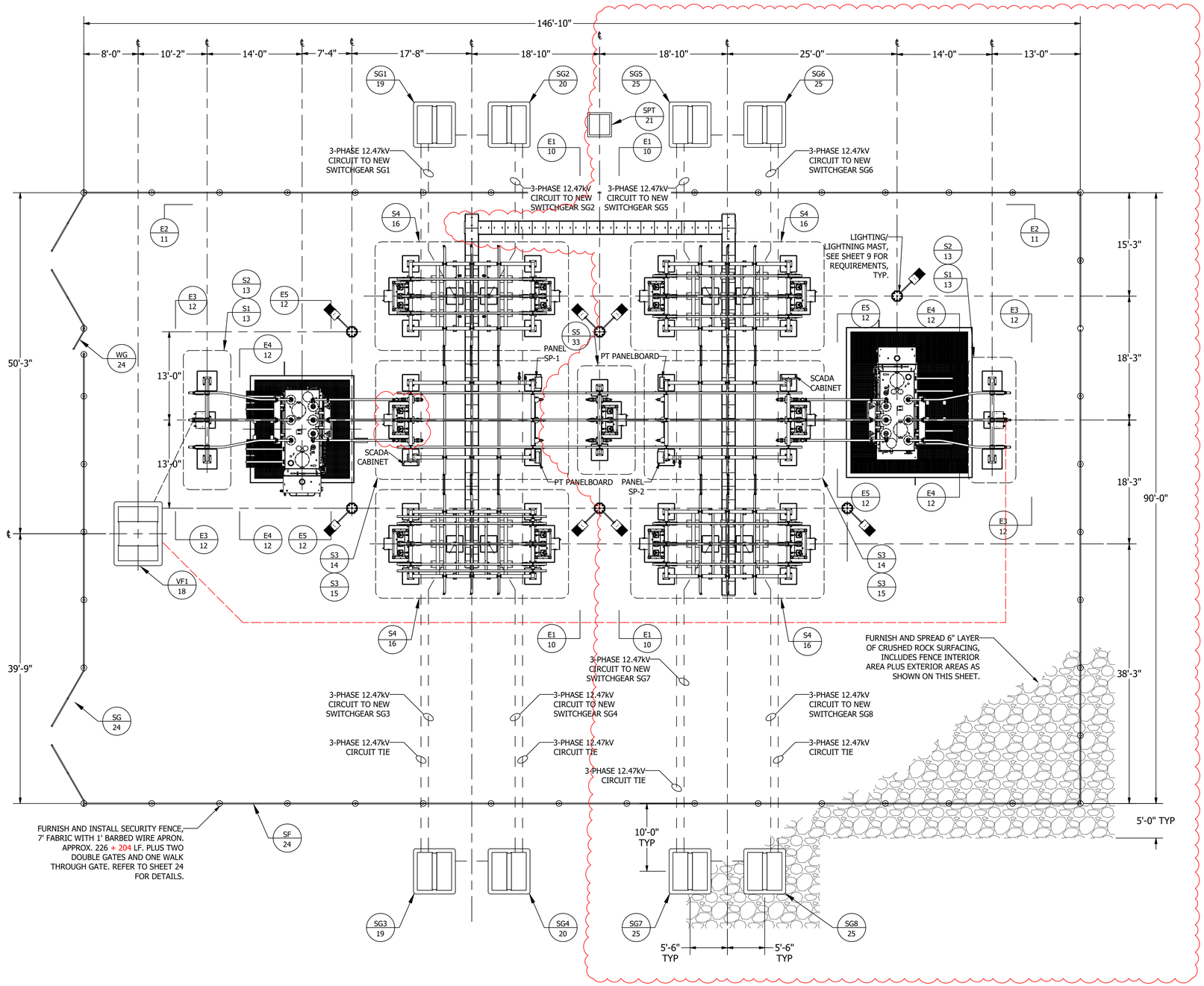
SEWARD, NEBRASKA

2019 - 2020

drawn by: NF
checked by: NF/GK
approved by: EE
QA/QC by: NF/GK
project no.: 018-1509
drawing no.: 5R
date: 2025-07-23

SHEET
5R of 34

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ISSUED FOR BID
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7-30-2025

0' 8.33' 16.66'
SCALE IN FEET

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DATE: Jul 24, 2025 7:30am XREFS:

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7/30/2025

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SUBSTATION PLAN

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

2025

drawn by: NF
checked by: NF/GK
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QA/QC by: NF/GK
project no.: 018-1509
drawing no.: 5
date: 2019-11-14

SHEET
5 of 34

MATERIAL LIST

ITEM	DESCRIPTION	MANUFACTURER/MODEL	UNIT	QUANTITY	COMMENTS
1	STRUCTURE, 35 KV SWITCH SUPPORT, 2–COLUMN, MIN. 8" TUBULAR STEEL		EA	1 + 1	SEE STEEL PERFORMANCE DRAWINGS FOR DETAILS
2	STRUCTURE, 35 KV RISER, 1–COLUMN, MIN 8" TUBULAR STEEL		EA	1 + 1	SEE STEEL PERFORMANCE DRAWINGS FOR DETAILS
3	STRUCTURE, 15 KV BUS/JUNCTION SUPPORT WITH PT'S, 4–COLUMN, MIN. 6" TUBULAR STEEL		EA	1 + 1	SEE STEEL PERFORMANCE DRAWINGS FOR DETAILS
4	STRUCTURE, 15 KV BUS/SWITCH SUPPORT FOR RECLOSERS, WITH STA SVC, 4–COLUMN, MIN. 6" TUBULAR STEEL		EA	2 + 2	SEE STEEL PERFORMANCE DRAWINGS FOR DETAILS
5	DISTRIBUTION CABLE, 350 KCM, 35 KV, 420 MIL EPR, JACKETED CONCENTRIC NEUTRAL	OKONITE URO–J	LOT	1 + 1	
6	DISTRIBUTION CABLE, 500 KCM, 15 KV, 220 MIL EPR, JACKETED CONCENTRIC NEUTRAL, OWNER–FURNISHED	OKONITE URO–J	FT	OSCI	
7	DISTRIBUTION CABLE, 1/0 AL, 15 KV, 220 MIL EPR, JACKETED CONCENTRIC NEUTRAL, OWNER–FURNISHED	OKONITE URO–J	FT	OSCI	
8	TERMINATION, OUTDOOR, COLD SHRINK, 8 SKIRT, FOR ITEM 5, WITH 2 HOLE ALUMINUM LUG	3M QT–III	EA	3 + 3	
9	SWITCH, HOOKSTICK OPERATED, SINGLE POLE, 34.5 KV, 600 AMP, STATION TYPE, VERTICAL, AS SPECIFIED	CLEVELAND–PRICE LCO–C #C102A230G10	EA	3 + 3	
10	SWITCH, HOOKSTICK OPERATED, SINGLE POLE, 14.4 KV, 1200 AMP, STATION TYPE, VERTICAL, AS SPECIFIED	CLEVELAND–PRICE LCO–C #C102A230G05	EA	3 + 9	
11	SWITCH, HOOKSTICK OPERATED, SINGLE POLE, 14.4 KV, 600 AMP, STATION TYPE, VERTICAL, AS SPECIFIED	SIEMENS TYPE EH W/ SILICONE INSULATORS	EA	12 + 12	
12	SWITCH, HOOKSTICK OPERATED, SINGLE POLE, 14.4 KV, 600 AMP, STATION TYPE, UNDERHUNG, AS SPECIFIED	SIEMENS TYPE EH W/ SILICONE INSULATORS	EA	18 + 18	
13	ALUMINUM TUBE BUS, 3" IPS, SCHEDULE 40, 6063–T6	VARIOUS	FT	100 – 10 + 100	
14	ALUMINUM ANGLE BUS, 3 1/4" X 3 1/4" 6101–T6	VARIOUS	FT	375 + 450	
15	INSULATOR, BUS SUPPORT, 250 KV BIL, POLYMER, 3" BOLT CIRCLE, 22" LENGTH	HUBBELL HI*LITE II 250 KV BIL	EA	3 + 3	
16	INSULATOR, BUS SUPPORT, 150 KV BIL, POLYMER, 3" BOLT CIRCLE, 14" LENGTH	HUBBELL HI*LITE II 150 KV BIL	EA	51 – 3 + 57	
17	POTENTIAL TRANSFORMER, 60:1, 110 KV BIL, SINGLE BUSHING TYPE, WITH CERTIFIED TEST REPORT	ABB VOG–11	EA	3 + 3	
18	ARRESTER, MOV–TYPE, RISER CLASS, 10 KV, 8.4 KV MCOV	OHIO BRASS OPTIMA	EA	13 + 13	
19	TERMINATION, T–BODY, 600A, 35 KV, WITH TEST POINT AND JACKET SEAL, FOR ITEM 5	ELASTIMOLD 756LR	EA	21 + 3	FOR VFI AND 35 KV JUNCTION CABINETS
20	TERMINATION, OUTDOOR, COLD SHRINK, 4–SKIRT, FOR ITEM 6, WITH 2 HOLE ALUMINUM LUG	3M QT–III	EA	15 + 36	
21	CONDUCTOR, BARE JUMPERS, AAC, 500 KCM 37 STRAND	SOUTHWIRE HYACINTH	FT	87 – 60 + 500	
22	CONNECTOR, ALUMINUM COMPRESSION TERMINAL, FOR ITEM 21, 2–HOLE NEMA PAD	HUBBELL ACF–475–B	EA	15 – 12 + 200	
23	CONNECTOR, ALUMINUM COMPRESSION TERMINAL, FOR ITEM 21, 4–HOLE NEMA PAD	HUBBELL ACF–475–C	EA	3 – 3 + 51	REUSE REMOVED CONNECTORS AS PRACTICAL
24	CONNECTOR, ALUMINUM BOLTED TEE, TUBE TO TUBE, 3" MAIN, 3" TAP	HUBBELL ATTH3030	EA	6 – 3 + 9	REUSE REMOVED CONNECTORS AS PRACTICAL
25	CONNECTOR, ALUMINUM BOLTED TEE, TUBE TO FLAT, 3" TUBE, 4–HOLE NEMA PAD	HUBBELL ATTF3031	EA	12 – 3 + 15	REUSE REMOVED CONNECTORS AS PRACTICAL
26	CONNECTOR, ALUMINUM BUS SUPPORT, 3" TUBE TO INSULATOR, RIGID OR SLIP–FREE CLAMPING, 3" BOLT CIRCLE	HUBBELL AUR303	EA	3 + 3	
27	CONNECTOR, ALUMINUM BUS SUPPORT, 3" TUBE TO INSULATOR, VERTICAL, 3" BOLT CIRCLE	HUBBELL AUDE303	EA	3 + 3	
28	CONNECTOR, ALUMINUM BUS SUPPORT, 2 CABLES TO INSULATOR, 3" BOLT CIRCLE	HUBBELL ADCS503	EA	3 – 3 + 3	
29	CONNECTOR, ALUMINUM COMPRESSION TERMINAL, FOR ITEM 21, 2–HOLE 45 DEGREE PAD	HUBBELL ACF–475–B–45	EA	12 + 38	
30	CONNECTOR, ALUMINUM BUS SUPPORT, 3 1/4" ANGLE TO INSULATOR, 3" BOLT CIRCLE	SEFCOR ASUA–325–3	EA	36 + 36	
31	CONNECTOR, ALUMINUM BUS SUPPORT, 1 CABLE TO INSULATOR, 3" BOLT CIRCLE	HUBBELL ACS93	EA	12 + 12	
32	CABLE TRENCH, FIBERGLASS–REINFORCED CONCRETE, 20" WIDE X 16" DEEP, OPEN BOTTOM, WITH PEDESTRIAN–RATED LID	CONCAST 802016F	FT	36 + 101	INCLUDE END PLATES AS REQUIRED CONCAST 802316. SPECIAL ORDER SECTION LENGTHS MAY BE REQUIRED
33	CONDUIT RISER, 6" GRC, FOR 15 KV FEEDER, WITH FITTINGS AND O–Z GEDNEY TYPE CMT VENTED CABLE SUPPORT	VARIOUS	EA	4 + 4	
34	CONDUIT RISER, 6" IMC, FOR 35 KV SOURCE, WITH FITTINGS AND O–Z GEDNEY TYPE CMT VENTED CABLE SUPPORT	VARIOUS	EA	1 + 1	
35	FUSE CUTOUT, 15 KV, 100A, FOR STATION SERVICE RISER, WITH MOUNTING BRACKET AND HARDWARE	HUBBELL TYPE C	EA	1 + 1	
36	CONDUCTOR, COVERED JUMPER, #4 COPPER STRANDED, 15KV	HENDRIX TAP04CUSTR	FT	60 + 60	
37	CONNECTOR, COMPRESSION TERMINAL, TINNED COPPER, FOR ITEM 36	VARIOUS	EA	4 + 4	
38	METER SOCKET, 13–TERMINAL, FORM 9S, WITH TEST SWITCH PROVISIONS	MIDWEST UC3423–XL	EA	1 + 1	
39	STATION SERVICE PANELBOARD, 240 V SINGLE PHASE, 125 AMP, NEMA 4, 18 KAIC, 20 SPACE, WITH BOLT–IN BREAKERS	SQUARE D NQOD	EA	1	
39A	STATION SERVICE PANELBOARD, 240 V SINGLE PHASE, 225 AMP, NEMA 3R, 22 KAIC, 30 SPACE, WITH BOLT–IN BREAKERS	SQUARE D NQ	EA	1	
40	STATION SERVICE FROM PAD XFM, 2" CONDUIT, 3 – 1/0 AL 600V, WITH FITTINGS, TERMINALS, AND HARDWARE AS REQUIRED	VARIOUS	EA	# + #	
41	MOUNTING BRACKET, FOR ITEM 5	3M MBS–6	EA	3 + 3	
42	MOUNTING BRACKET, FOR ITEM 6	3M MB–4	EA	12 + 12	
43	END PLUG, ALUMINUM 3" TUBE	HUBBELL ACBI30	EA	9 + 9	
44	CONNECTOR, ALUMINUM ISOLATED TERMINAL, 3" TUBE TO 4–HOLE NEMA PAD	HUBBELL ASTF–300	EA	6 – 3 + 9	REUSE REMOVED CONNECTORS AS PRACTICAL
45	PT PANELBOARD, 240V THREE–PHASE, 100A, NEMA 3R, MAIN BRKR, 30 SPACE	SQUARE D NQ	EA	1 + 1	
46	TERMINATION, OUTDOOR, COLD SHRINK, 4–SKIRT, FOR ITEM 7	3M QT–III	EA	1 – 1 + 1	
47	RUBBERIZED CABLE INSULATOR WRAP, FOR ITEM 21	VARIOUS	FT	60 + 180	
48	STRUCTURE, 15KV TIE BUS PORTAL STRUCTURE, 2 COLUMN MIN 8" TUBULAR STEEL		EA	1	SEE STEEL PERFORMANCE DRAWINGS FOR DETAILS
49	CABLE TRENCH, FIBERGLASS–REINFORCED CONCRETE, 20" WIDE X 16" DEEP, UNIVERSAL, WITH PEDESTRIAN RATED LID	CONCAST 802016F (20X20)	EA	2	INCLUDE END PLATES (CONCAST 802316) AND CORNER PROTECTORS (CONCAST 8006) AS REQUIRED
50	ANIMAL GUARD, BUSHING GUARD, MESH, MEDIUM	HUBBELL RELIAGUARD BC–15023	EA	42	
51	CONNECTOR, ALUMINUM COMPRESSION TERMINAL, FOR ITEM 21, 2–HOLE 90 DEGREE PAD	HUBBELL ACF–475–B–90	EA	12	
52	SWITCH, HOOKSTICK OPERATED, SINGLE POLE, 15.5 KV, 1200 AMP, VEE TYPE, VERTICAL, AS SPECIFIED	ROYAL SWITCHGEAR 19811	EA	6	
53	SWITCH, GANG OPERATED, THREE POLE, 15.5 KV, 1200 AMP, VEE TYPE, SIDE BREAK, WITH OPERATOR, AS SPECIFIED	ROYAL SWITCHGEAR VF1512	EA	1	SEE STEEL PERFORMANCE DRAWINGS & COORDINATE WITH ENGINEER FOR MOUNTING DETAILS

NOTES:

1. UNLESS NOTED OTHERWISE, SUBSTATION MATERIAL LIST DOES NOT INCLUDE THE FOLLOWING CONTRACTOR–FURNISHED MATERIALS:
   - A. GROUND GRID MATERIALS. REFER TO SHEET 8 FOR REQUIREMENTS.
   - B. STRUCTURE AND EQUIPMENT FOUNDATIONS.
   - C. LV POWER AND CONTROL WIRING, CONDUITS (1" AND 2"), RECEPTACLES, AND TRENCHES.
   - D. FENCE, OR ROCK
   - E. LIGHTING/LIGHTNING MASTS, FIXTURES, CIRCUITS AND RELATED COMPONENTS. REFER TO SHEET 9 FOR REQUIREMENTS.
   - F. JUNCTION/BREAKER BOX FOR PT SECONDARY'S AND CONDUITS/WIRING BETWEEN PTS AND TO BOX.
   - G. UNDERGROUND SOURCE AND FEEDER CONDUITS, 6".
   - H. SUMP PUMP AND DRAIN COMPONENTS FOR TRANSFORMER CONTAINMENT PIT DRAIN.
   - I. MISCELLANEOUS FASTENERS AND HARDWARE.
   - J. FEEDER EXIT RISER EQUIPMENT.
2. OWNER–FURNISHED MATERIALS: THE FOLLOWING WILL BE FURNISHED BY OWNER FOR INSTALLATION BY CONTRACTOR.
   - A. VACUUM CIRCUIT RECLOSERS, 15 KV, 4 + 7 EA.
   - B. PAD–MOUNTED SWITCHGEAR, S&C PMH–10, 15 KV, 4 + 4 EA.
   - C. BOX PADS FOR PAD–MOUNTED SWITCHGEAR, 4 + 4 EA.
   - D. STATION SERVICE TRANSFORMER, 25KVA AND PAD, 50KVA AND PAD.
   - E. 15 KV DISTRIBUTION CABLE, 500 ALUMINUM, 220 MIL EPR, 1 + 1 LOT.
3. CONTRACTOR TO DETERMINE CONDUIT AND FITTING QUANTITIES.
4. ALTERNATE MANUFACTURERS AND MODEL NUMBERS MUST MEET OR EXCEED SPECIFICATIONS LISTED ABOVE AND BE APPROVED BY ENGINEER.
5. PER 2025 SUBSTATION EXPANSION, EXISTING QUANTITIES NOT VERIFIED.

ISSUED FOR BID
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10-22-2025

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10/22/2025

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0	5-28-2019	95% OWNER REVIEW
1	6-07-2019	ISSUED FOR BID
2	11-21-2019	ISSUED FOR CONSTRUCTION
3	07-30-2025	SUBSTATION EXPANSION

MATERIAL LIST

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

2025

drawn by:	NF
checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	6
date:	2019-11-14

DWG: F:\2024\05501-06000\024-05881\40-Design\Exhibits\AutoCAD\SHEETS\E_QTY_81509.dwg USER: ccarrigan
DATE: Oct 09, 2025 9:48am XREFS:

LV POWER AND CONTROL CABLE SCHEDULE

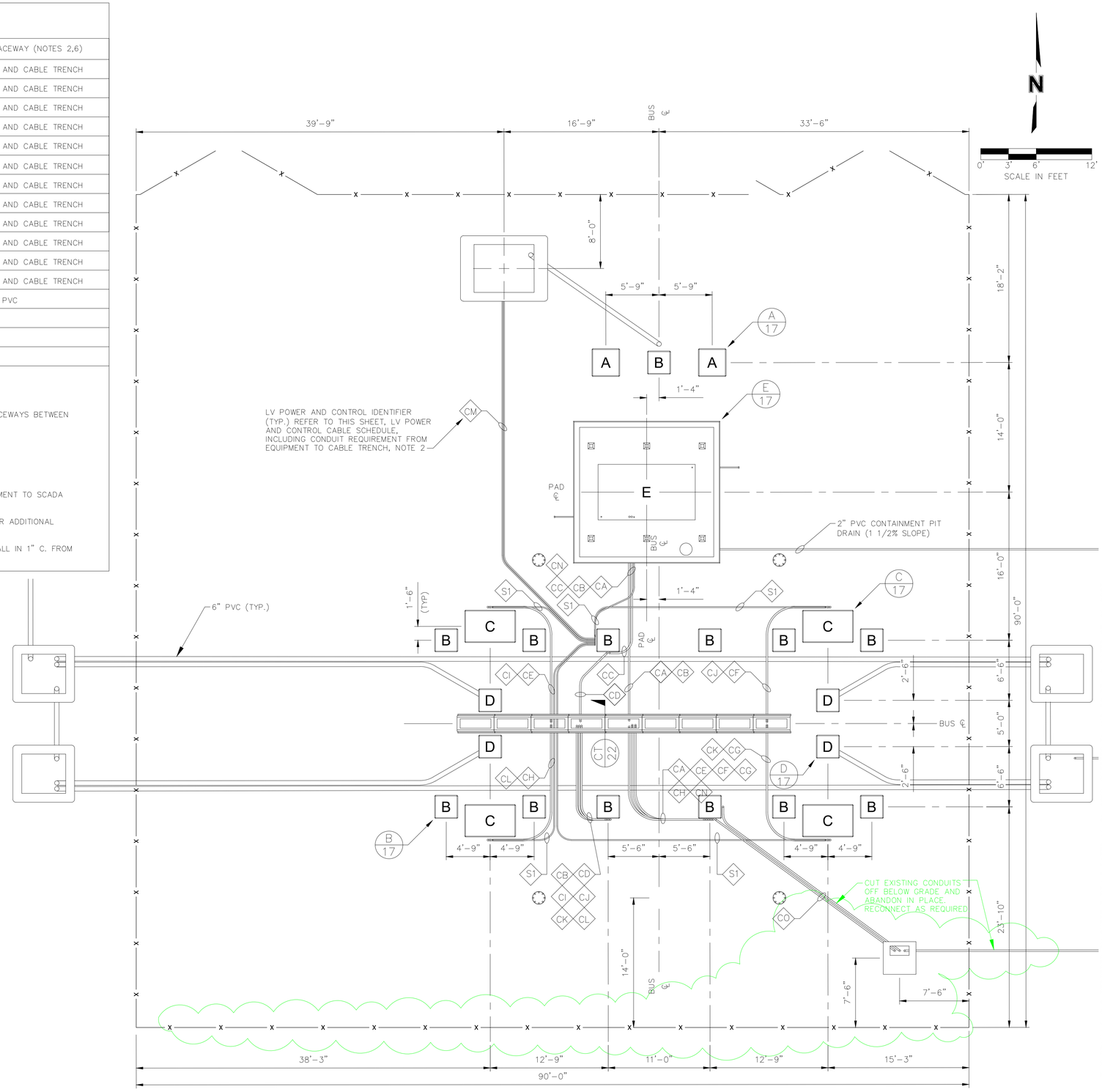
ITEM	DESCRIPTION	QUANTITY AND SIZE	FROM	TO	RACEWAY (NOTES 2,6)
CA	T–1 AC ACCESSORY POWER	3 – #10 + GND	PANEL SP–1	TRANSFORMER T–1	2" PVC AND CABLE TRENCH
CB	LTC REFERENCE VOLTAGE	2 – #12	PT PANELBOARD	TRANSFORMER T–1	2" PVC AND CABLE TRENCH
CC	T–1 METERING CTS	4/C #10	TRANSFORMER T–1	STATION METER	2" PVC AND CABLE TRENCH
CD	STATION METERING PTS	4 – #12	PT PANELBOARD	STATION METER	2" PVC AND CABLE TRENCH
CE	VCR 1 AC ACCESSORY POWER	3 – #12 + GND	PANEL SP–1	VCR 1 CONTROL CABINET	2" PVC AND CABLE TRENCH
CF	VCR 2 AC ACCESSORY POWER	3 – #12 + GND	PANEL SP–1	VCR 2 CONTROL CABINET	2" PVC AND CABLE TRENCH
CG	VCR 3 AC ACCESSORY POWER	3 – #12 + GND	PANEL SP–1	VCR 3 CONTROL CABINET	2" PVC AND CABLE TRENCH
CH	VCR 4 AC ACCESSORY POWER	3 – #12 + GND	PANEL SP–1	VCR 4 CONTROL CABINET	2" PVC AND CABLE TRENCH
CI	VCR 1 POTENTIALS	4/C #14	PT PANELBOARD	VCR 1 CONTROL CABINET	2" PVC AND CABLE TRENCH
CJ	VCR 2 POTENTIALS	4/C #14	PT PANELBOARD	VCR 2 CONTROL CABINET	2" PVC AND CABLE TRENCH
CK	VCR 3 POTENTIALS	4/C #14	PT PANELBOARD	VCR 3 CONTROL CABINET	2" PVC AND CABLE TRENCH
CL	VCR 4 POTENTIALS	4/C #14	PT PANELBOARD	VCR 4 CONTROL CABINET	2" PVC AND CABLE TRENCH
CM	COMM FOR VFI	BY OTHERS	VFI	SCADA CABINET	2 – 1" PVC
CN	SUMP PUMP	2 – #12 + GND	PANEL SP–1	TRANSFORMER T–1	NOTE 8
CO	STATION SERVICE	3 – 1/0 AL + GND	TRANSFORMER T–2	PANEL SP–1	2" PVC
S	SPARE/VACANT CONDUIT	S1 = 1", S2 = 2"			

NOTES:

1. CONTROL WIRING SHALL INCLUDE RING–TYPE TERMINALS AND WIRE MARKERS AS SPECIFIED.
2. CONDUITS AS NOTED SHALL INCLUDE ALL FITTINGS, SWEEPS, ELBOWS, CLAMPS, AND SUPPORTS AS NEEDED FOR RACEWAYS BETWEEN CABLE TRENCH AND EQUIPMENT CONTROL CABINETS/BOXES.
3. EQUIPMENT SCHEMATICS AND WIRING DIAGRAMS WILL BE FURNISHED BY ENGINEER
4. SCHEDULE DOES NOT INCLUDE EXTERIOR LIGHTING CIRCUITS. REFER TO SHEET 9 FOR REQUIREMENTS.
5. REFER TO SHEET 4 FOR CONTINUATION OF CONDUITS OUTSIDE SUBSTATION.
6. TRANSFORMER AND EACH RECLOSER HAVE 2–2" C. FROM EQUIPMENT TO CABLE TRENCH AND 1–1" C. FROM EQUIPMENT TO SCADA CABINET.
7. 1" CONDUITS TO SCADA CABINET SHALL NOT RUN THROUGH CABLE TRENCH. REFER TO DETAIL CT ON SHEET 22 FOR ADDITIONAL INFORMATION.
8. INSTALL SUMP PUMP CIRCUIT CN WITH CIRCUIT CA IN 2" C. FROM SP–1 TO TRANSFORMER CONTROL CABINET. INSTALL IN 1" C. FROM TRANSFORMER CONTROL CABINET TO SUMP PIT.

NOTES:

1. SEE SHEET 17 FOR FOUNDATION DETAILS.
2. SCHEMATICS AND WIRING DIAGRAMS FOR ALL OWNER–FURNISHED EQUIPMENT AND FIELD CONNECTIONS WILL BE FURNISHED TO CONTRACTOR.
3. PROVIDE AND INSTALL 2" CONDUIT FROM TRANSFORMER CONTROL CONDUIT STUB–OUT TO CABLE TRENCH (TYP. FOR 2).
4. PROVIDE AND INSTALL 2" CONDUIT FROM TRANSFORMER CONTROL CONDUIT TO SCADA CABINET. SCADA CABINET OSCI.



SUBSTATION FOUNDATION PLAN
SCALE: 1" = 6'–0"

WHEN THIS DRAWING IS PRINTED TO THE SCALE SHOWN, THE BAR SHOWN BELOW WILL BE 1" LONG.

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7/30/2025

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R	07-30-2025	SUBSTATION EXPANSION

FOUNDATION AND CONDUIT PLAN

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

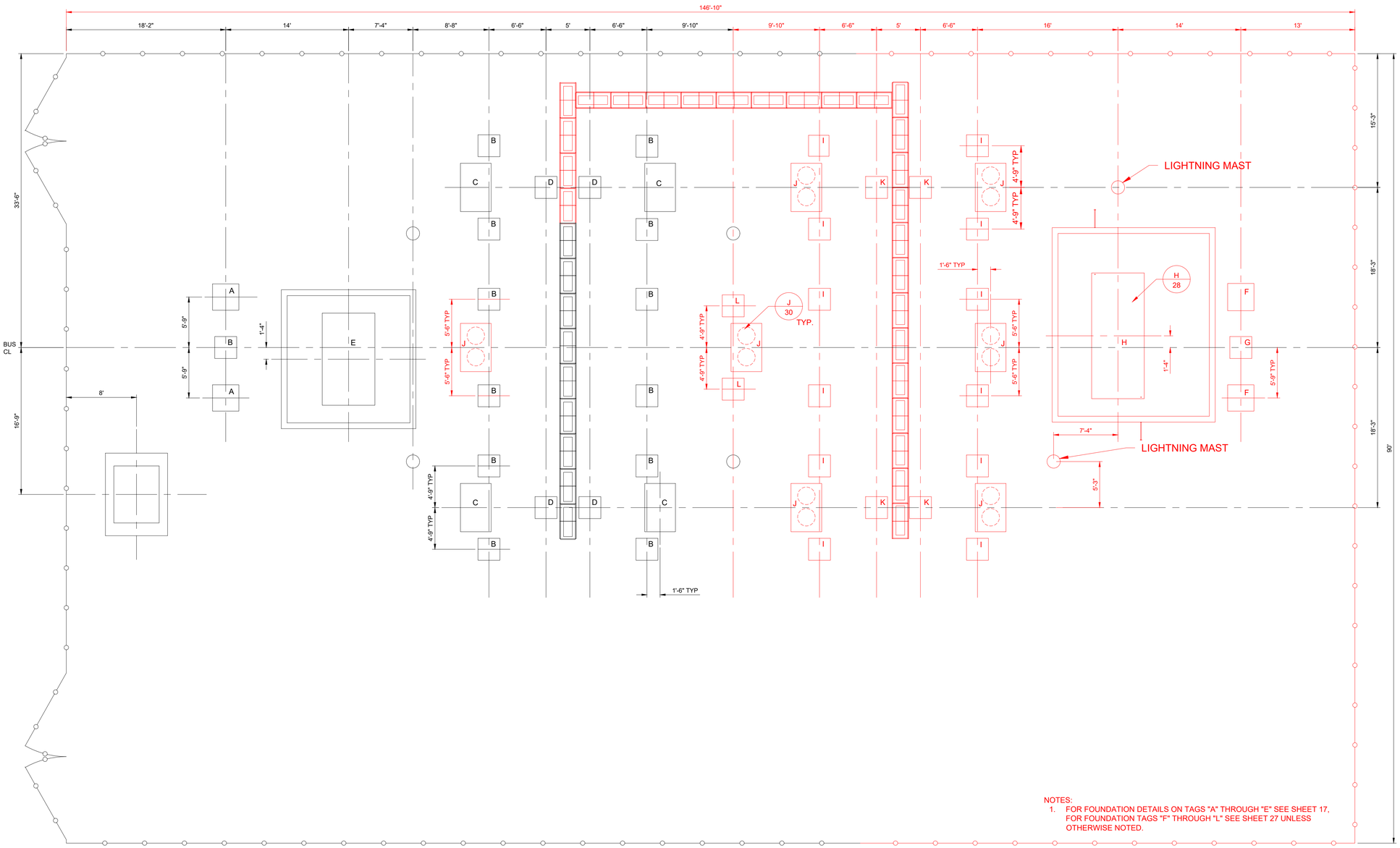
2019 - 2020

THIS DRAWING IS SUPERSEDED BY SHEET 7 REV 3 DATED 11–21–2019, SHEETS 31 AND 32 REV 0 DATED 07–21–2025

drawn by:	NF
checked by:	NF/GK
approved by:	CRS
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	7R
date:	2019-11-14

SHEET
7R of 34

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DATE: Jul 23, 2025 2:26pm XREFS: E_FDTM_81509 E_CONDUIT_MASTER_81509



NOTES:
1. FOR FOUNDATION DETAILS ON TAGS "A" THROUGH "E" SEE SHEET 17, FOR FOUNDATION TAGS "F" THROUGH "L" SEE SHEET 27 UNLESS OTHERWISE NOTED.

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7-30-2025

0" 6.25" 12.5"
SCALE IN FEET

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THIS DRAWING SUPERSEDES SHEET 7 REV 2 DATED 11-21-2019

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FOUNDATION PLAN

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

2019 - 2020

drawn by: NF
checked by: NF/GK
approved by: EE
QA/QC by: NF/GK
project no.: 018-1509
drawing no.: 7
date: 2019-11-14

SHEET 7 of 34

NOTES:

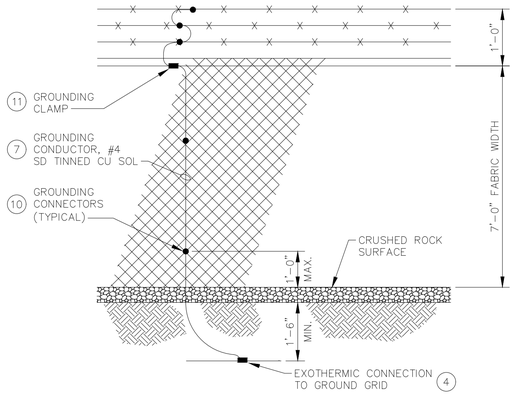
1. CONNECT TO TRANSFORMER TANK GROUND NEUTRAL BUSHING AND LV ARRESTERS. USE 4–HOLE CABLE–TO–FLAT CONNECTOR FOR NEUTRAL BUSHING. ROUTE GROUNDING CONDUCTOR THROUGH EXISTING 1" PVC IN PAD.
2. CONNECT TO TRANSFORMER TANK GROUND AND HV ARRESTERS. ROUTE GROUNDING CONDUCTOR THROUGH EXISTING 1" PVC IN PAD.
3. CONNECT TO VFI GROUND BUS.
4. AT GATES, PROVIDE GATE POST GROUND AND BRAIDED STRAP TO GATE FRAME (INSIDE THE FENCE). GROUND GATE FABRIC SIMILAR TO FENCE GROUNDING DETAIL ON THIS SHEET.
5. ALL CORNER AND GATE POST GROUND SHALL INCLUDE FENCE (FABRIC) GROUND PER DETAIL THIS SHEET.
6. 2–HOLE CLAMPS REQUIRED FOR TRANSFORMER, RECLOSERS, AND VFI. 1 OR 2–HOLE CLAMPS MAY BE USED FOR STRUCTURE GROUNDS.
7. ALL CONNECTIONS SHALL BE COATED WITH ANTIOXIDANT COMPOUND (PER MNFR RECOMMENDATION).

GROUND GRID MATERIAL LIST

ITEM	DESCRIPTION	UNIT	QUANTITY
1	4/0 CU STR. GROUND WIRE	FT.	2000–110
2	#4 CU STR GROUND WIRE FOR CABLE TRENCH	FT.	100
3	3/4" x 10'–0" COPPER CLAD STEEL GROUND ROD	EA.	11
4	EXOTHERMIC "CADWELD" CONNECTION (QTY. AND TYPE TO BE DETERMINED BY CONTRACTOR)	LOT	1
5	CONNECTOR, CU, BOLTED, CABLE TO 2–HOLE FLAT	EA.	8
6	GROUND CLAMP, CABLE TO FLAT PAD (QUANTITY AND TYPE TO BE DETERMINED BY CONTRACTOR)	LOT	1
7	TINNED COPPER SD WIRE FOR FENCE GROUND	FT.	180–54
8	GROUND CLAMP FOR 4" FENCE POST	EA.	7–2
9	BRAIDED GROUND STRAP – GATE POSTS	EA.	5
10	CONNECTOR, SPLIT BOLT SERVIT	LOT	1
11	FENCE TOP RAIL GROUND CLAMP	EA.	11–3

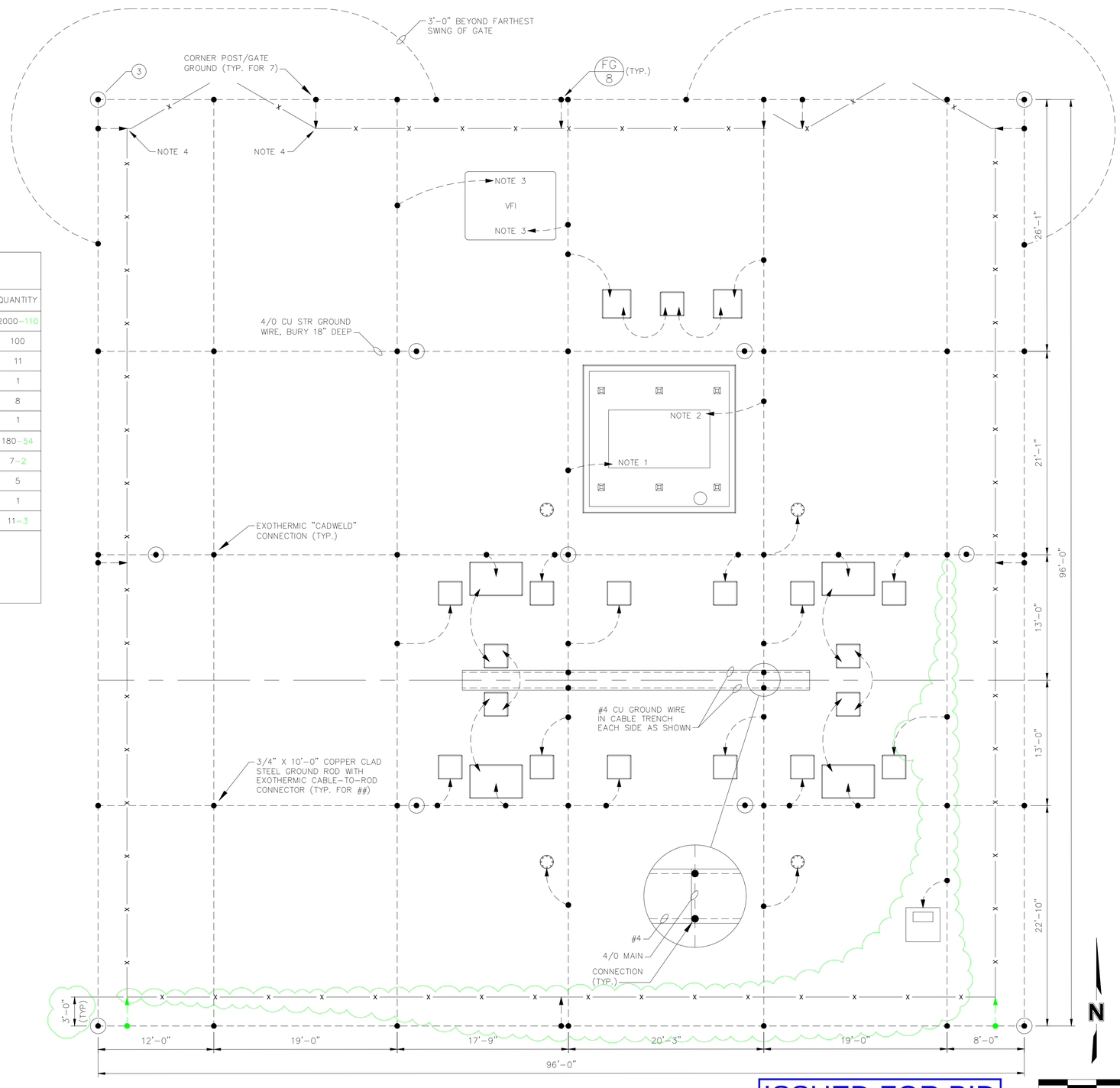
NOTES:

1. MATERIAL LIST DOES NOT INCLUDE CONDUIT GROUNDS, ABOVE–GRADE SWITCH GROUNDING COMPONENTS, VAULT GROUND RODS, UG FEEDER RISER, OR EQUIPMENT GROUNDS OUTSIDE OF STATION, OR COMPONENTS FOR GROUND ATTACHMENTS/CONNECTIONS IN CABLE TRENCH.



FENCE GROUNDING DETAIL FG 8

SCALE: NOT TO SCALE



SUBSTATION GROUNDING PLAN

SCALE: 1" = 6'–0"

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7-30-2025

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R	07-30-2025	SUBSTATION EXPANSION

GROUNDING PLAN

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

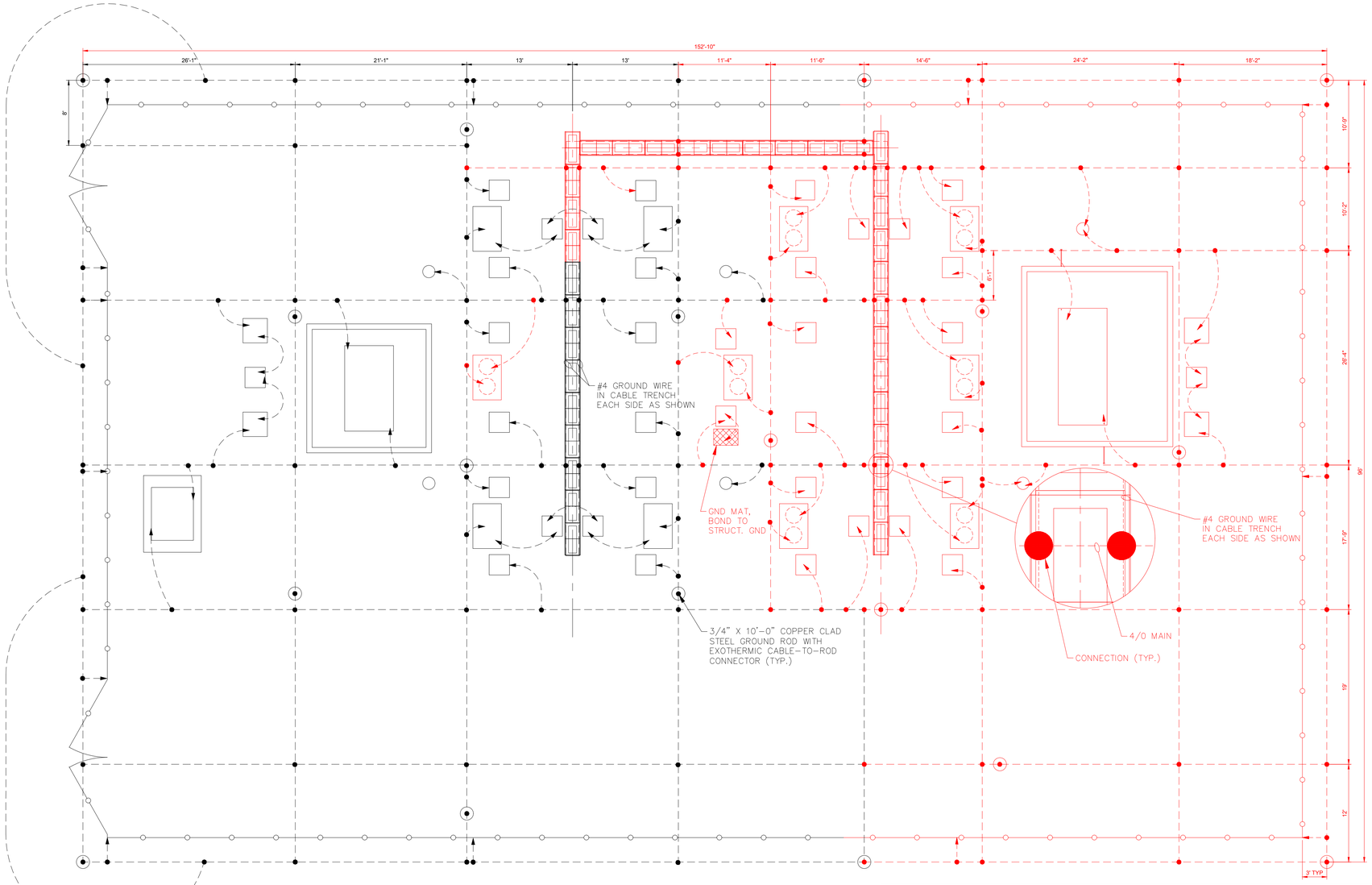
2019 - 2020

drawn by:	NF
checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	8R
date:	2019-11-14

SHEET 8R of 34

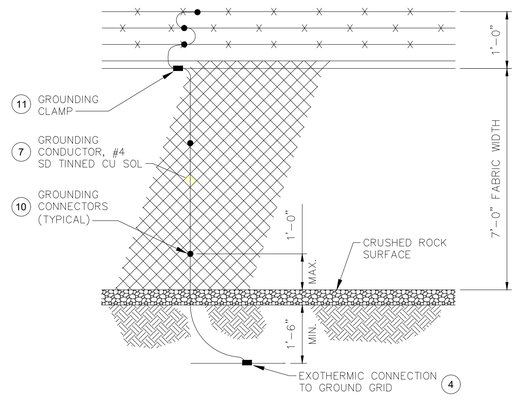
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DATE: Jul 23, 2025 2:04pm XREFS: E_FDTM_81509 E_CONDUIT_MASTER_81509

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7-30-2025



NOTES:

1. CONNECT TO TRANSFORMER TANK GROUND NEUTRAL BUSHING AND LV ARRESTERS. USE 4-HOLE CABLE-TO-FLAT CONNECTOR FOR NEUTRAL BUSHING. ROUTE GROUNDING CONDUCTOR THROUGH EXISTING 1" PVC IN PAD.
2. CONNECT TO TRANSFORMER TANK GROUND AND HV ARRESTERS. ROUTE GROUNDING CONDUCTOR THROUGH EXISTING 1" PVC IN PAD.
3. CONNECT TO VFI GROUND BUS.
4. AT GATES, PROVIDE GATE POST GROUND AND BRAIDED STRAP TO GATE FRAME (INSIDE THE FENCE). GROUND GATE FABRIC SIMILAR TO FENCE GROUNDING DETAIL ON THIS SHEET.
5. ALL CORNER AND GATE POST GROUND SHALL INCLUDE FENCE (FABRIC) GROUND PER DETAIL THIS SHEET.
6. 2-HOLE CLAMPS REQUIRED FOR TRANSFORMER, RECLOSERS, AND VFI. 1 OR 2-HOLE CLAMPS MAY BE USED FOR STRUCTURE GROUNDS.
7. ALL CONNECTIONS SHALL BE COATED WITH ANTIOXIDANT COMPOUND (PER MNFR RECOMMENDATION).



FENCE GROUNDING DETAIL FG 8
SCALE: NOT TO SCALE

GROUND GRID MATERIAL LIST

ITEM	DESCRIPTION	UNIT	QUANTITY
1	4/0 CU STR. GROUND WIRE	FT.	1890+2050
2	#4 CU STR GROUND WIRE FOR CABLE TRENCH	FT.	100+300
3	3/4" x 10'-0" COPPER CLAD STEEL GROUND ROD	EA.	11+7
4	EXOTHERMIC "CADWELD" CONNECTION (QTY. AND TYPE TO BE DETERMINED BY CONTRACTOR)	LOT	1+1
5	CONNECTOR, CU, BOLTED, CABLE TO 2-HOLE FLAT	EA.	8+4
6	GROUND CLAMP, CABLE TO FLAT PAD (QUANTITY AND TYPE TO BE DETERMINED BY CONTRACTOR)	LOT	1+1
7	TINNED COPPER SD WIRE FOR FENCE GROUND	FT.	126+90
8	GROUND CLAMP FOR 4" FENCE POST	EA.	5+2
9	BRAIDED GROUND STRAP - GATE POSTS & SWITCH OPERATOR	EA.	5 + 1
10	CONNECTOR, SPLIT BOLT SERVIT	LOT	1+1
11	FENCE TOP RAIL GROUND CLAMP	EA.	8+5
12	2' X 3' STEEL GRATING GROUNDING MAT	EA.	1

NOTES:

1. MATERIAL LIST DOES NOT INCLUDE CONDUIT GROUNDS, ABOVE-GRADE SWITCH GROUNDING COMPONENTS, VAULT GROUND RODS, UG FEEDER RISER, OR EQUIPMENT GROUNDS OUTSIDE OF STATION, OR COMPONENTS FOR GROUND ATTACHMENTS/CONNECTIONS IN CABLE TRENCH.
2. PER 2025 EXPANSION, EXISTING QUANTITES NOT VERIFIED.

N

0' 7.5' 15'
SCALE IN FEET

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GROUNDING PLAN

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

2019 - 2020

drawn by: NF
checked by: NF/GK
approved by: EE
QA/QC by: NF/GK
project no.: 018-1509
drawing no.: 8
date: 2019-11-14

SHEET 8 of 34

DWG: C:\Temp\AcPublish_4012\E_FND_0240588I.dwg USER: ccarrigan
DATE: Jul 23, 2025 1:18pm XREFS: E_CONDUIT_MASTER_81509

LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER – MODEL #	LUMENS	MOUNTING HEIGHT	NOMINAL POWER	MOUNTING	CONTROL
A	LED AREA LIGHT, SCALABLE DUAL–SWITCHED FOR 2 LIGHT LEVELS	COOPER LUMARK NAVION NAV–AE–04–E–UNV–AFL–10K–2L–530–AP–OA/RA1016	6,000 (LEVEL 1) 12,000 (LEVEL 2)	32'–0"	54 W (LEVEL 1) 105 W (LEVEL 2)	ARM	PHOTOCELL (LEVEL 1) SWITCHED (LEVEL 2)

LIGHTING/LIGHTNING POLE DATA

HEIGHT: 50'–0" OVERALL (10' BURIAL DEPTH, CONTRACTOR TO VERIFY W/ MNF)

MATERIAL: STEEL

SECTION: TAPERED, MULTI–SIDED

FINISH: GALVANIZED (STEEL)

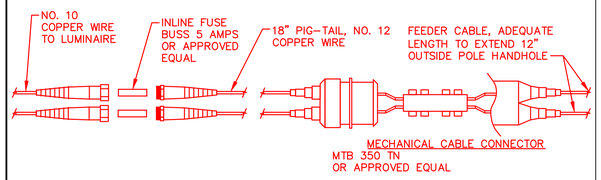
HANDHOLE: REINFORCED HANDHOLE WITH COVER, APPROX. 5"X3", LOCATED APPROXIMATELY 1'–6" ABOVE GRADE

GROUNDING TABS/LUGS:
1. INSIDE SURFACE OF POLE OPPOSITE HANDHOLE.
2. EXTERIOR SURFACE OF POLE 13'–0" FROM BASE OF POLE (2'–0" BELOW GROUNDLINE FOR CONNECTION TO SUBSTATION GROUND GRID).
3. EXTERIOR SURFACE OF POLE 1'–0" BELOW TOP OF POLE FOR CONNECTION FROM SHIELD WIRE.

WIRING SUPPORT HOOK REQUIRED

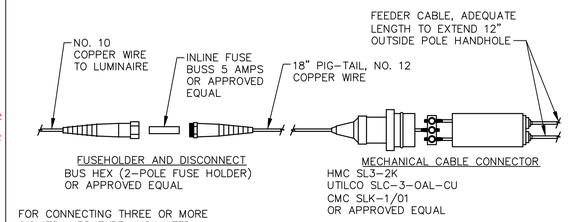
CONDUIT ACCESS HOLES REQUIRED

FUTURE SHIELDWIRE MAXIMUM TENSION = 900#



CONNECTIONS FOR DUAL LUMINAIRE INSTALLATIONS (AB 9)

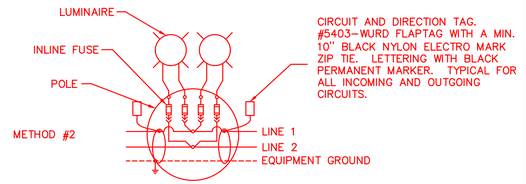
SCALE: NOT TO SCALE

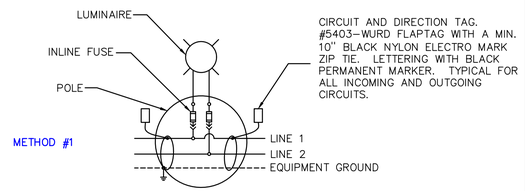


FOR CONNECTING THREE OR MORE CICUITS: URD TYPE, INSULATED, MULTI–CABLE, MECHANICAL CONNECTORS MAY BE USED

CONNECTIONS FOR SINGLE LUMINAIRE INSTALLATIONS (AA 9)

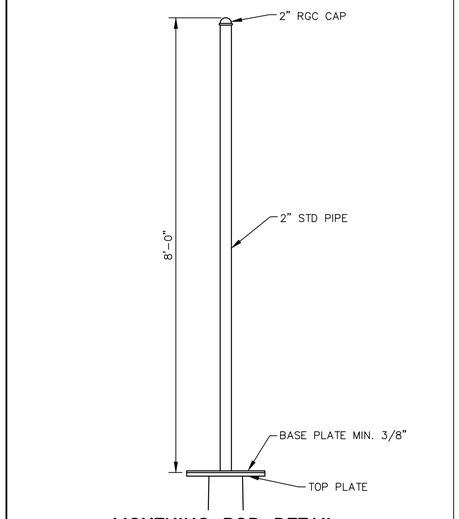
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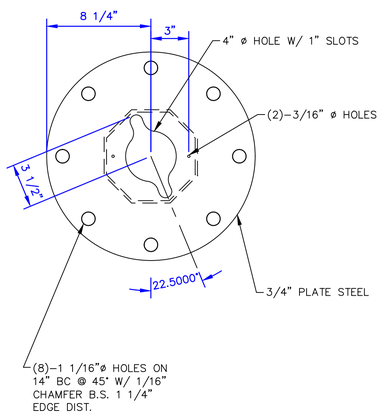
POLE WIRING SCHEMATIC (240 V, 2–WIRE)

SCALE: NOT TO SCALE



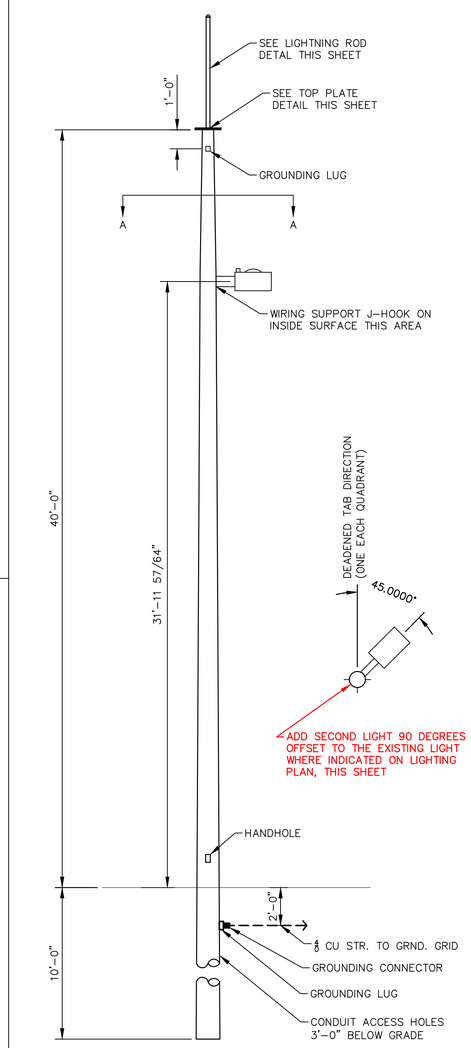
LIGHTNING ROD DETAIL

SCALE: 1" = 1'–4"



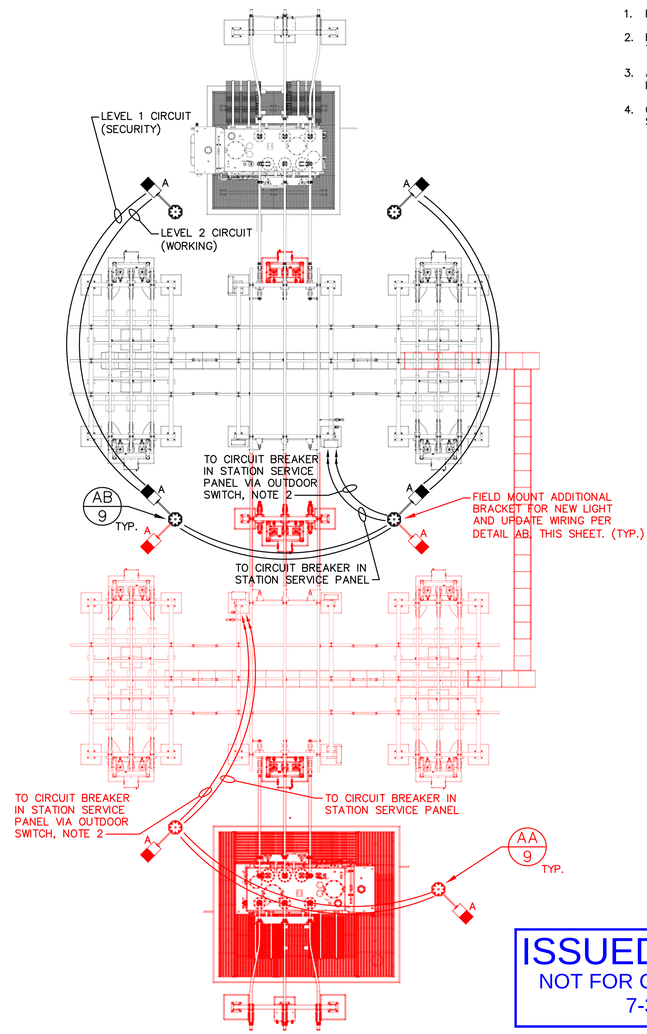
TOP PLATE DETAIL

SCALE: 2" = 1'–0"



LIGHTNING/LIGHTING MAST DETAIL

SCALE: 1" = 4'–0" (4 + 2 REQUIRED)



SUBSTATION LIGHTING PLAN

SCALE: NOT TO SCALE

NOTES:

1. REFER TO SHEET 5 FOR POLE LOCATION DIMENSIONS.
2. FURNISH AND INSTALL 30 A OUTDOOR SWITCH, SQUARE D TYPE D221 OR EQUAL.
3. ALL CIRCUITS TO BE 240 V. 2–#10 CU WITH #10 CU GND IN 3/4" CONDUIT.
4. ORIENTATION OF FIXTURES SHALL BE AS SHOWN ON THIS SHEET.

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TEL 402.474.6311
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PROFESSIONAL ELECTRICAL ENGINEER
JEREMY DUANE CALLOWAY
E–21354
STATE OF NEBRASKA
7/30/2025

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0	5-28-2019	95% OWNER REVIEW
1	6-07-2019	ISSUED FOR BID
2	11-21-2019	ISSUED FOR CONSTRUCTION
3	07-30-2025	SUBSTATION EXPANSION

LIGHTING PLAN

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

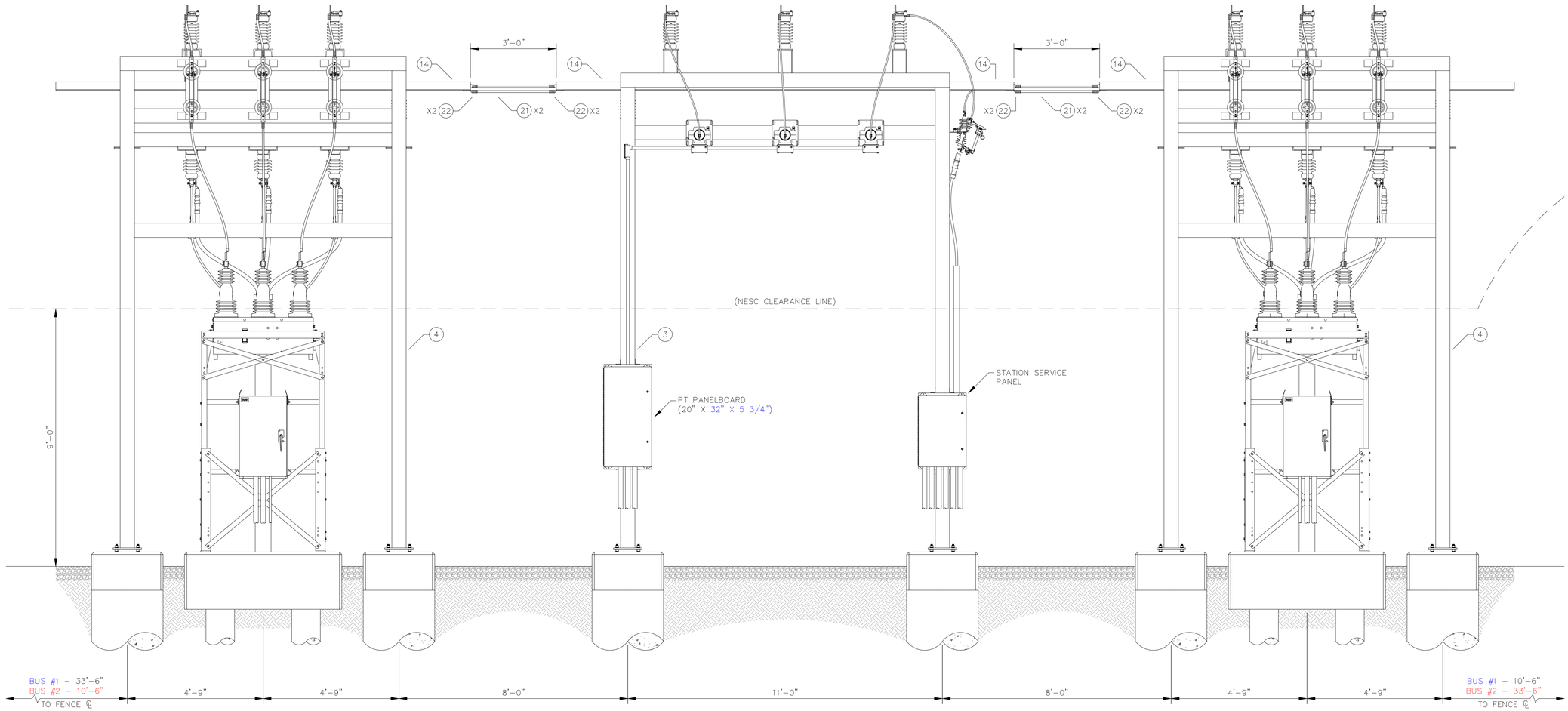
2019-2020

drawn by:	NF
checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	9
date:	2019-11-14

SHEET 9 of 34

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DATE: Jul 23, 2025 12:58pm XREFS: E_SUBM_81509 E_LTGM_81509

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C_PBASE_170056 E_SUBM_81509 E_CONDUIT_MASTER_81509



BUS #1 SOUTH ELEVATION/BUS #2 NORTH ELEVATION (E1/5)

SCALE: 1/2" = 1'-0"

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ELEVATIONS (1 OF 3)

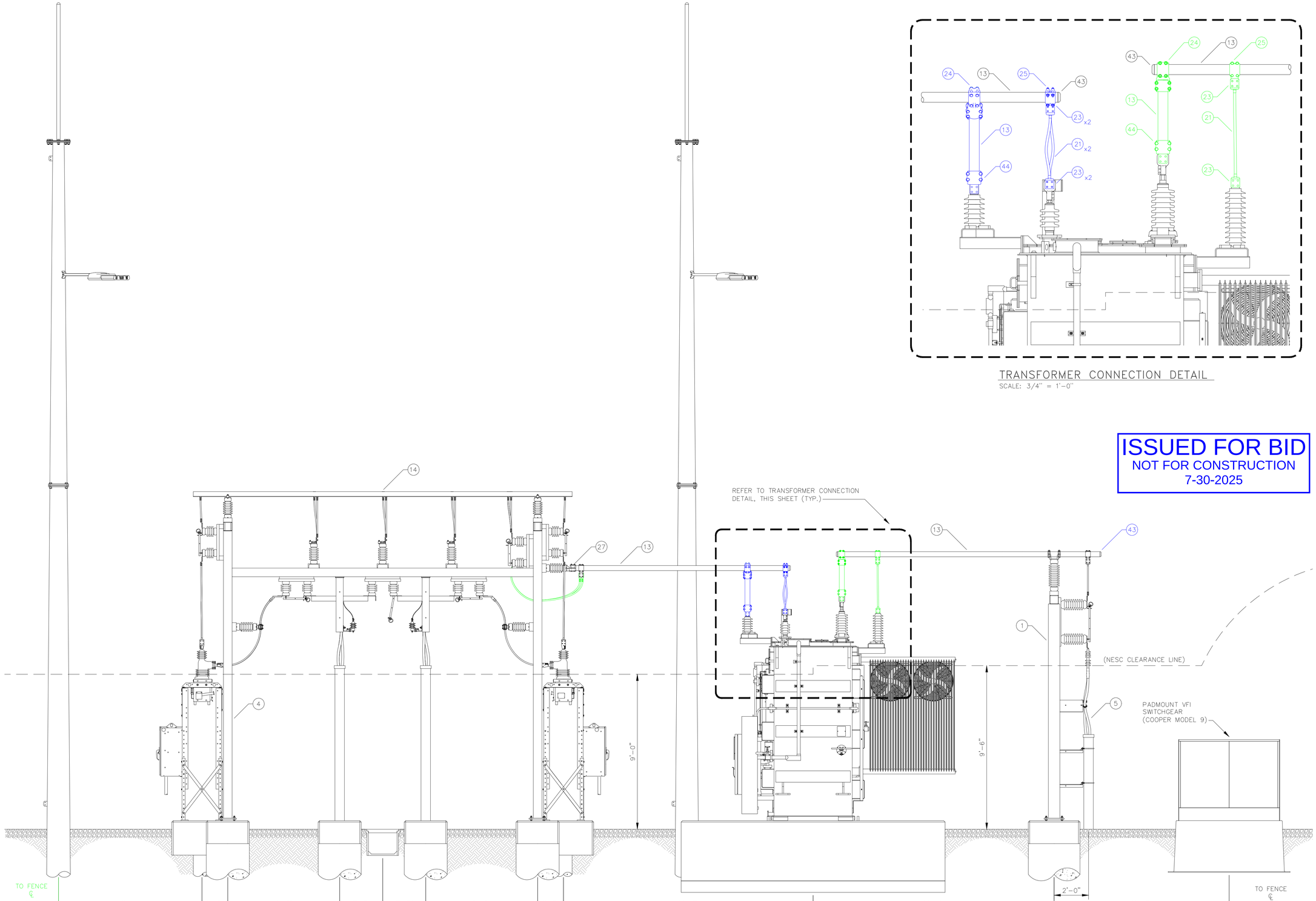
34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

2019 - 2020

drawn by:	NF
checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	10
date:	2019-11-14

TRANSFORMER CONNECTION DETAIL
SCALE: 3/4" = 1'-0"



EAST ELEVATION (E2) 5
SCALE: 3/8" = 1'-0"

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R	07-30-2025	SUBSTATION EXPANSION

ELEVATIONS (2 OF 3)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

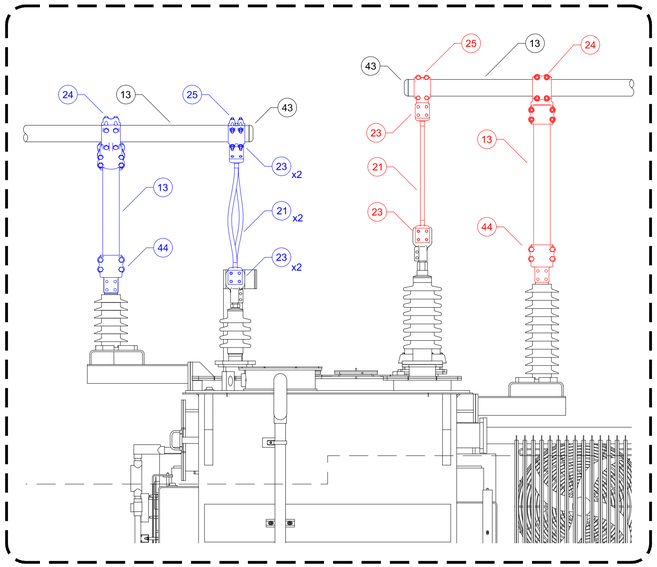
2025

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checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
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date:	2019-11-14

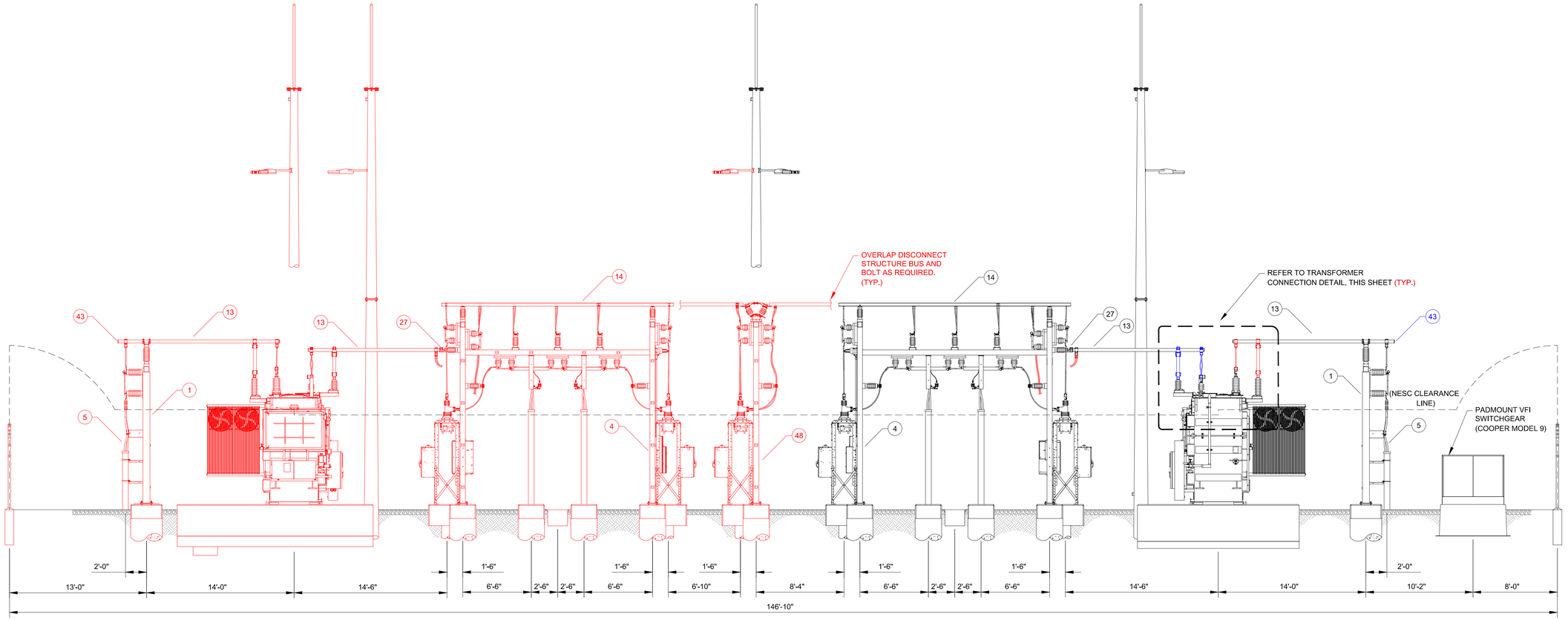
SHEET
11R of 34

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C_PBASE_170056 E_SUBM_81509 E_CONDUIT_MASTER_81509 111605_BOUNDARY

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TRANSFORMER CONNECTION DETAIL
SCALE: 3/4" = 1'-0"



EAST ELEVATION E2
SCALE: 3/16" = 1'-0" 5

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ELEVATIONS (2 OF 3)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

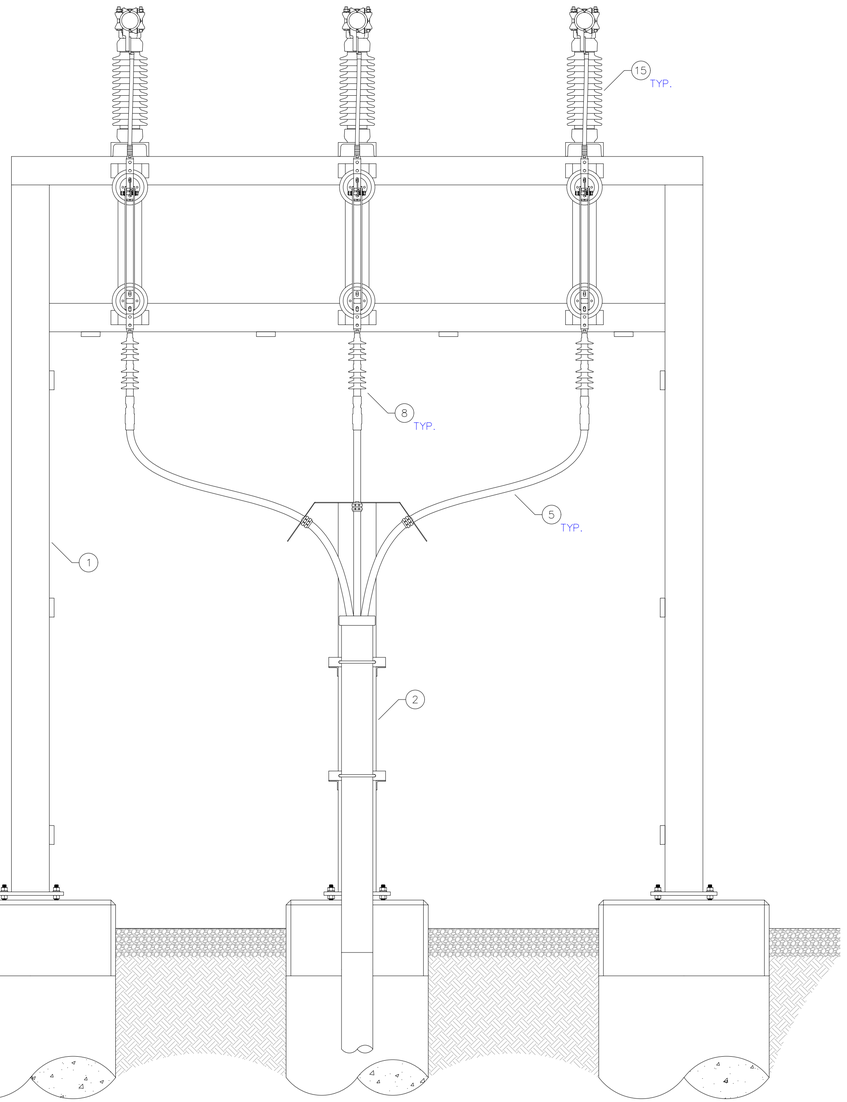
SEWARD, NEBRASKA

2019 - 2020

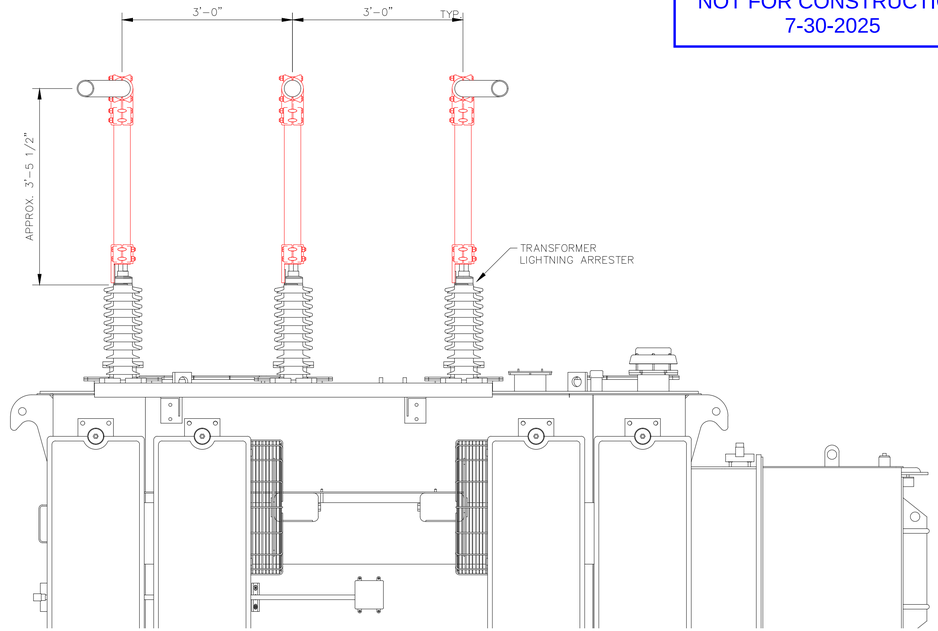
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checked by:	NF/GK
approved by:	EE
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project no.:	018-1509
drawing no.:	11
date:	2019-11-14

SHEET
11 of 34

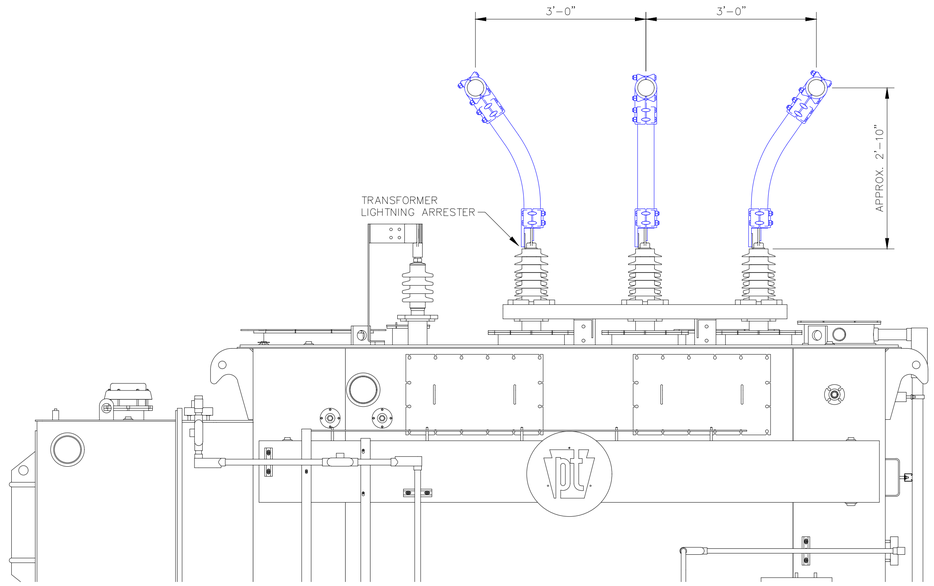
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INCOMING 34.5KV SWITCH STRUCTURE ELEVATION E3/5
SCALE: 3/4" = 1'-0"



TRANSFORMER HS BUS CONNECTION DETAIL E4/5
SCALE: 3/4" = 1'-0"



TRANSFORMER LS BUS CONNECTION DETAIL E5/5
SCALE: 3/4" = 1'-0"

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ELEVATIONS (3 OF 3)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

2025

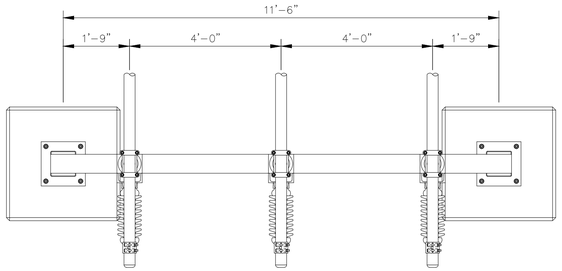
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checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	12
date:	2019-11-14

SHEET
12 of 34

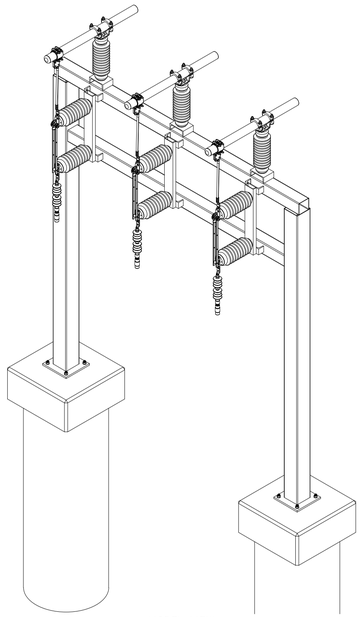
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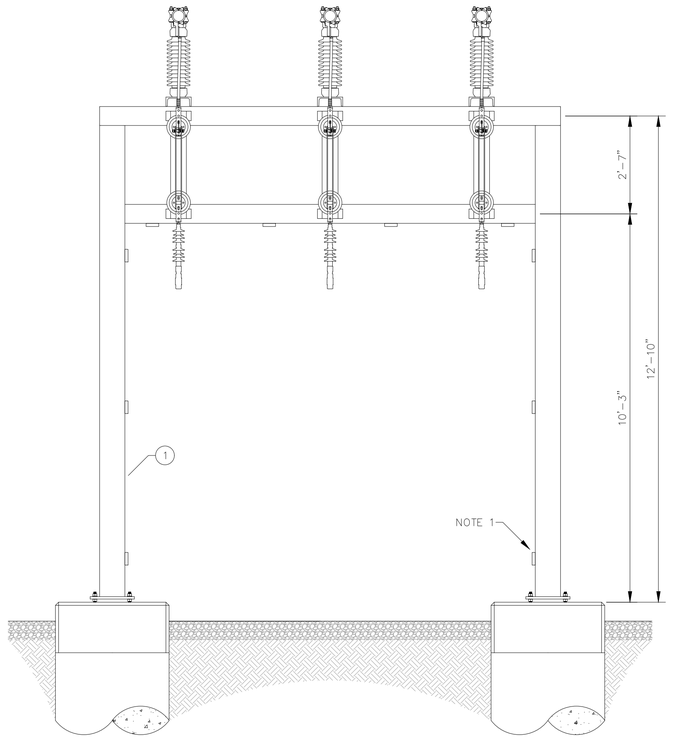
1. PROVIDE GROUND PADS FOR CONNECTION OF GROUNDING CLAMPS ON STEEL STRUCTURES. 3 PADS PER COLUMN, 4'-0" MAXIMUM SPACING, 4 PADS ON LOWER CROSS MEMBER, EVENLY SPACED.
2. BOND STRUCTURE AND EQUIPMENT GROUND WIRE TO GROUND GRID USING EXOTHERMIC "CADWELD" CONNECTION. REFER TO SHEET 8 FOR ADDITIONAL GROUNDING REQUIREMENTS.



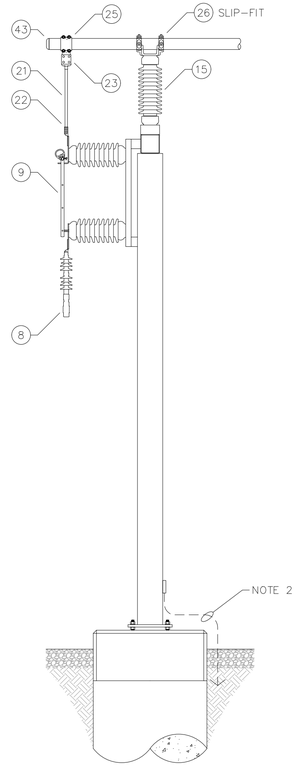
PLAN VIEW



MODEL VIEW
(NTS)



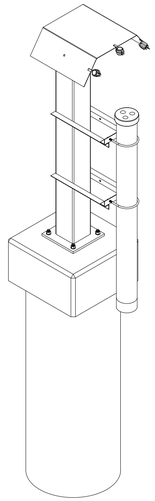
FRONT VIEW



SIDE VIEW

34.5 KV SWITCH STRUCTURE S1 / 5
SCALE: 1/2" = 1'-0"

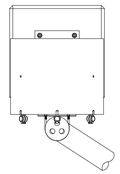
THIS DETAIL TO BE INSTALLED 1 TIME(S) PER 2025 SUBSTATION EXPANSION



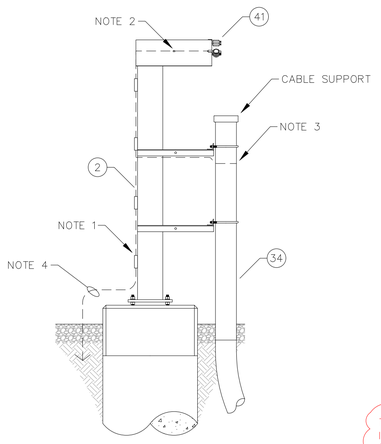
MODEL VIEW
(NTS)

NOTES:

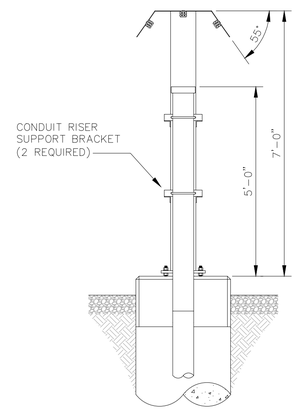
1. PROVIDE GROUND PADS FOR CONNECTION OF GROUNDING CLAMPS ON STEEL STRUCTURES, 4 PADS PER COLUMN.
2. PROVIDE 9/16" HOLES IN CABLE SUPPORT PLATE FOR CABLE MOUNTING ATTACHMENT.
3. PROVIDE GROUND CLAMP FOR RISER CONDUIT.
4. BOND STRUCTURE AND EQUIPMENT GROUND WIRE TO GROUND GRID USING EXOTHERMIC "CADWELD" CONNECTION. REFER TO SHEET 8 FOR ADDITIONAL GROUNDING REQUIREMENTS.



PLAN VIEW



SIDE VIEW



FRONT VIEW

34.5 KV RISER SUPPORT STRUCTURE S2 / 5
SCALE: 1/2" = 1'-0"

THIS DETAIL TO BE INSTALLED 1 TIME(S) PER 2025 SUBSTATION EXPANSION

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34.5 KV STRUCTURE DETAILS

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

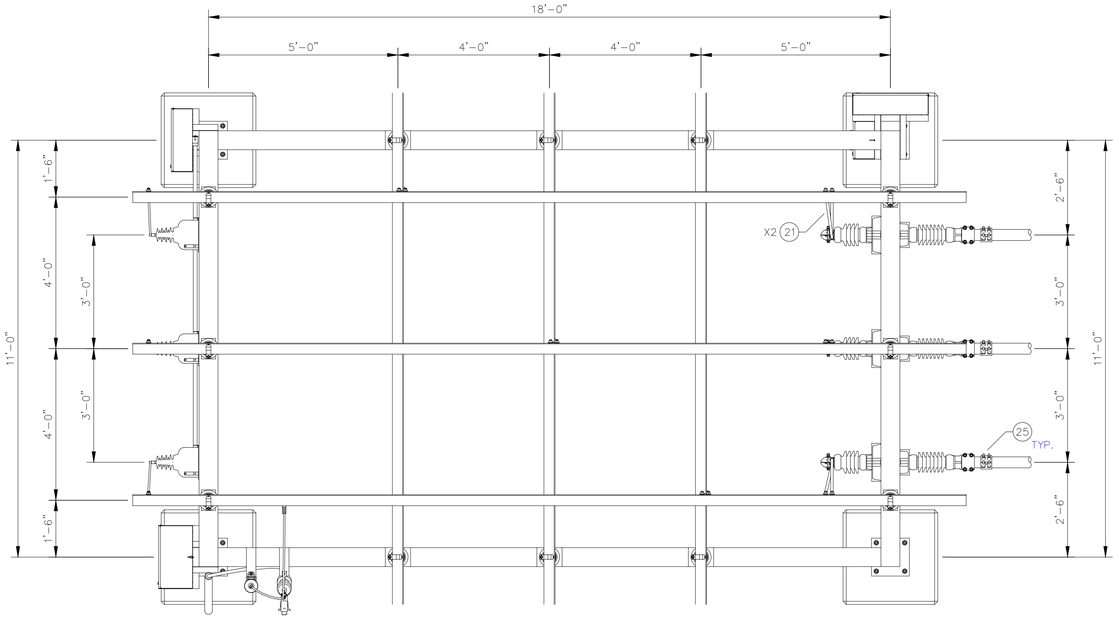
2025

drawn by:	NF
checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	13
date:	2019-11-14

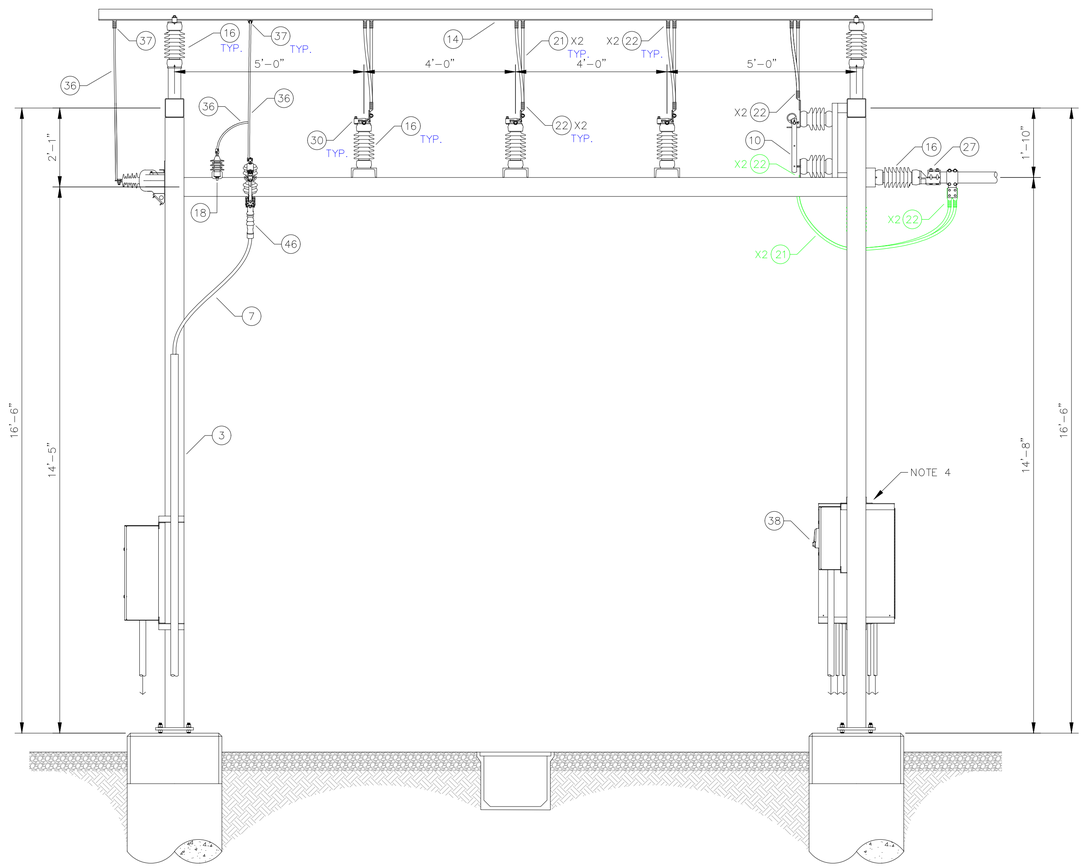
SHEET
13 of 34

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DATE: Jul 28, 2025 1:16pm XREFS: Sub Model

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PLAN VIEW



FRONT VIEW

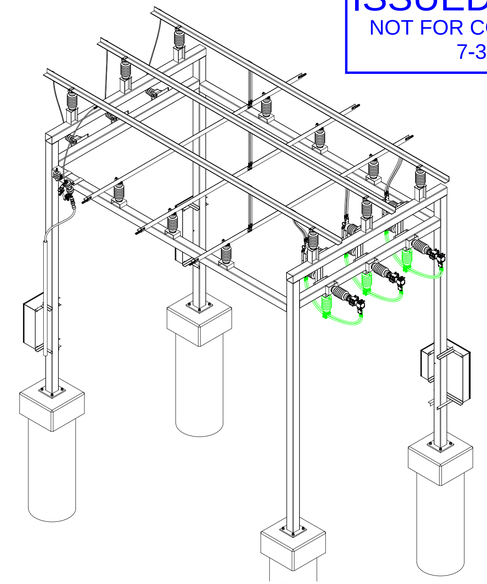
NOTES:

1. PROVIDE GROUND PADS FOR CONNECTION OF GROUNDING CLAMPS ON STEEL STRUCTURES. MINIMUM 3 PADS PER COLUMN, 4'-0" MAXIMUM SPACING. THREADED INSERTS OF 1/2" DIA. AND 13 THD/INCH MAY BE USED IN LIEU OF GROUNDING PADS.
2. REFER TO STANDARD ALUMINUM ANGLE BUS CONNECTIONS DETAIL "AC" ON SHEET 18.
3. PROVIDE BRACKETS, MOUNTING PLATES, AND ATTACHMENT HARDWARE AS NECESSARY FOR SECURING CONDUITS, BOXES, AND OTHER ATTACHMENTS TO STEEL STRUCTURES.
4. PROVIDE PROVISIONS FOR MOUNTING SCADA CABINET (24" x 36" x 6" CABINET BY OTHERS).
5. BOND STRUCTURE AND EQUIPMENT GROUND WIRE TO GROUND GRID USING EXOTHERMIC "CADWELD" CONNECTION. REFER TO SHEET 8 FOR ADDITIONAL GROUNDING REQUIREMENTS.

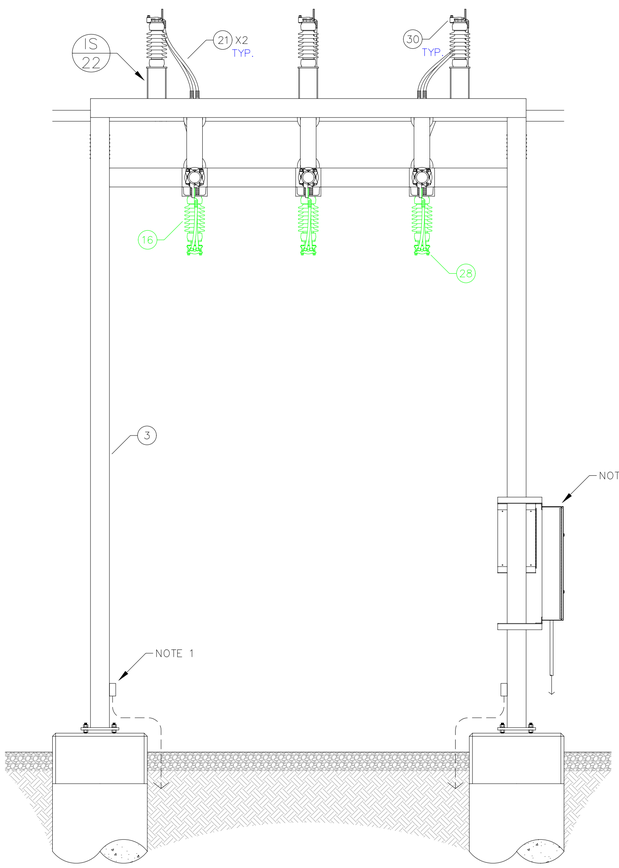
12.47 KV DISCONNECT STRUCTURE

S3
5

SCALE: 1/2" = 1'-0"



MODEL VIEW
(NTS)



SIDE VIEW

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REVISIONS

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0	5-28-2019	95% OWNER REVIEW
1	6-07-2019	ISSUED FOR BID
2	11-21-2019	ISSUED FOR CONSTRUCTION
R	07-30-2025	SUBSTATION EXPANSION

12.47 KV SWITCH & BUS SUPPORT STRUCTURE DETAIL (1 OF 2)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

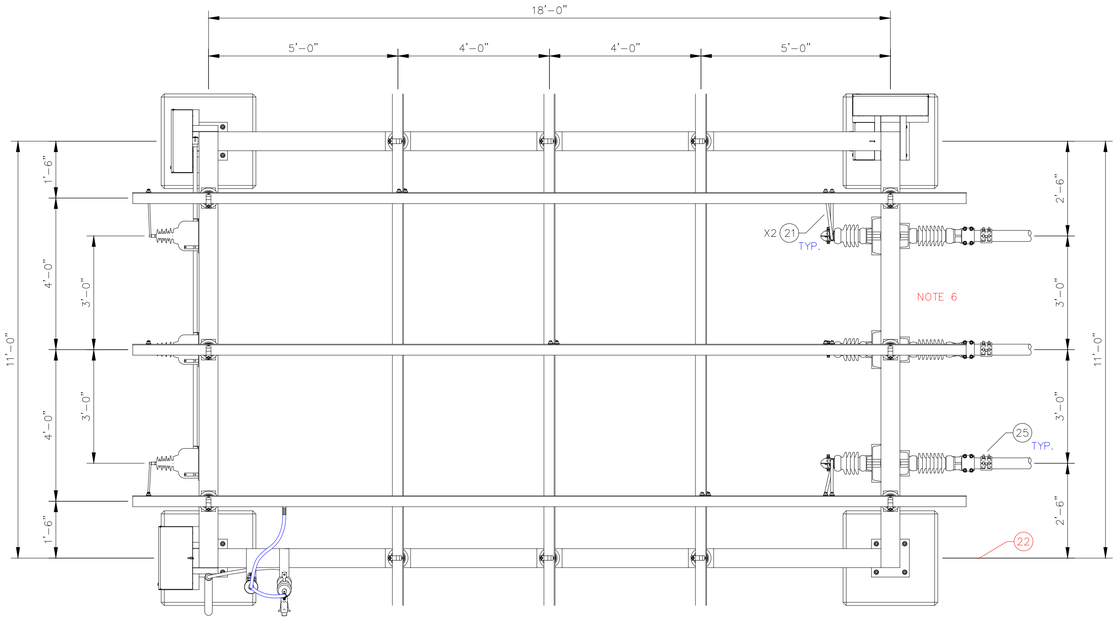
SEWARD, NEBRASKA

2019 - 2020

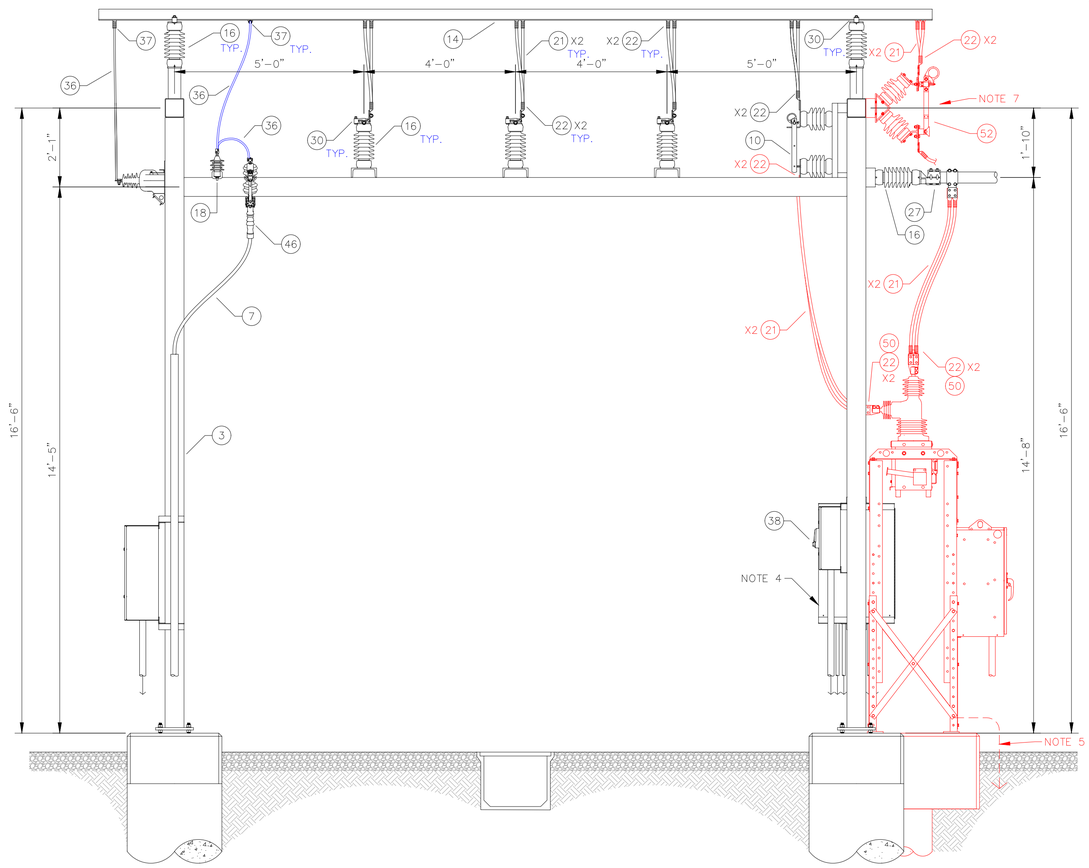
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checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	14R
date:	2019-11-14

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7-30-2025



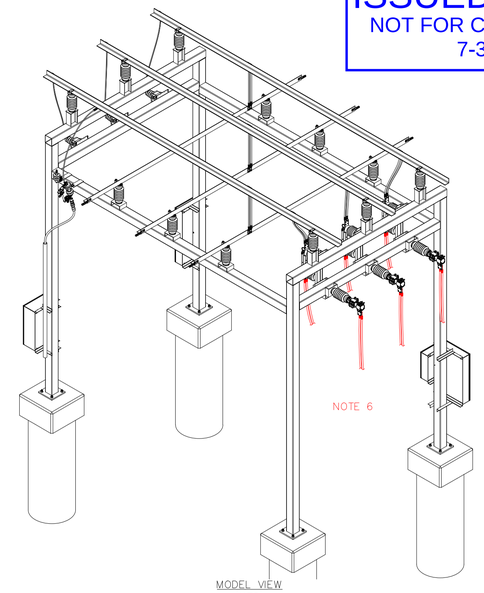
PLAN VIEW



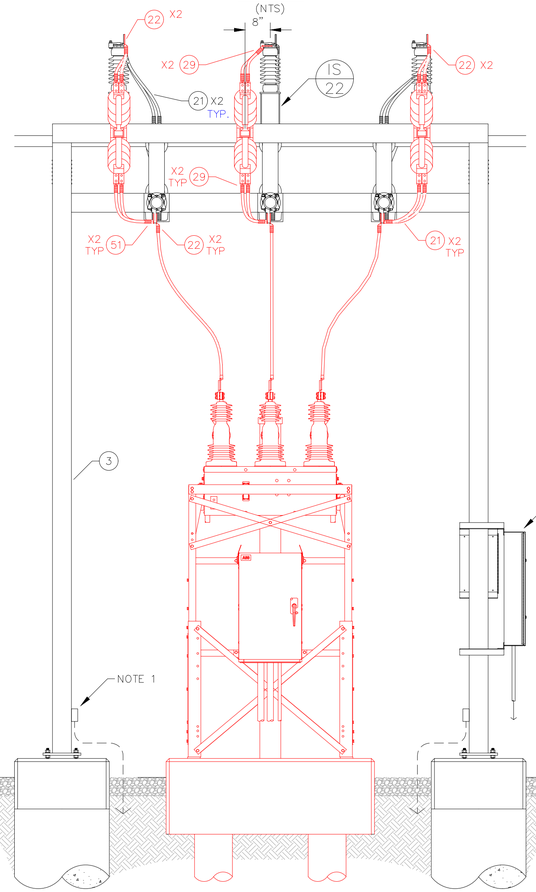
FRONT VIEW

NOTES:

1. PROVIDE GROUND PADS FOR CONNECTION OF GROUNDING CLAMPS ON STEEL STRUCTURES. MINIMUM 3 PADS PER COLUMN, 4'-0" MAXIMUM SPACING. THREADED INSERTS OF 1/2" DIA. AND 13 THD/INCH MAY BE USED IN LIEU OF GROUNDING PADS.
2. REFER TO STANDARD ALUMINUM ANGLE BUS CONNECTIONS DETAIL "AC" ON SHEET 18.
3. PROVIDE BRACKETS, MOUNTING PLATES, AND ATTACHMENT HARDWARE AS NECESSARY FOR SECURING CONDUITS, BOXES, AND OTHER ATTACHMENTS TO STEEL STRUCTURES.
4. PROVIDE PROVISIONS FOR MOUNTING SCADA CABINET (24" x 36" x 6" CABINET BY OTHERS).
5. BOND STRUCTURE AND EQUIPMENT GROUND WIRE TO GROUND GRID USING EXOTHERMIC "CADWELD" CONNECTION. REFER TO SHEET 8 FOR ADDITIONAL GROUNDING REQUIREMENTS.
6. RECLOSER, V-SWITCH, AND RELEVANT CONNECTIONS NOT SHOWN FOR CLARITY.
7. BOLT V-SWITCH MOUNTING BRACKET ON EXISTING STRUCTURE AS SHOWN AND SPECIFIED.



MODEL VIEW
(NTS)



SIDE VIEW

12.47 KV DISCONNECT STRUCTURE
SCALE: 1/2" = 1'-0"
S3
5

WHEN THIS DRAWING IS PRINTED TO THE SCALE SHOWN, THE BAR SHOWN BELOW WILL BE 1" LONG.

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PROFESSIONAL ELECTRICAL ENGINEER
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STATE OF NEBRASKA
7/30/2025

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3	07-30-2025	SUBSTATION EXPANSION

12.47 KV SWITCH & BUS SUPPORT STRUCTURE DETAIL (1 OF 2)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

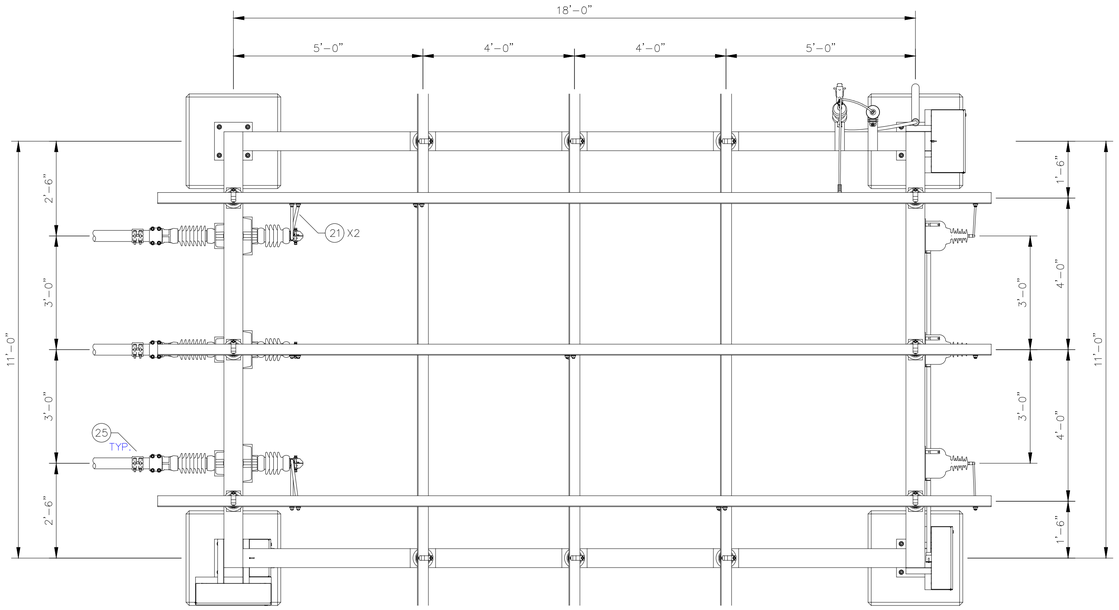
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drawn by: NF
checked by: NF/GK
approved by: EE
QA/QC by: NF/GK
project no.: 018-1509
drawing no.: 14
date: 2019-11-14

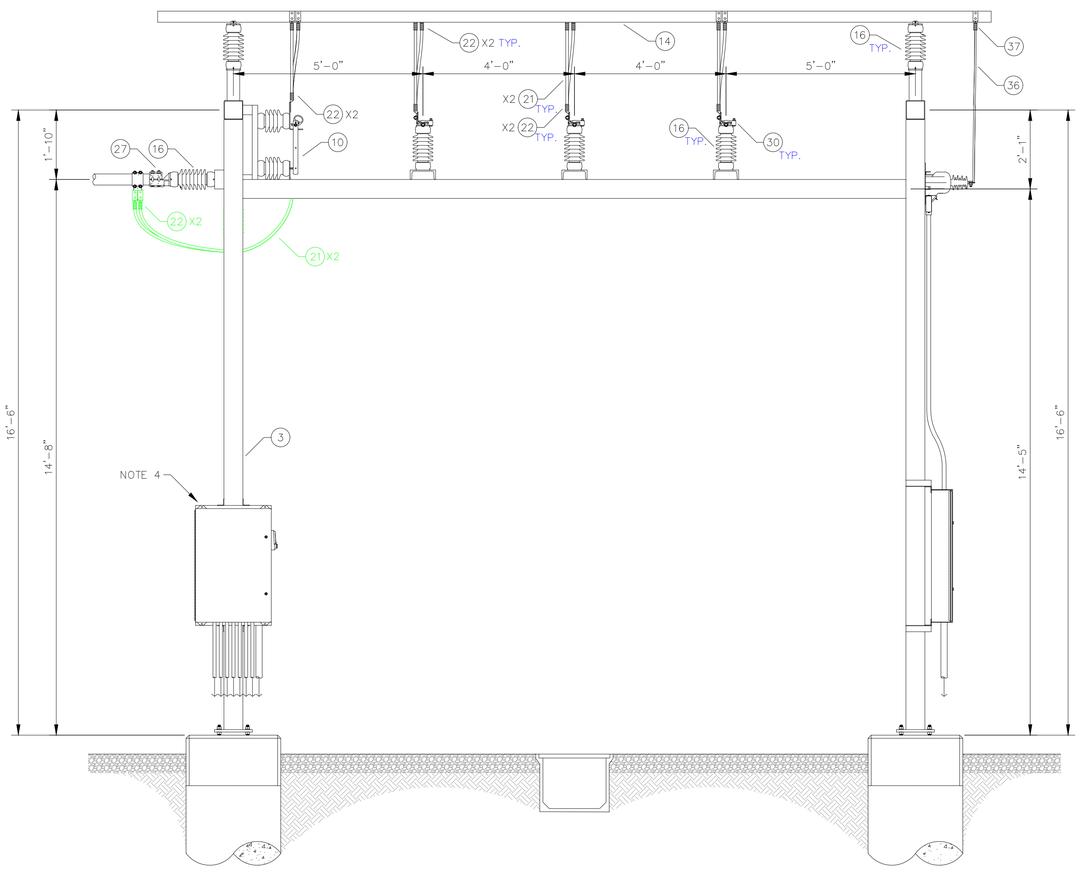
SHEET 14 of 34

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NOT FOR CONSTRUCTION
7-30-2025



PLAN VIEW



FRONT VIEW

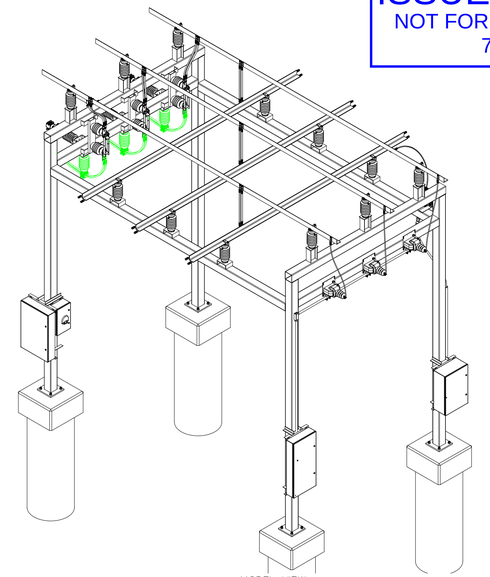
12.47 KV DISCONNECT STRUCTURE

SCALE: 1/2" = 1'-0"

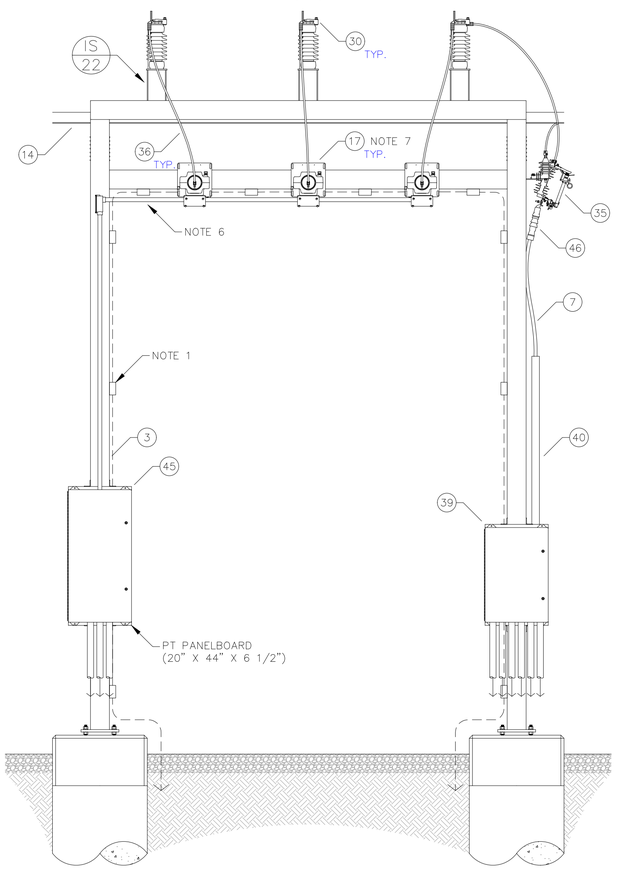
S3
5

NOTES:

1. PROVIDE GROUND PADS FOR CONNECTION OF GROUNDING CLAMPS ON STEEL STRUCTURES. MINIMUM 3 PADS PER COLUMN EXCEPT COLUMN, AND ON PT CROSSMEMBER AS SHOWN, 4'-0" MAXIMUM SPACING. THREADED INSERTS OF 1/2" DIA. AND 13 THD/INCH MAY BE USED IN LIEU OF GROUNDING PADS.
2. REFER TO STANDARD ALUMINUM ANGLE BUS CONNECTIONS DETAIL "AC" ON SHEET 18.
3. PROVIDE BRACKETS, MOUNTING PLATES, AND ATTACHMENT HARDWARE AS NECESSARY FOR SECURING CONDUITS, BOXES, AND OTHER ATTACHMENTS TO STEEL STRUCTURES.
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6. FURNISH AND INSTALL 1" CONDUIT BETWEEN PT'S AND TO PT PANEL BOARD. FURNISH AND INSTALL PANEL BOARD WITH BREAKERS FOR PT SECONDARY (10A FUSES).
7. BOND PT GROUNDS TO STATION GROUND.



MODEL VIEW
(NTS)



SIDE VIEW

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7/30/2025

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12.47 KV SWITCH & BUS SUPPORT STRUCTURE DETAIL (2 OF 2)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

2019 - 2020

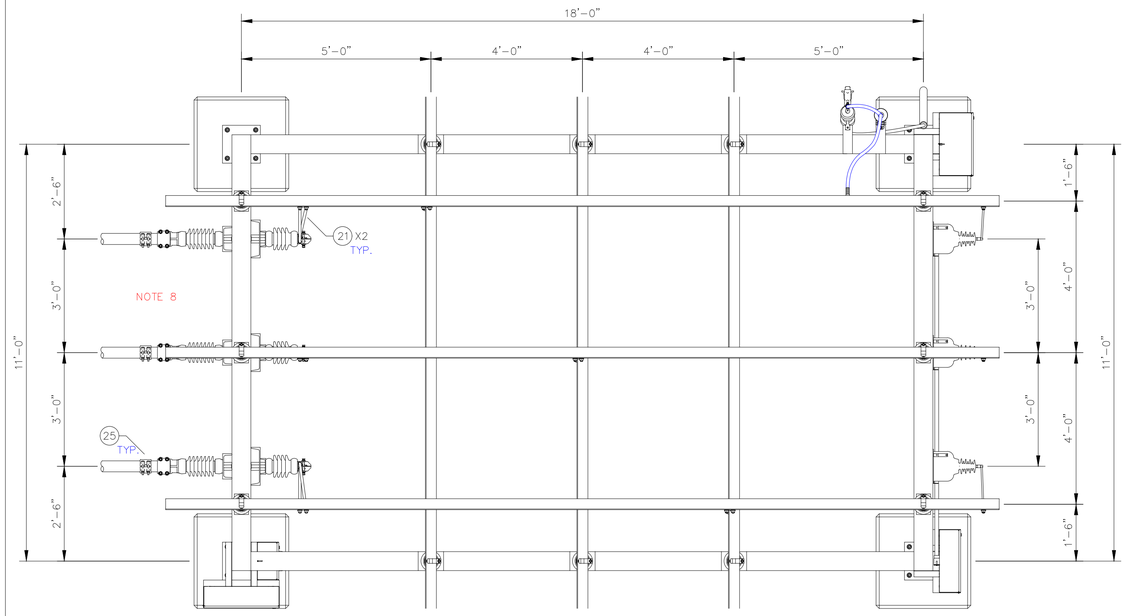
SEWARD, NEBRASKA

drawn by:	NF
checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	15R
date:	2019-11-14

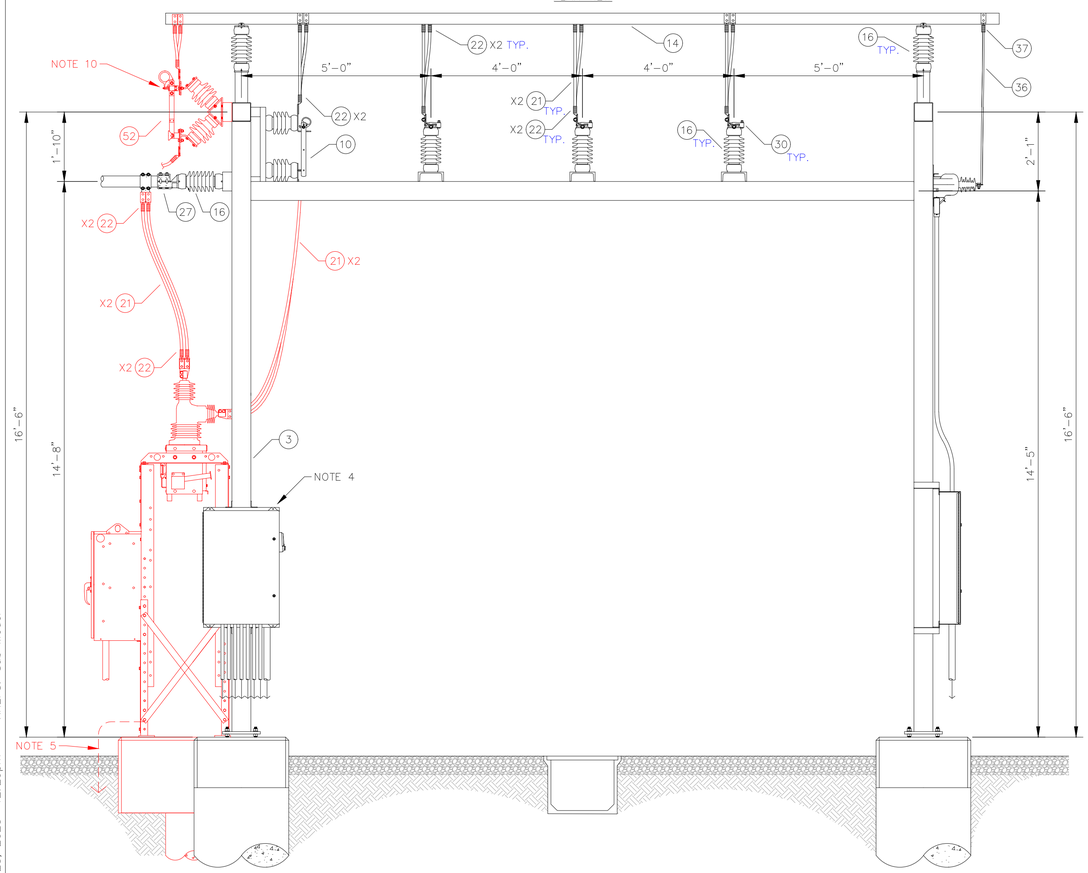
SHEET
15R of 34

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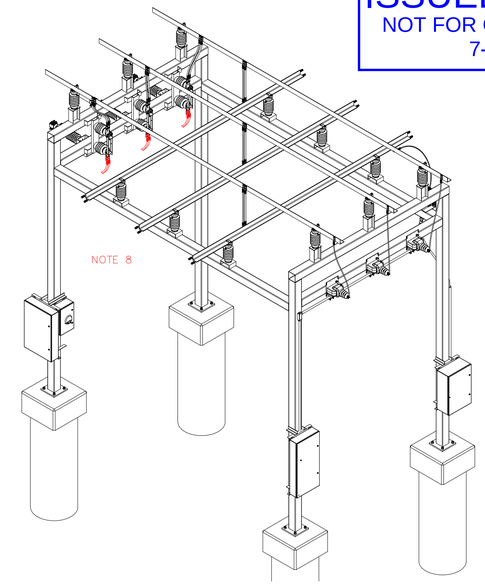
PLAN VIEW



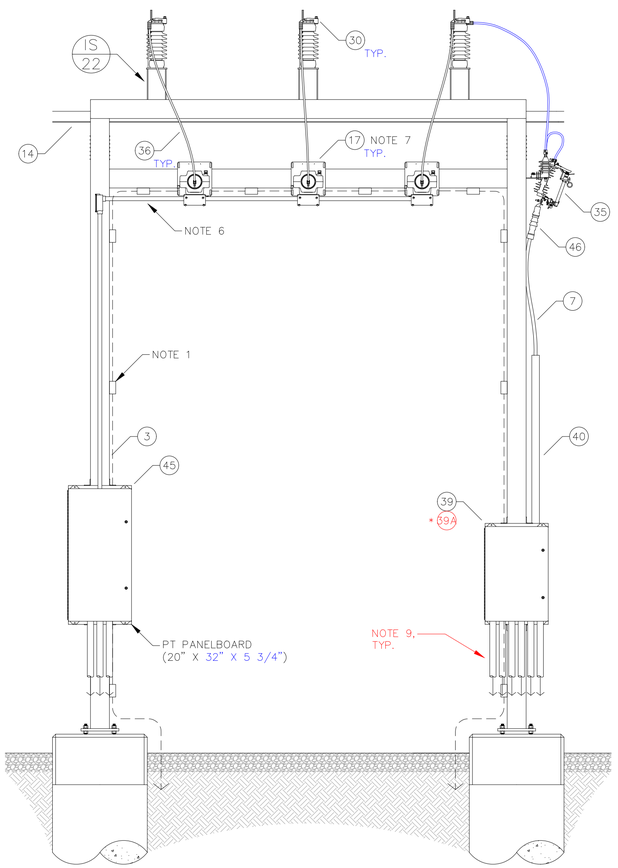
FRONT VIEW

NOTES:

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6. FURNISH AND INSTALL 1" CONDUIT BETWEEN PT'S AND TO PT PANEL BOARD. FURNISH AND INSTALL PANEL BOARD WITH BREAKERS FOR PT SECONDARY (10A FUSES).
7. BOND PT GROUNDS TO STATION GROUND.
8. RECLOSER, V-SWITCH, AND RELEVANT CONNECTIONS NOT SHOWN FOR CLARITY.
9. CONDUITS SHOWN FOR REFERENCE ONLY. ACTUAL ARRANGEMENT MAY VARY. SEE CONDUIT PLAN, SHEET 31.
10. BOLT V-SWITCH MOUNTING BRACKET ON EXISTING STRUCTURE AS SHOWN AND SPECIFIED.
11. * - FOR SP-2 PANEL INSTALLATION ONLY. NO CHANGE TO EXISTING SP-1 PANEL.
12. CONTRACTOR TO PROCURE AND MOUNT 240V 4 PRONG WEATHERPROOF RECEPTACLE ADJACENT TO SP-2 PANEL AND ROUTE CIRCUIT IN 1" FLEX CONDUIT.



MODEL VIEW
(NTS)



SIDE VIEW

12.47 KV DISCONNECT STRUCTURE
SCALE: 1/2" = 1'-0"
S3
5

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7/30/2025

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12.47 KV SWITCH & BUS SUPPORT STRUCTURE DETAIL (2 OF 2)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

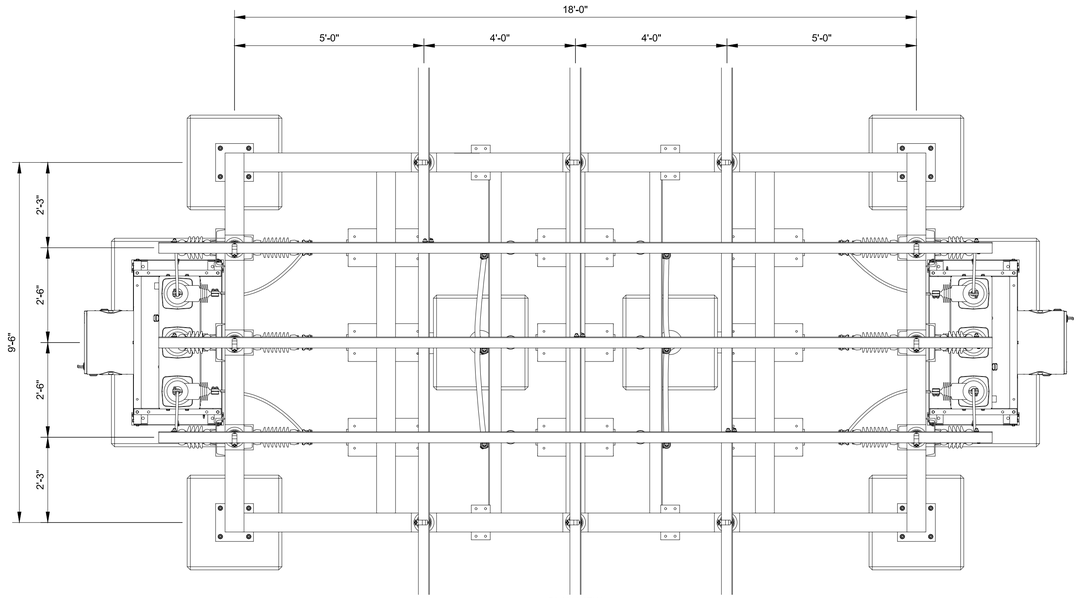
2025

SEWARD, NEBRASKA

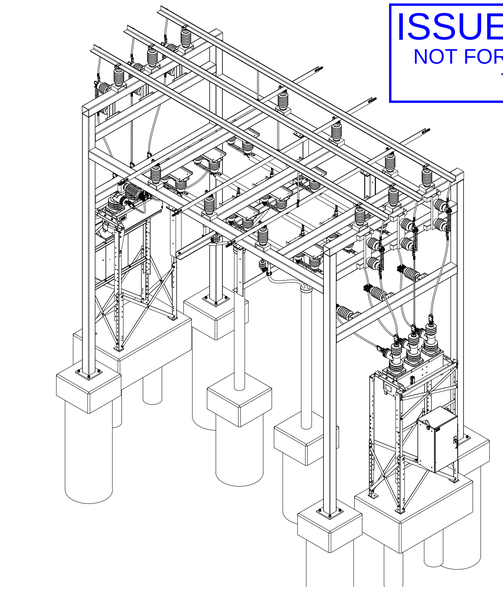
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checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	15
date:	2019-11-14

SHEET
15 of 34

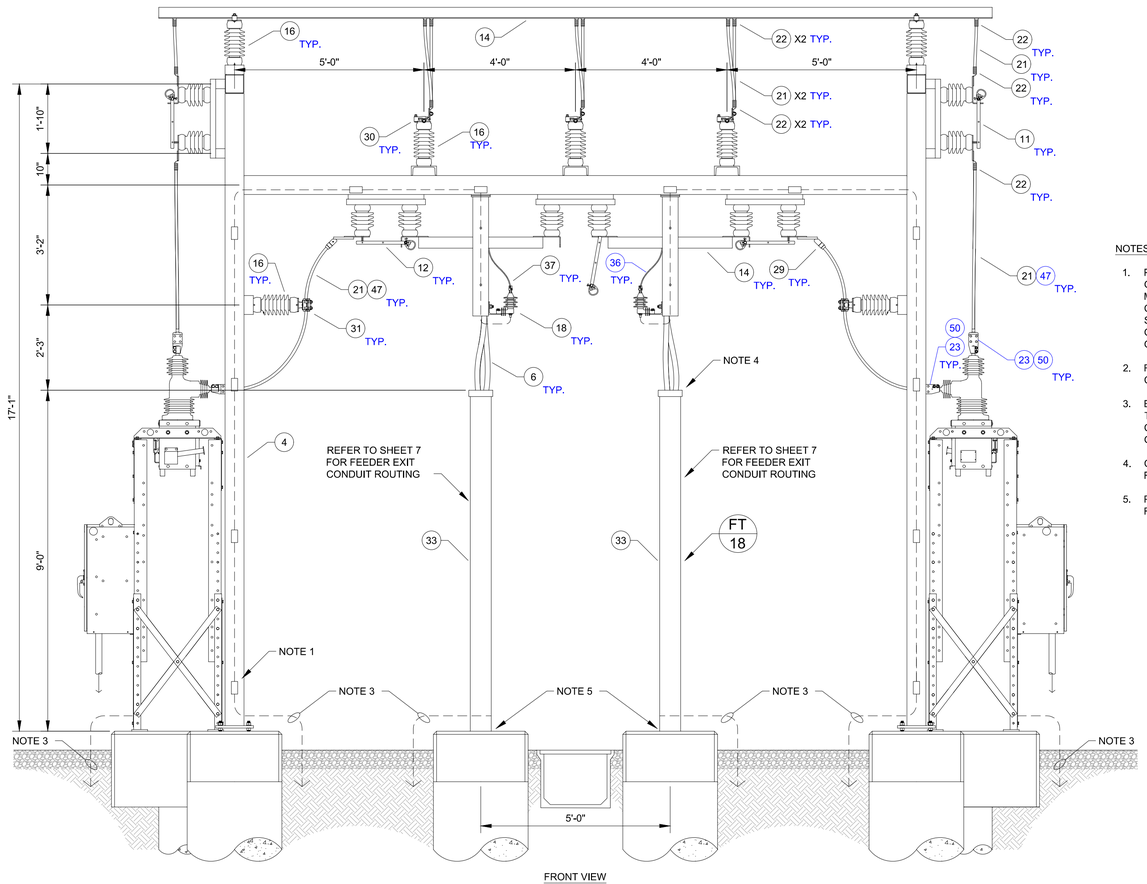
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PLAN VIEW



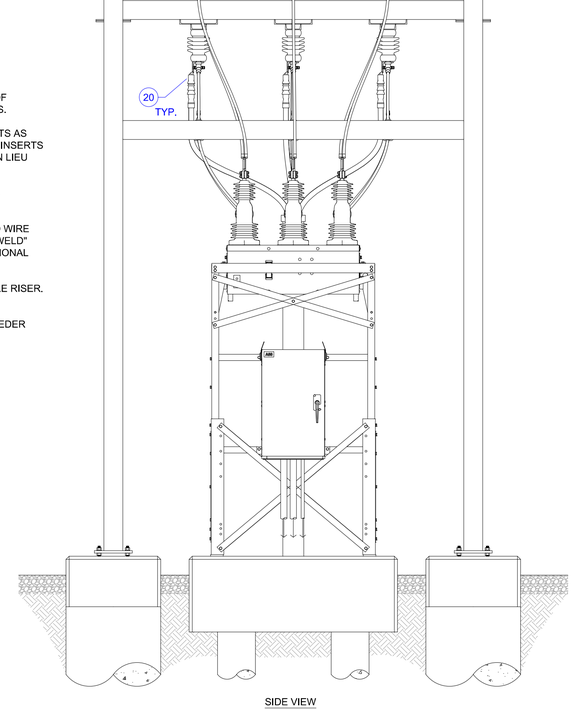
MODEL VIEW
(NTS)



FRONT VIEW

NOTES:

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2. REFER TO STANDARD ALUMINUM ANGLE BUS CONNECTIONS DETAIL "AC" ON SHEET 18.
3. BOND STRUCTURE AND EQUIPMENT GROUND WIRE TO GROUND GRID USING EXOTHERMIC "CADWELD" CONNECTION. REFER TO SHEET 8 FOR ADDITIONAL GROUNDING REQUIREMENTS.
4. CABLE SUPPORTS ARE SPECIFIED WITH CABLE RISER. REFER TO MATERIAL LIST.
5. PROVIDE CONDUIT GROUND CLAMPS FOR FEEDER RISER CONDUITS.



SIDE VIEW

12.47 KV RECLOSER BAY
SCALE: 1/2" = 1'-0"

S4
5

THIS DETAIL TO BE INSTALLED 2 TIME(S) PER 2025 SUBSTATION EXPANSION

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7-30-2025

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12.47 KV RECLOSER BAY
STRUCTURE DETAIL

34.5 - 12.47 KV INDUSTRIAL SUBSTATION
CONSTRUCTION

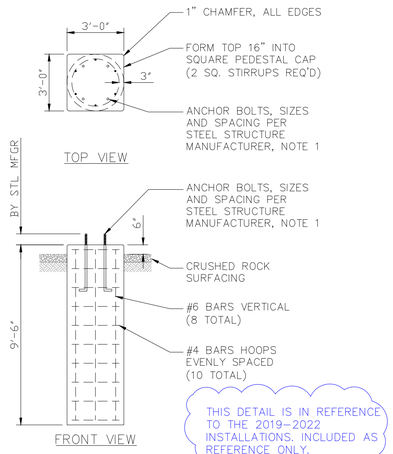
SEWARD, NEBRASKA

2019 - 2020

drawn by:	NF
checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	16
date:	2019-11-14

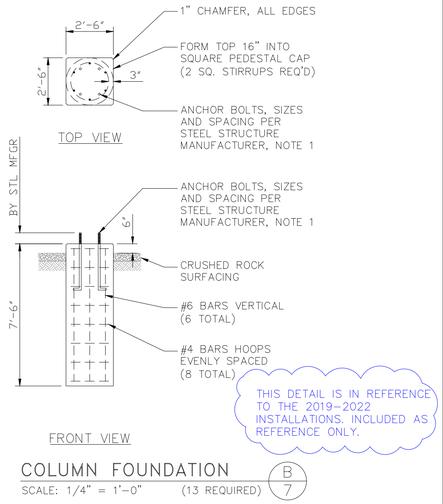
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16 of 34

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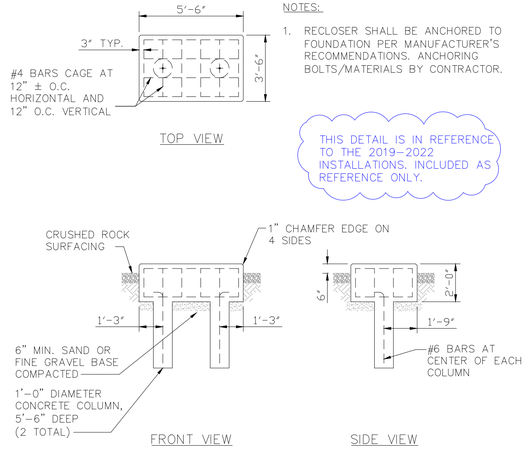
DISC. STRUCTURE FOUNDATION (A/7)

SCALE: 1/4" = 1'-0" (2 REQUIRED)



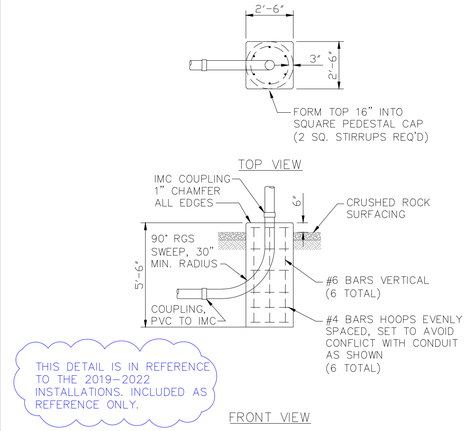
COLUMN FOUNDATION (B/7)

SCALE: 1/4" = 1'-0" (13 REQUIRED)



15 KV RECLOSER FOUNDATION (C/7)

SCALE: 1/4" = 1'-0" (4 REQUIRED)



CONDUIT RISER FOUNDATION (D/7)

SCALE: 1/4" = 1'-0" (4 REQUIRED)

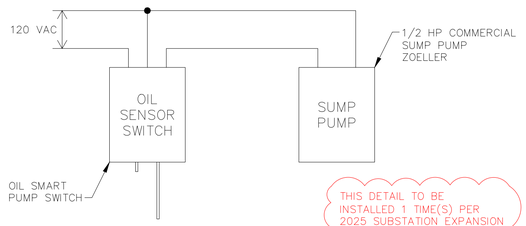
NOTES:

1. ANCHOR BOLT SIZES AND SPACING PER STEEL STRUCTURE MANUFACTURER. LOCATIONS TO BE VERIFIED BY MANUFACTURER'S TEMPLATE PRIOR TO SETTING ANCHOR BOLT.

*TRANSFORMER T1 AND CONTAINMENT FOUNDATION AND GRATING NOT IN CONTRACT. WORK COMPLETED BY OTHERS. THIS DETAIL FOR INFORMATION ONLY.

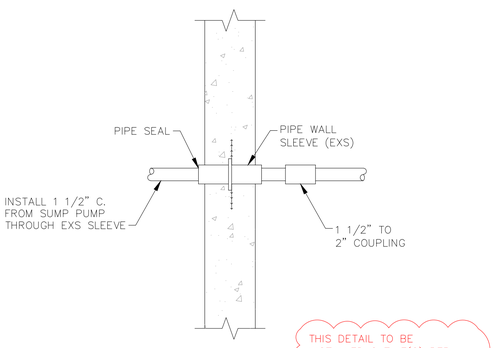
THIS DETAIL IS IN REFERENCE TO THE 2019-2022 INSTALLATIONS. INCLUDED AS REFERENCE ONLY.

TRANSFORMER T1 AND CONTAINMENT FOUNDATION (E/7)



SUMP PUMP SCHEMATIC

SCALE: NOT TO SCALE



PIPE DRAIN PENETRATION DETAIL

SCALE: NOT TO SCALE

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DATE: Jul 28, 2025 1:17pm XREFS:

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FOUNDATION DETAILS

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

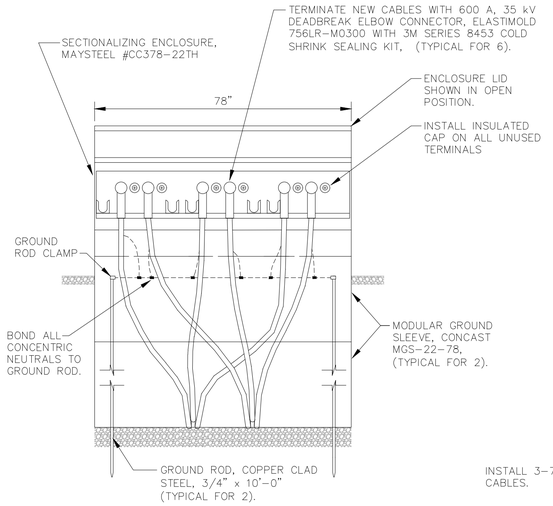
2019-2020

SEWARD, NEBRASKA

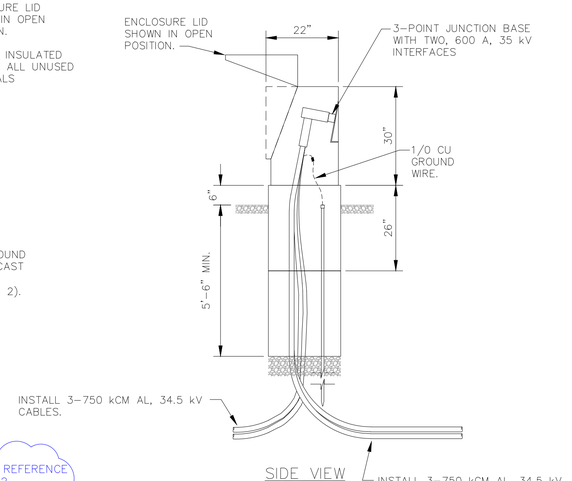
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checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	17
date:	2019-11-14

SHEET
17 of 34

ISSUED FOR BID
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FRONT VIEW

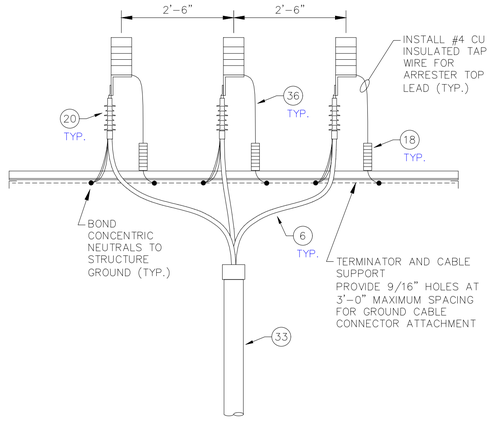


SIDE VIEW

THIS DETAIL IS IN REFERENCE TO THE 2019-2022 INSTALLATIONS. INCLUDED AS REFERENCE ONLY.

THREE-PHASE 35 KV JUNCTION ENCLOSURE (J1 4) (J2 4)

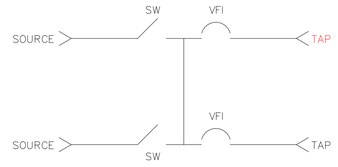
SCALE: NOT TO SCALE (2 REQUIRED)



THIS DETAIL TO BE UTILIZED PER 2025 SUBSTATION EXPANSION

FEEDER EXIT TERMINATIONS (FT 16)

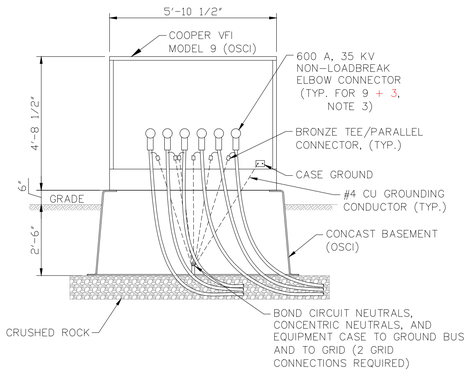
SCALE: NOT TO SCALE



CONNECTION DIAGRAM

NOTES:

1. MAKE GROUND CONNECTIONS SUCH THAT A FULL-CAPACITY NEUTRAL IS MAINTAINED. THE NEUTRAL, WITH SOURCE AND LOAD "BOLTED", SHALL BE BONDED TO THE EQUIPMENT GROUND CABLES AND ROD ELECTRODES SPECIFIED.
2. REFER TO PLAN SHEET 7 FOR CONDUIT REQUIREMENTS AND CIRCUIT ROUTING. CONDUITS NOT SHOWN ON THIS DETAIL.
3. 600 A ELBOWS ARE INCLUDED ON SHEET 6 MATERIAL LIST, ITEM 19.

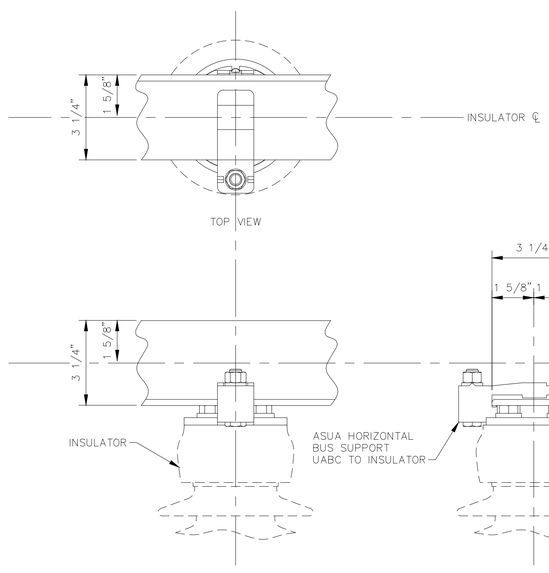


FRONT VIEW

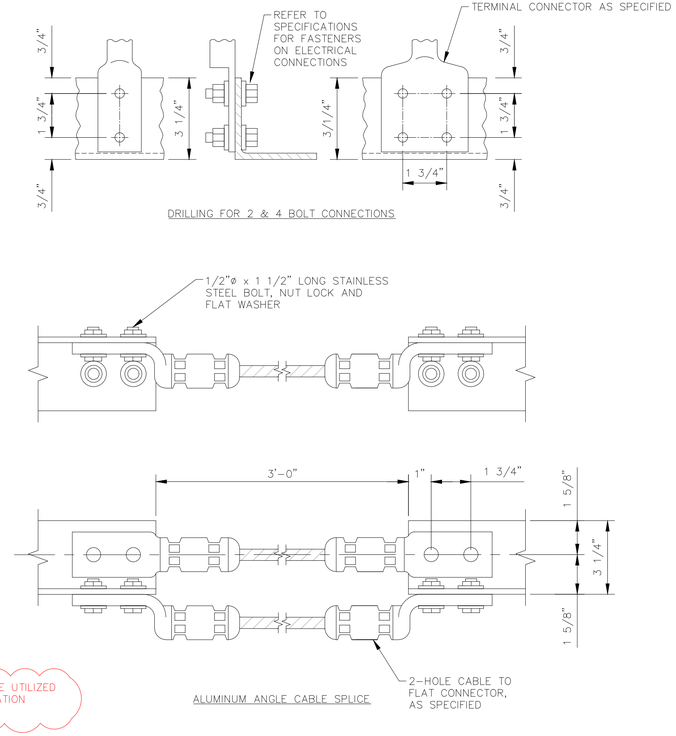
THIS DETAIL TO BE UTILIZED PER 2025 SUBSTATION EXPANSION

35 KV PAD-MOUNTED VFI DETAIL (OSCI) (VF1 5)

SCALE: 3/8" = 1'-0" (1 REQUIRED)



THIS DETAIL TO BE UTILIZED PER 2025 SUBSTATION EXPANSION



STANDARD ALUMINUM ANGLE BUS CONNECTIONS (AC 14) (AC 16)

SCALE: NOT TO SCALE

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MISCELLANEOUS DETAILS (1 OF 6)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

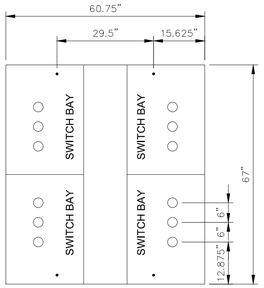
2019-2020

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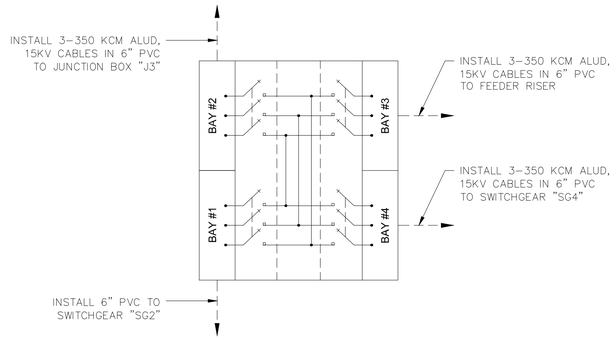
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project no.: 018-1509
drawing no.: 18
date: 2019-11-14

SHEET 18 of 34

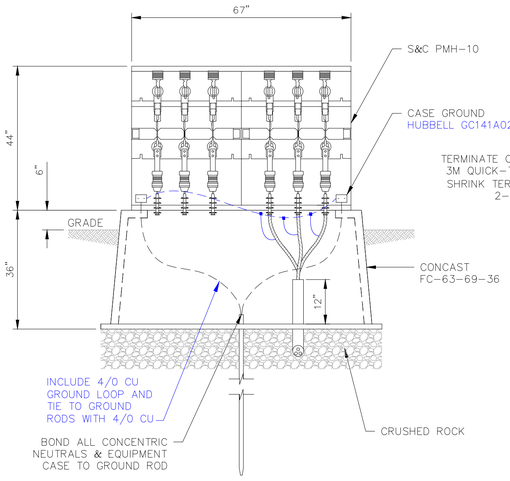
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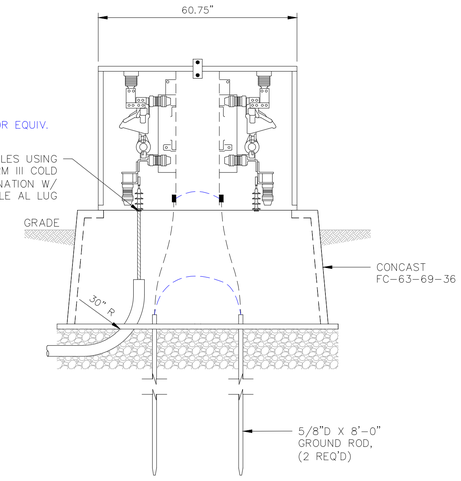
TOP VIEW



CONNECTION DIAGRAM



SIDE VIEW

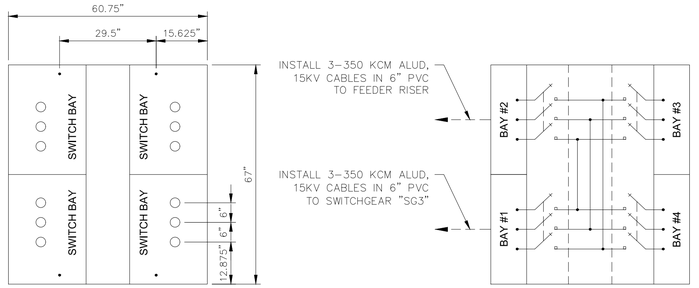


FRONT VIEW

PADMOUNT SWITCHGEAR DETAIL SG3 5

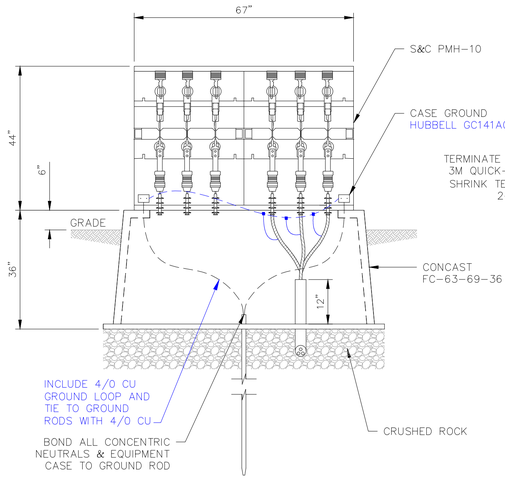
SCALE: NOT TO SCALE

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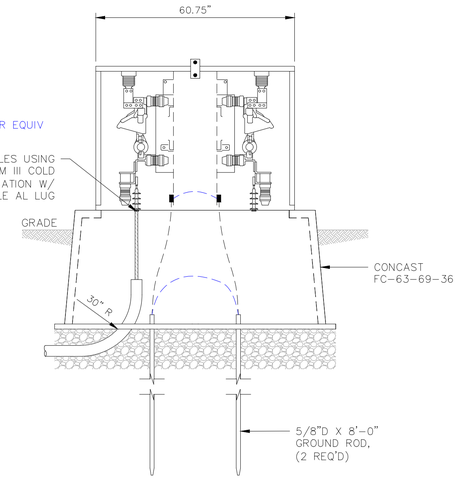


TOP VIEW

CONNECTION DIAGRAM



SIDE VIEW



FRONT VIEW

PADMOUNT SWITCHGEAR DETAIL SG1 5

SCALE: NOT TO SCALE

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MISCELLANEOUS DETAILS (2 OF 6)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

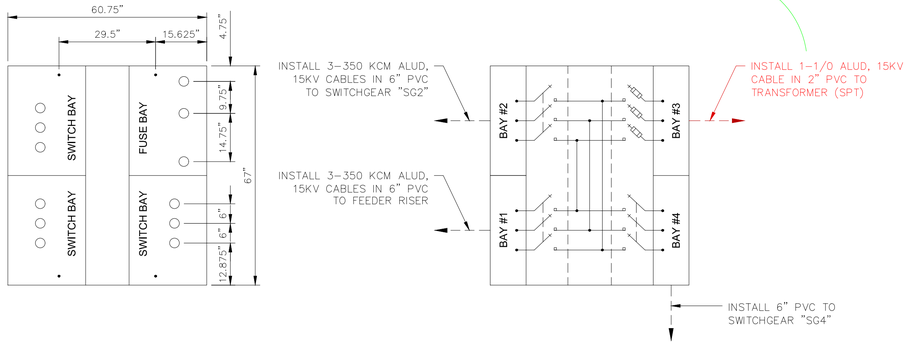
SEWARD, NEBRASKA

2019-2020

drawn by:	NF
checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	19
date:	2019-11-14

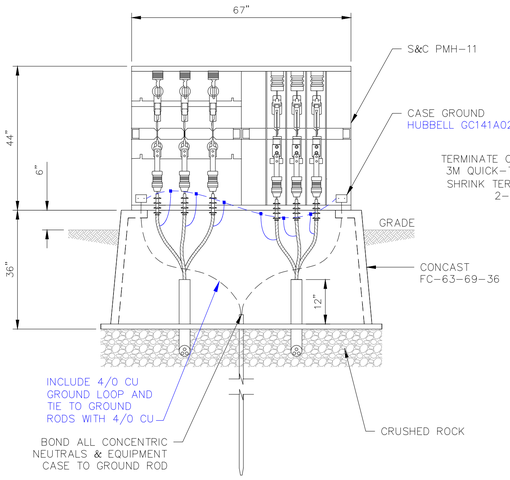
SHEET
19 of 34

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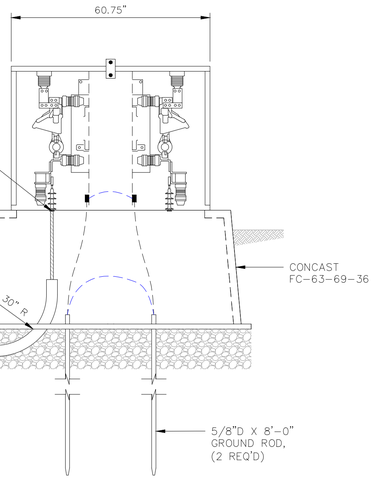


TOP VIEW

CONNECTION DIAGRAM



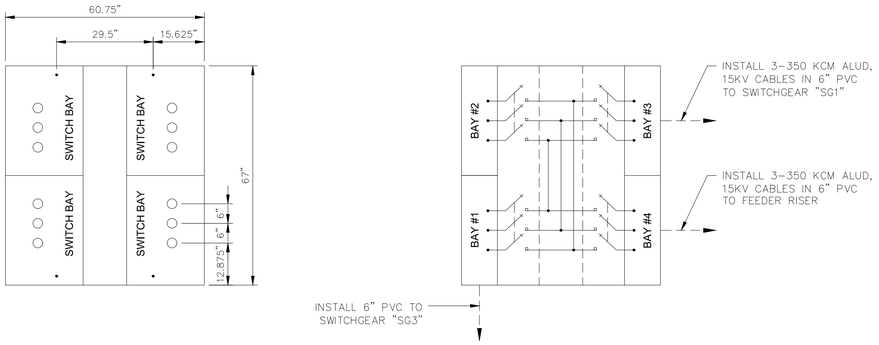
SIDE VIEW



FRONT VIEW

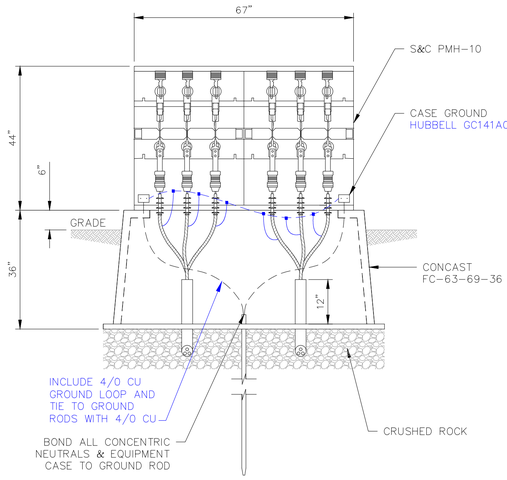
PADMOUNT SWITCHGEAR DETAIL SG2 5

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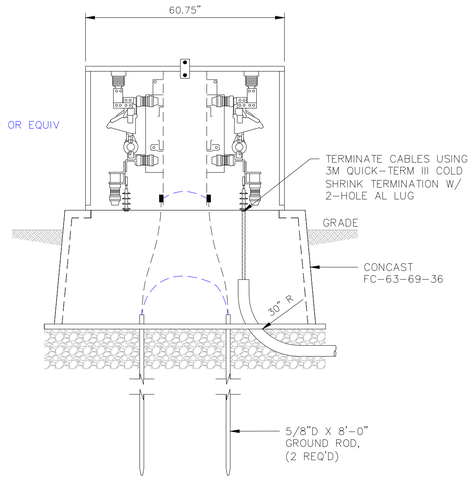


TOP VIEW

CONNECTION DIAGRAM



SIDE VIEW



FRONT VIEW

PADMOUNT SWITCHGEAR DETAIL SG4 5

SCALE: NOT TO SCALE

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MISCELLANEOUS DETAILS (3 OF 6)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

2019-2020

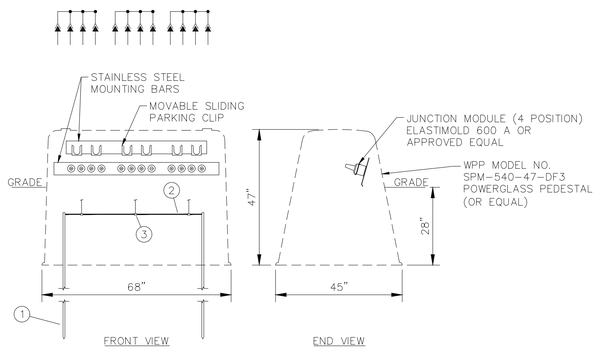
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project no.:	018-1509
drawing no.:	20
date:	2019-11-14

SHEET
20 of 34

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NOTES:

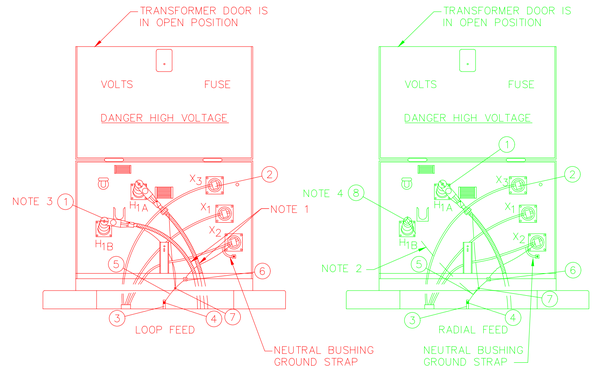
1. MAXIMUM ABOVE-GRADE EXPOSURE OF GROUND ROD = 6".
2. PROVIDE AND INSTALL 600 A, 15 KV ELBOWS AS REQUIRED FOR TERMINATION OF CABLES IN JUNCTION CABINET (NOT SHOWN). 600 A ELBOWS ARE INCLUDED ON SHEET 6 MATERIAL LIST. BOND CONCENTRIC NEUTRALS TO GROUND.
3. TRAIN PRIMARY CABLES AND CONCENTRIC NEUTRAL SO SLACK IS PROVIDED FOR MOVING ELBOWS TO STAND OFF INSULATORS IN PARKING STAND IF NECESSARY.
4. INSTALL INSULATED CAPS ON ALL UNUSED MODULE POINTS.
5. INSTALL 6" CONDUIT SWEEP AND 5' STUB OUT TOWARD FUTURE RISER. COORDINATE WITH OWNER FOR DIRECTION.



3 PHASE PRIMARY JUNCTION CABINET DETAIL

SCALE: NOT TO SCALE (2 REQUIRED) J3 / 4

THIS DETAIL IS IN REFERENCE TO THE 2019-2022 INSTALLATIONS. INCLUDED AS REFERENCE ONLY.



NOTES:

1. TRAIN PRIMARY CABLES AND CONCENTRIC NEUTRAL SO SLACK IS PROVIDED FOR MOVING ELBOWS TO STAND OFF INSULATORS IN PARKING STANDS IF NECESSARY.
2. USE CONCENTRIC NEUTRAL WIRE FOR DEADEND CAP BLEED-OFF WRAP WIRE AROUND GROUND BUS FOR CONNECTION.
3. 2. IF TRANSFORMER IS NOT EXPECTED TO HAVE ANY LOAD IN THE NEAR FUTURE, REMOVE FUSE FROM BAYONET AND STORE COMPARTMENT IN PLASTIC BAG.
4. 3. INSTALL ELBOW ARRESTER WHERE SPECIFIED.

NO.	QUANTITY UGXFM1-L	QUANTITY UGXFM1-R	DESCRIPTION
1	2	1	ELBOW, 15 KV
2	3	3	SECONDARY LUG
3	1	1	GROUND ROD 5/8" x 8' CWLD
4	1	1	CLAMP, GROUND ROD
5	AS REQ'D		WIRE, 2 CU BARE SD
6	1	1	TRANSFORMER TANK GROUND
7	AS REQ'D		CONNECTORS
8	NA	1	DEADEND RECEPTICAL, 15 KV, 200 A

SINGLE-PHASE TRANSFORMER PADMOUNTED

SCALE: NOT TO SCALE (1 REQUIRED) SPT / 5

T2
1

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MISCELLANEOUS DETAILS (4 OF 6)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

2019-2020

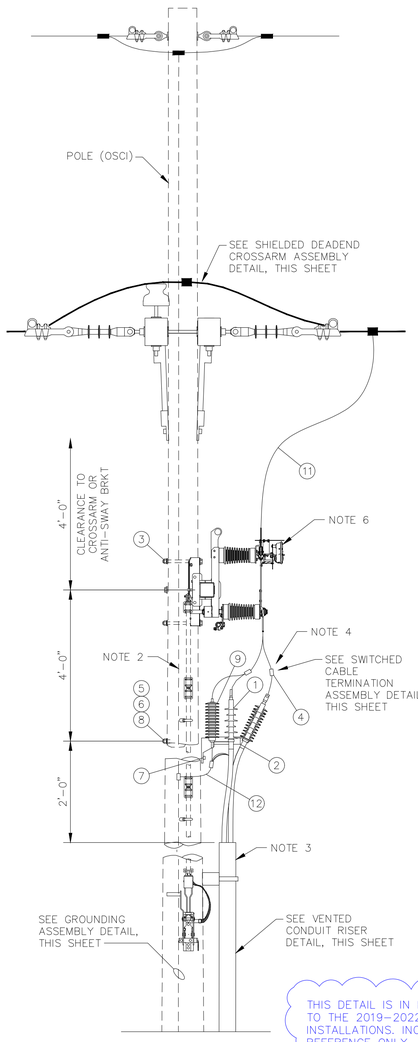
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checked by: NF/GK
approved by: EE
QA/QC by: NF/GK
project no.: 018-1509
drawing no.: 21
date: 2019-11-14

SHEET 21 of 34

DWG: C:\Temp\AcPublish_37028\E_DTL_81509.dwg USER: ccarrigan
DATE: Jul 28, 2025 1:46pm XREFS:

NOTES:

1. EQUIPMENT AND MATERIALS FOR RISER POLE ASSEMBLIES ARE NOT INCLUDED ON SHEET 6 MATERIAL LIST.
2. POLE GROUND ASSEMBLY IS SPECIFIED SEPARATELY.
3. CABLE CONDUIT RISER IS SPECIFIED SEPARATELY.
4. BOND CONCENTRIC NEUTRALS AND ARRESTERS TO GROUND.
5. TOTAL ARRESTER LEAD LENGTHS MUST BE UNDER 3'-0".
6. REFER TO SWITCH MANUFACTURER DRAWING.

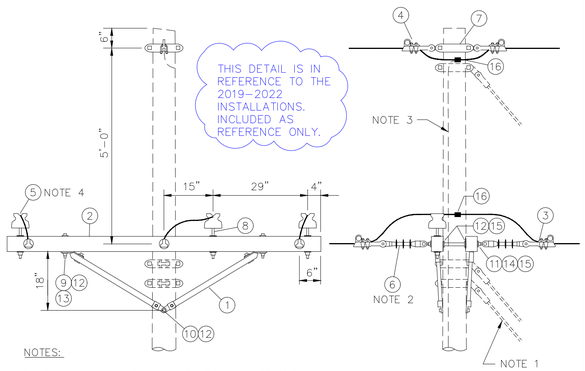


THIS DETAIL IS IN REFERENCE TO THE 2019-2022 INSTALLATIONS. INCLUDED AS REFERENCE ONLY.

NO	QUANTITY	DESCRIPTION
1	3	TERMINATOR, 15KV, AS SPECIFIED
2	1	TERMINATOR/ARRESTER MOUNTING BRKT
3	1	SWITCH MOUNTING BRKT, AS SPECIFIED
4	AS REQ'D	CONNECTOR, COMPRESSION
5	3	BOLT, MACHINE, 5/8" X REQUIRED LENGTH
6	AS REQ'D	LOCKNUTS
7	2	LAG SCREW, 1/2"
8	2	WASHER, SQ., 2 1/4" X 3/16", 13/16" HOLE
9	3	ARRESTER, RISER CLASS
10	1	S&C SWITCH ED-703R4
11	AS REQ'D	CONDUCTOR, AS SPECIFIED
12	AS REQ'D	CONDUCTOR, #4 BARE CU SD

RISER POLE ASSEMBLY DETAIL (P1 / 4)

SCALE: NOT TO SCALE



THIS DETAIL IS IN REFERENCE TO THE 2019-2022 INSTALLATIONS. INCLUDED AS REFERENCE ONLY.

NOTES:

1. GUY ASSEMBLIES SHALL BE SPECIFIED SEPARATELY.
2. WHERE ANSI 52-1 OR 52-9 PORCELAIN SUSPENSION INSULATORS ARE SPECIFIED, USE 2 PER PHASE FOR 15 KV CLASS AND 1 PER PHASE FOR 5 KV CLASS.
3. POLE GROUND ASSEMBLY SHALL BE SPECIFIED SEPARATELY.
4. ASSEMBLY INCLUDES TIES APPROPRIATE FOR THE SIZE AND TYPE OF CONDUCTOR SUPPORTED.

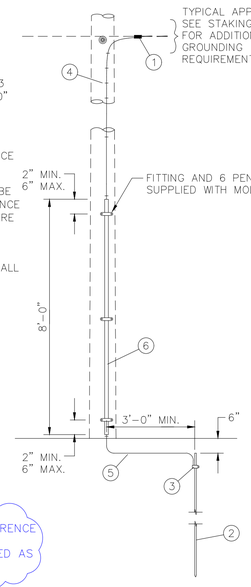
NO.	QUANTITY	DESCRIPTION
1	2 PAIR	CROSSARM BRACE, WOOD, 60" SPAN
2	2	CROSSARM, 3 5/8" X 4 5/8" X 8'-0"
3	6	DEADEND CLAMP, PRIMARY
4	2	DEADEND CLAMP, SHIELDWIRE
5	3	INSULATOR, PIN TYPE, 15 KV
6	6	DEADEND INSULATOR, POLYMER, 15 KV
7	1	POLE BAND AND HARDWARE FOR SHIELDWIRE
8	3	PIN, STEEL, 5/8" X 10 3/4", 1" NYLON HEAD
9	4	BOLT, MACHINE, 1/2" X 6"
10	1	BOLT, MACHINE, 5/8" X REQUIRED LENGTH
11	3	BOLT, DOUBLE ARMING, 5/8" X REQUIRED LENGTH
12	AS REQ'D	LOCKNUTS
13	4	WASHER, ROUND, 2" DIA. 9/16" HOLE
14	6	NUT, EYE, 5/8"
15	10	WASHER, SQUARE, 2 1/4" X 3/16", 13/16" HOLE
16	LOT	CONNECTORS, COMPRESSION TYPE

3-PHASE SHIELDED DEADEND CROSSARM ASSEMBLY

SCALE: NOT TO SCALE

NOTES:

1. MOULDING SHALL BE SECURED BY 3 STRAPS AND 6 NAILS FOR AN 8'-0" LENGTH.
2. GROUND WIRE TO BE LOCATED ON SAME SIDE AS NEUTRAL AND IN QUADRANT OPPOSITE CLIMBING SPACE OR POLE TOP PIN.
3. STAPLES ON GROUND WIRE SHALL BE 2'-0" APART EXCEPT FOR A DISTANCE OF 8'-0" FROM TOP OF POLE, WHERE THEY SHALL BE 6" APART.
4. GROUND WIRE TO CLEAR ALL HARDWARE BY 2" MINIMUM AND SHALL BE STAPLED TO MAINTAIN THIS POSITION.



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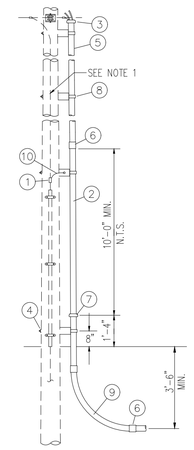
NO.	QUANTITY	DESCRIPTION
1	AS REQ'D	CONNECTORS
2	1	ROD, GROUND, CU CLAD STEEL, 3/4" X 10'
3	1	CLAMP, GROUND ROD
4	AS REQ'D	STAPLES, GROUND WIRE
5	AS REQ'D	GROUND WIRE, #4 CU, S.D.
6	AS REQ'D	GROUND WIRE MOLDING, 13/16" X 8'-0"

GROUNDING ASSEMBLY GROUND ROD TYPE

SCALE: NOT TO SCALE

NOTES:

1. POLE GROUND ASSEMBLY IS SPECIFIED SEPARATELY.

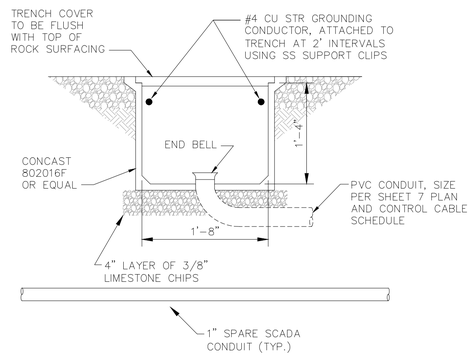


THIS DETAIL IS IN REFERENCE TO THE 2019-2022 INSTALLATIONS. INCLUDED AS REFERENCE ONLY.

NO	QUANTITY	DESCRIPTION
1	AS REQ'D	CONNECTORS
2	AS REQ'D	CONDUIT RIGID STEEL, 6" W/COUPLING
3	1	VENTED CABLE SUPPORT BUSHING, OZ GEDNEY
4	AS REQ'D	BOLTS, WASHERS, LOCKNUTS
5	AS REQ'D	PVC CONDUIT, 6"
6	1	ADAPTER, PVC TO GRC
7	1	CONDUIT VENT
8	AS REQ'D	CONDUIT SUPPORT BRACKET
9	1	ELBOW, RIGID STEEL CONDUIT, 6", 90°
10	AS REQ'D	CONDUCTOR, #4 BARE CU SD

CABLE RISERS (VENTED CONDUIT) DETAIL

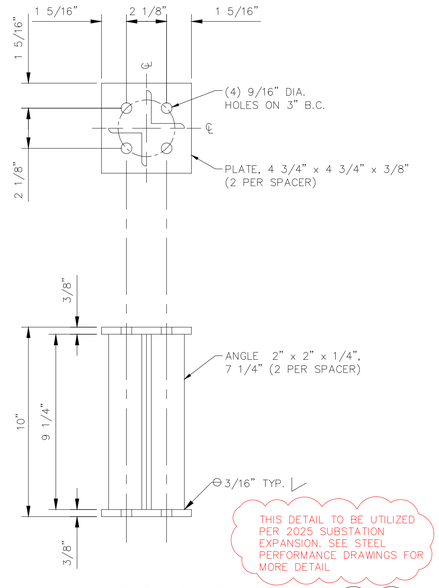
SCALE: NOT TO SCALE



CABLE TRENCH CROSS SECTION (CT / 7)

SCALE: NOT TO SCALE

THIS DETAIL TO BE UTILIZED PER 2025 SUBSTATION EXPANSION



THIS DETAIL TO BE UTILIZED PER 2025 SUBSTATION EXPANSION. SEE STEEL PERFORMANCE DRAWINGS FOR MORE DETAIL

INSULATOR SPACER DETAILS (IS 14 / IS 15)

SCALE: 3" = 1'-0" (6 + 6 REQUIRED)

WHEN THIS DRAWING IS PRINTED TO THE SCALE SHOWN, THE BAR SHOWN BELOW WILL BE 1" LONG.

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7-30-2025

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7/30/2025

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REVISIONS

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0	5-29-2019	95% OWNER REVIEW
1	6-07-2019	ISSUED FOR BID
2	11-21-2019	ISSUED FOR CONSTRUCTION
3	07-30-2025	SUBSTATION EXPANSION

MISCELLANEOUS DETAILS (5 OF 6)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

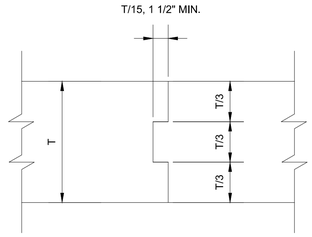
SEWARD, NEBRASKA

2019-2020

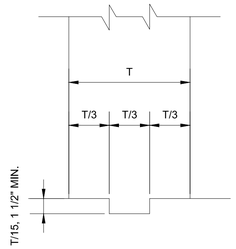
drawn by:	NF
checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	22
date:	2019-11-14

SHEET 22 of 34

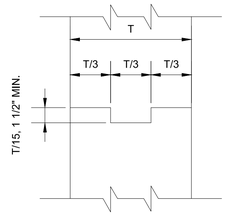
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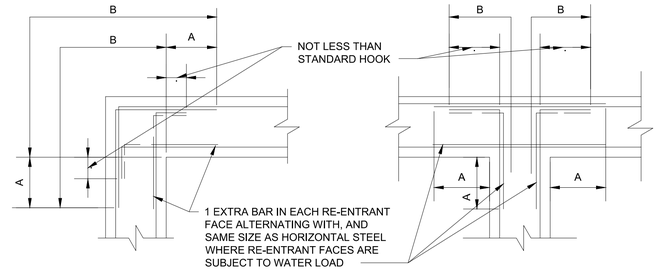


SLABS



BASE OF WALLS

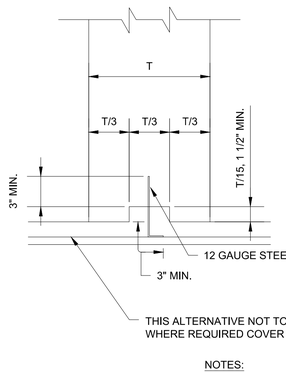


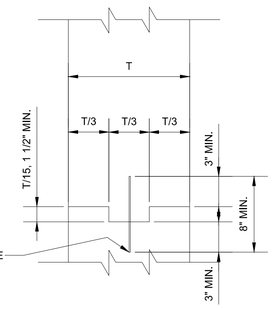


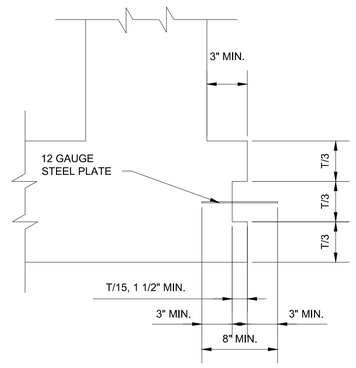
WALLS

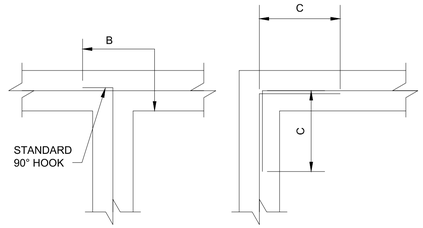
JOINTS WITHOUT WATER STOPS

THIS DETAIL IS IN REFERENCE TO THE 2019-2022 INSTALLATIONS. INCLUDED AS REFERENCE ONLY.









NOTES:

VERTICAL REINFORCING NOT SHOWN

A=1/5 THE CLEAR SPAN DISTANCE MEASURED HORIZONTALLY OR 0.4 THE CLEAR SPAN OR CANTILEVER MEASURED VERTICALLY, WHICHEVER IS THE SMALLER: BUT IN NO CASE LESS THAN THE REQUIRED LENGTH OF LAPPED SPLICES FOR TOP BARS AS SHOWN ON THIS SHEET. THE "A" DIMENSION FOR ONE-HALF OF THE EXTRA BARS CAN BE REDUCED BY 30%.

B=SUFFICIENT LENGTH TO PERMIT BARS TO EXTEND THROUGH THE WALL TO THE OPPOSITE FACE AND TERMINATE IN A STANDARD HOOK BUT SHALL NOT BE LESS THAN THE LENGTH REQUIRED FOR EMBEDMENT OF THE BARS, AS SHOWN ON THIS SHEET.

C=NOT LESS THAN THE LENGTH REQUIRED FOR LAPPED SPLICES FOR TOP BARS, AS SHOWN ON THIS SHEET.

1. REINFORCING STEEL IS TO BE CARRIED ACROSS ALL CONSTRUCTION JOINTS.

2. WHERE T IS LESS THAN 12", OMIT KEYS

TYPICAL CORNER REINFORCING DETAILS

THIS DETAIL IS IN REFERENCE TO THE 2019-2022 INSTALLATIONS. INCLUDED AS REFERENCE ONLY.

BAR SIZE	LENGTH OF LAPPED SPLICES FOR REINFORCING, IN INCHES		LENGTH OF EMBEDMENT FOR END ANCHORAGE OF REINFORCING WITH STD. HOOKS, IN INCHES	
	* TOP BARS	OTHERS	* TOP BARS	OTHER
3	20	20	14	14
4	23	20	16	16
5	29	20	20	18
6	37	26	26	20
7	50	36	36	22
8	66	47	44	26
9	83	60	55	32
10	106	76	66	41
11	130	93	78	52
14	NOT PERMITTED		108	79
18	NOT PERMITTED		158	119

* TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR. HORIZONTAL BARS IN THE WALLS ARE TO BE PROVIDED WITH A LAPS AS REQUIRED FOR TOP BARS.

EXCEPT AS OTHERWISE INDICATED ON THE PLANS. EMBEDMENT LENGTHS FOR END ANCHORAGE AND LAPPED SPLICES SHALL BE NOT LESS THAN (NO MINUS TOLERANCE) SHOWN ABOVE.

LAPPED SPLICES SHALL NOT BE MADE AT POINTS OF MAXIMUM STRESS AS DETERMINED BY THE ENGINEER, AND SHALL NOT BE SPACED CLOSER THAN 6" ON CENTERS. IF SPLICES ARE STAGGERED SO THAT NO MORE THAN 1/2" ARE SPLICED IN A LAP SPLICE LENGTH, THE SPLICE LENGTH CAN BE REDUCED TO 75% OF THE LENGTHS TABULATED ABOVE.

STANDARD BENDS & HOOKS

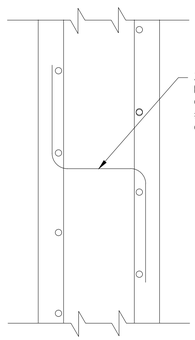
	STIRRUPS AND TIES			PRIMARY STRESS BARS		
BAR SIZE	90° HOOK HOOK H	135° HOOK HOOK H	(Dp) - PIN DIAMETER	90° HOOK HOOK H	180° HOOK HOOK H	(Dp) - PIN DIAMETER
3	2 3/4"	3 1/2"	1 1/2"	-	-	-
4	3 1/2"	4 1/2"	2"	6 3/4"	6"	3"
5	4 1/2"	5 1/2"	2 1/2"	8 1/2"	7"	3 3/4"
6	10 1/4"	7 3/4"	4 1/2"	10 1/4"	8 1/4"	4 1/2"
7	1'-0"	9"	5 1/4"	1'-0"	9 3/4"	5 1/4"
8	1'-1 1/2"	10 1/4"	6"	1'-1 1/2"	11"	6"
9	-	-	-	1'-4"	1'-3"	9"
10	-	-	-	1'-6"	1'-4 3/4"	10 1/4"
11	-	-	-	1'-8"	1'-6 1/2"	11 1/4"

BASE OF WALLS WALLS CORNERS

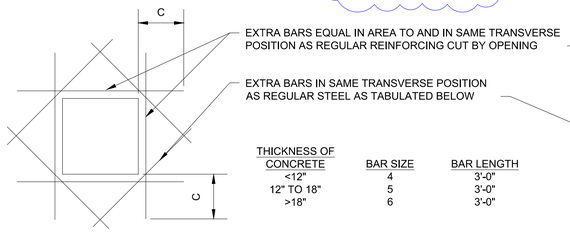
TYPICAL CONSTRUCTION JOINTS

(WATERTIGHT JOINTS, T = 12" OR MORE)

THIS DETAIL IS IN REFERENCE TO THE 2019-2022 INSTALLATIONS. INCLUDED AS REFERENCE ONLY.



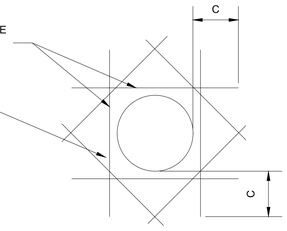
SPACERS FOR WALL REINFORCEMENT



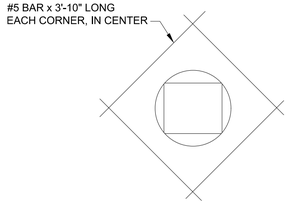
THICKNESS OF CONCRETE	BAR SIZE	BAR LENGTH
<12"	4	3'-0"
12" TO 18"	5	3'-0"
>18"	6	3'-0"

C = THE REQUIRED LENGTH FOR LAPPED SPLICE FOR TOP BARS AS SHOWN ON THIS SHEET

FOR RECTANGULAR OPENINGS LARGER THAN 21" DIAGONAL



FOR CIRCULAR OPENINGS LARGER THAN 21" DIAMETER



NOTE:

EXTRA BARS NOT REQUIRED AT SLEEVES OR WALL PIPES WHEN REINFORCEMENT IS NOT CUT AND O.D. IS 10" OR LESS

FOR OPENINGS 21" AND SMALLER IN DIAMETER OR DIAGONAL

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7-30-2025

TYPICAL EXTRA REINFORCING AT OPENINGS

THIS DETAIL IS IN REFERENCE TO THE 2019-2022 INSTALLATIONS. INCLUDED AS REFERENCE ONLY.

CONCRETE COVER FOR REINFORCEMENT

LOCATION	MINIMUM COVER
UNFORMED SURFACES ADJACENT TO EXCAVATION	3"
FORMED OR TOP SURFACES EXPOSED TO WEATHER OR SATURATED AIR, SUBMERGED OR IN CONTACT WITH EARTH	
#6 OR LARGER BARS	2"
#5 OR SMALLER BARS	1 1/2"
OTHER LOCATIONS	
BARS IN BEAMS OR GIRDERS, INCLUDING STIRRUPS AND COLUMN SPIRALS OR TIES	1 1/2"
SLABS, WALLS AND JOIST	
# 14 AND # 18	1 1/2"
# 11 AND SMALLER	3/4"

COVER FOR REINFORCEMENT STEEL SHALL NOT BE LESS THAN THE MINIMUM GIVEN ABOVE (NO MINUS TOLERANCE), AND SHALL NOT EXCEED THE MINIMUM BY MORE THAN 1/4" WHERE THE CONCRETE THICKNESS IS 24" OR LESS, OR MORE THAN 1/2" WHERE THE CONCRETE THICKNESS IS MORE THAN 24".

GENERAL NOTE:

DETAILS ON THIS SHEET APPLY TO THE ENTIRE SET OF PLANS EXCEPT WHERE SPECIFICALLY SHOWN OTHERWISE.

WHEN THIS DRAWING IS PRINTED TO THE SCALE SHOWN, THE BAR SHOWN BELOW WILL BE 1" LONG.

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STRUCTURAL REINFORCEMENT DETAILS

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

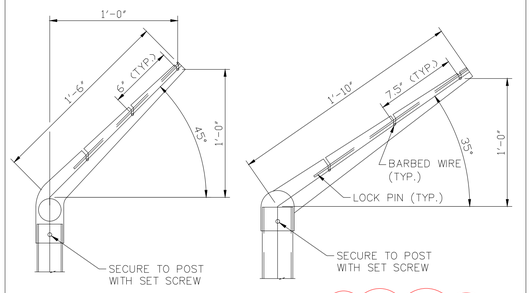
2019 - 2020

drawn by: NF
checked by: NF/GK
approved by: CRS
QA/QC by: NF/GK
project no.: 018-1509
drawing no.: 23
date: 2019-11-14

SHEET 23 of 34

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7-30-2025



LINE POST CORNER POST

THIS DETAIL TO BE UTILIZED PER 2025 SUBSTATION EXPANSION

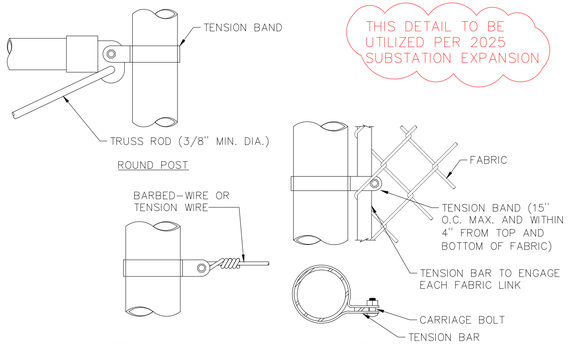
EXTENSION ARM DETAILS
NOT TO SCALE

STEEL POST AND GATE POST SCHEDULE

USE AND SECTION	MINIMUM OUTSIDE DIMENSIONS (NOMINAL)
CORNER, END AND PULL POSTS TUBULAR - ROUND	2.875" O.D.
LINE POSTS TUBULAR - ROUND	2.375" O.D.
TOP AND BRACE RAILS, GATE FRAME TUBULAR - ROUND	1.625" O.D.
GATE POST TUBULAR - ROUND	4" O.D.

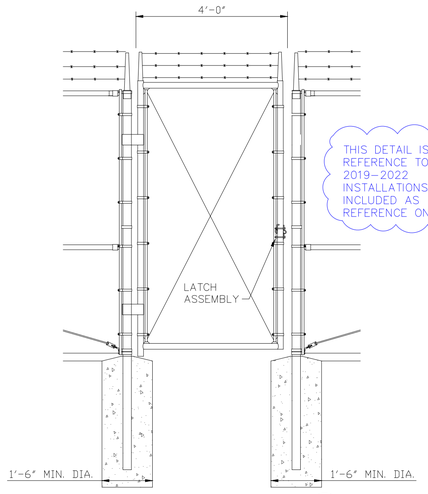
NOTES:

1. DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPES OF FENCE SECTIONS AND METHODS OF INSTALLATION.
2. WIRE TIES, RAILS, POSTS, AND BRACES SHALL BE CONSTRUCTED ON THE SECURE SIDE OF THE FENCE ALIGNMENT, CHAIN-LINK FABRIC SHALL BE PLACED ON THE OPPOSITE SIDE OF THE SECURE AREA.
3. TIE BACK POSTS WITH LATCHING HARDWARE SHALL BE PROVIDED FOR EACH LEAF OF ALL DOUBLE GATES.



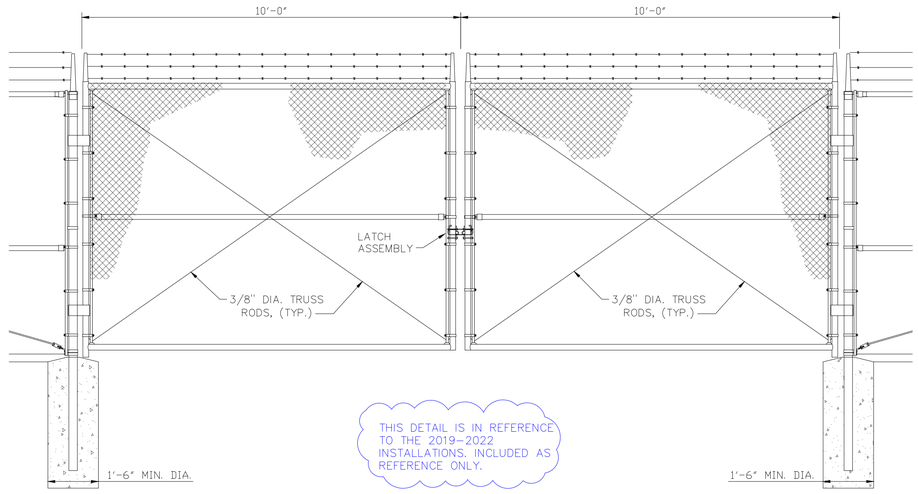
THIS DETAIL TO BE UTILIZED PER 2025 SUBSTATION EXPANSION

FASTENING DETAILS
NOT TO SCALE



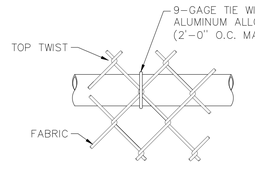
THIS DETAIL IS IN REFERENCE TO THE 2019-2022 INSTALLATIONS. INCLUDED AS REFERENCE ONLY.

WALK-THROUGH GATE (WG 5)
SCALE: 1/2" = 1'-0"

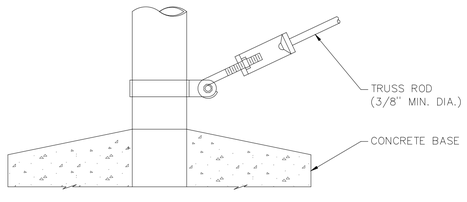


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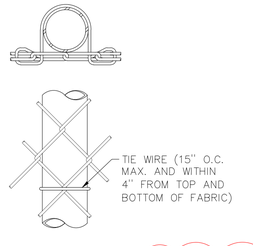
SWING GATES (SG 5)
SCALE: 1/2" = 1'-0"
(2 REQUIRED)



TOP OR BRACE RAIL ATTACHMENT



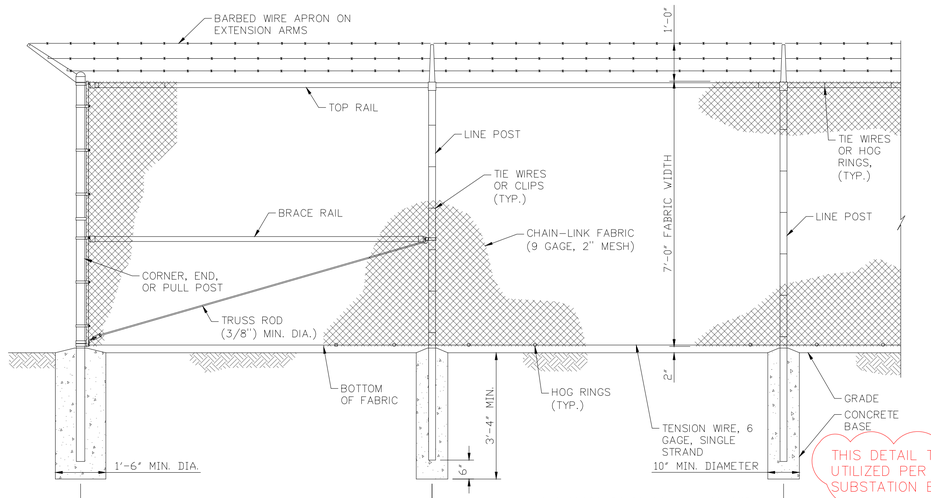
TRUSS ROD AND BAND



ROUND POST

THIS DETAIL TO BE UTILIZED PER 2025 SUBSTATION EXPANSION

FENCE LINE POST ATTACHMENTS
NOT TO SCALE



CHAIN-LINK SECURITY FENCE (SF 5)
SCALE: 1/2" = 1'-0"

THIS DETAIL TO BE UTILIZED PER 2025 SUBSTATION EXPANSION

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FENCE DETAILS

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

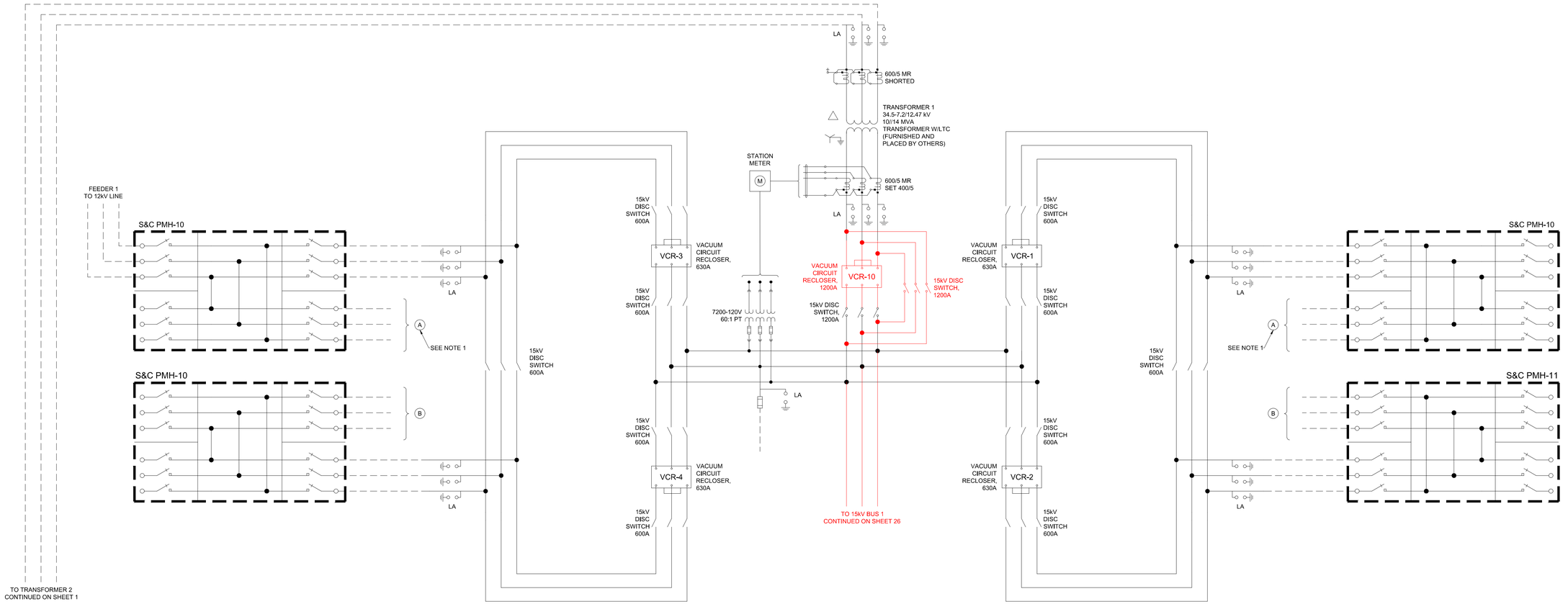
SEWARD, NEBRASKA

2019 - 2020

drawn by:	NF
checked by:	NF/GK
approved by:	EE
QA/QC by:	NF/GK
project no.:	018-1509
drawing no.:	24
date:	2019-11-14

SHEET
24 of 34

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NOTES:

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
0	07-30-2025	SUBSTATION EXPANSION

THREE LINE DIAGRAM NORTH

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

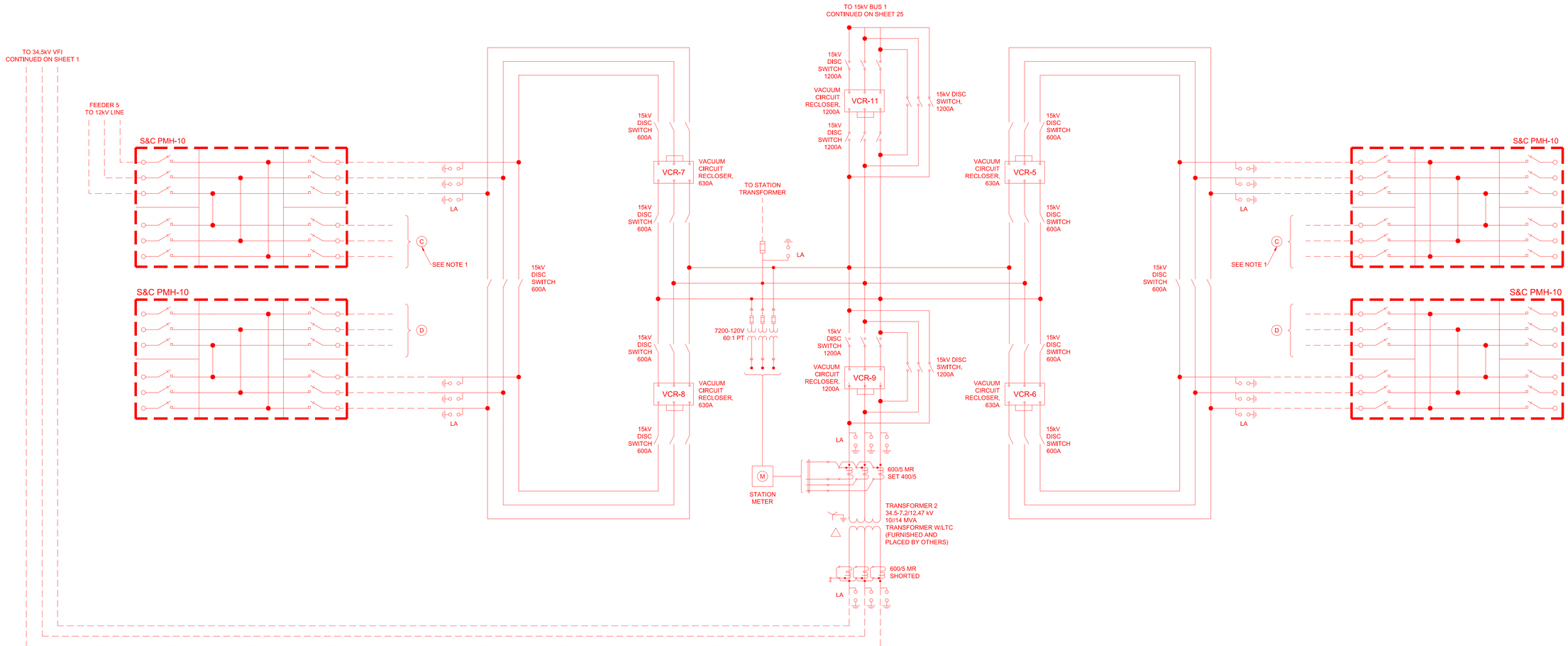
SEWARD, NEBRASKA

2025

drawn by: JWS
checked by: NCW
approved by: JDC
QA/QC by: CAS
project no.: 024-05881
drawing no.: 25
date: 2025-05-22

SHEET 25 of 34

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REV. NO.	DATE	REVISIONS DESCRIPTION
0	07-30-2025	SUBSTATION EXPANSION

REVISIONS

THREE LINE DIAGRAM SOUTH

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

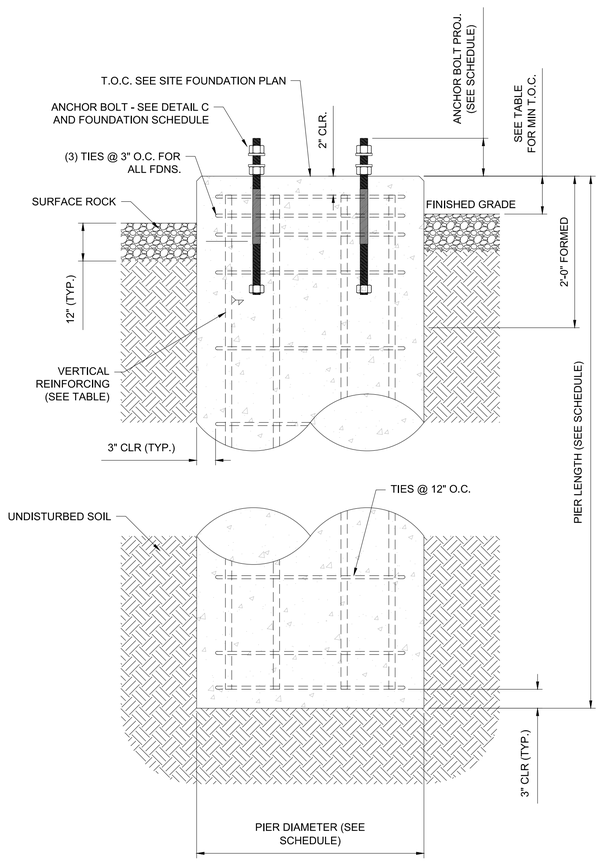
2025

drawn by:	JWS
checked by:	NCW
approved by:	JDC
QA/QC by:	CAS
project no.:	024-05881
drawing no.:	26
date:	2025-05-22

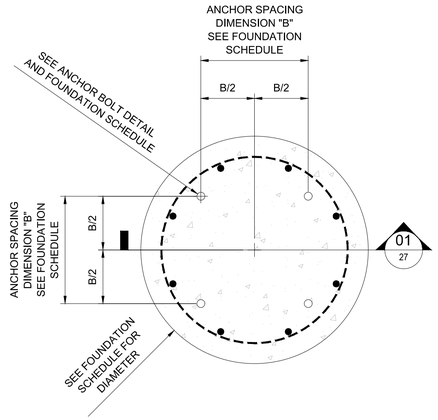
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26 of 34

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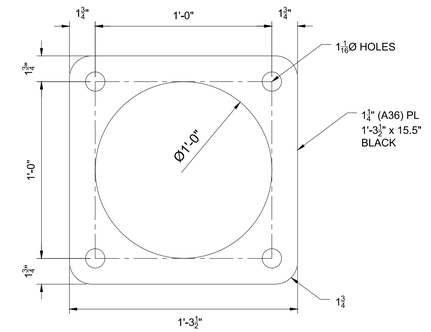
PIER FOUNDATION SCHEDULE													
FOUNDATION INFORMATION						REBAR INFO QTY (SIZE)		ANCHOR BOLT INFORMATION					
FDN. TAG	DESCRIPTION	QTY. REQ'D	TOP OF CONCRETE (FEET)	PIER DIA. (INCHES)	PIER LENGTH (FEET)	VERT. REINF.	TIE REINF.	UNIT QTY.	DIAMETER (INCHES)	PROJECTION (INCHES)	OVERALL LENGTH (INCHES)	SPACING "B" (INCHES)	PLATE WASHER (INCHES)
F	34.5kV SWITCH STRUCTURE	2	MATCH EXISTING T.O.C.	36	11	12 (#6)	13 (#4)	4	1"	6"	42"	12"	1"
G	34.5kV RISER SUPPORT STAND	1		30	9	10 (#6)	11 (#4)	4	1"	6"	42"	12"	1"
I	RECLOSER BAY	12		36	11	12 (#6)	13 (#4)	4	1"	6"	42"	12"	1"
J	15kV RECLOSER	14		36	11	12 (#6)	13 (#4)	4	1"	6"	42"	12"	1"
K	12.47kV RISER SUPPORT STAND	4		30	10	10 (#6)	12 (#4)	4	1"	6"	42"	12"	1"
L	12.47kV PORTAL STRUCTURE	2		30	10	10 (#6)	12 (#4)	4	1"	6"	42"	12"	1"



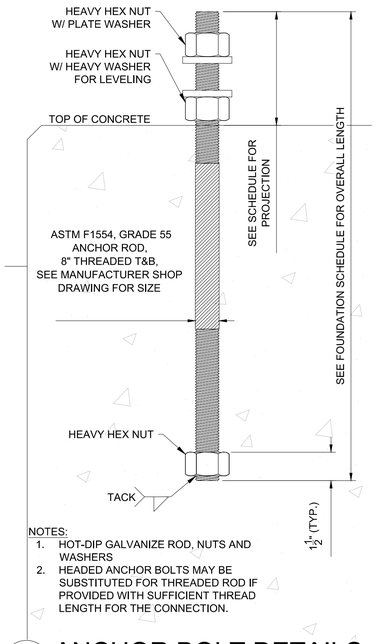
1 SIDE VIEW - PIER REBAR LAYOUT
SCALE:1" = 1'-0"



A TYPICAL DRILLED PIER FNDN DETAIL
SCALE: 1" = 1'-0"

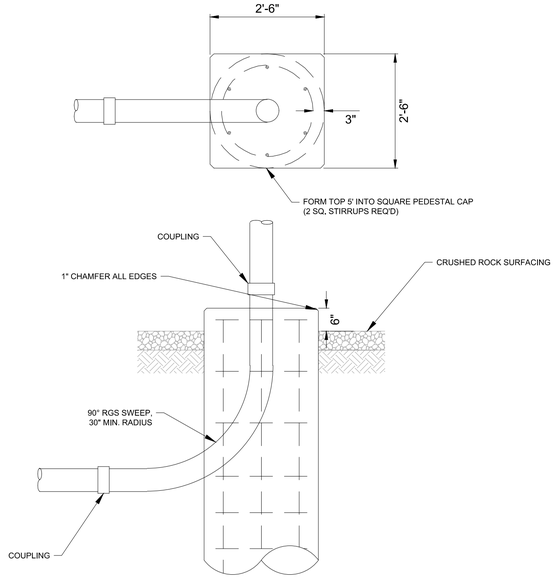


TP TOP TEMPLATE
SCALE: NOT TO SCALE



NOTES:
1. HOT-DIP GALVANIZE ROD, NUTS AND WASHERS
2. HEADED ANCHOR BOLTS MAY BE SUBSTITUTED FOR THREADED ROD IF PROVIDED WITH SUFFICIENT THREAD LENGTH FOR THE CONNECTION.

B ANCHOR BOLT DETAILS
SCALE: NOT TO SCALE



C CONDUIT RISER FOUNDATION
SCALE: NOT TO SCALE

THIS SHEET TO BE UTILIZED PER 2025 SUBSTATION EXPANSION

GENERAL NOTES

1. ANCHOR BOLTS AND TEMPLATES DESIGNED AND PROVIDED BY STEEL VENDOR.
2. MIN. CONCRETE STRENGTH SHALL BE 4,500PSI @ 28 DAYS.
3. PIER DESIGNS ARE ON HOLD PENDING EQUIPMENT MANUFACTURING DRAWINGS.
4. SQUARE TOPS ARE TO BE FORMED 2' FROM THE TOP OF CONCRETE.
5. FOR PAD CONNECTIONS ON PIER FDN TAG "J" SEE SHEET 30.
6. SEE SHEET 28 FOR NOTES.

ISSUED FOR BID
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7-30-2025

WHEN THIS DRAWING IS PRINTED TO THE SCALE SHOWN, THE BAR SHOWN BELOW WILL BE 1" LONG.

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7/30/2025

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PIER FOUNDATION DETAILS

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

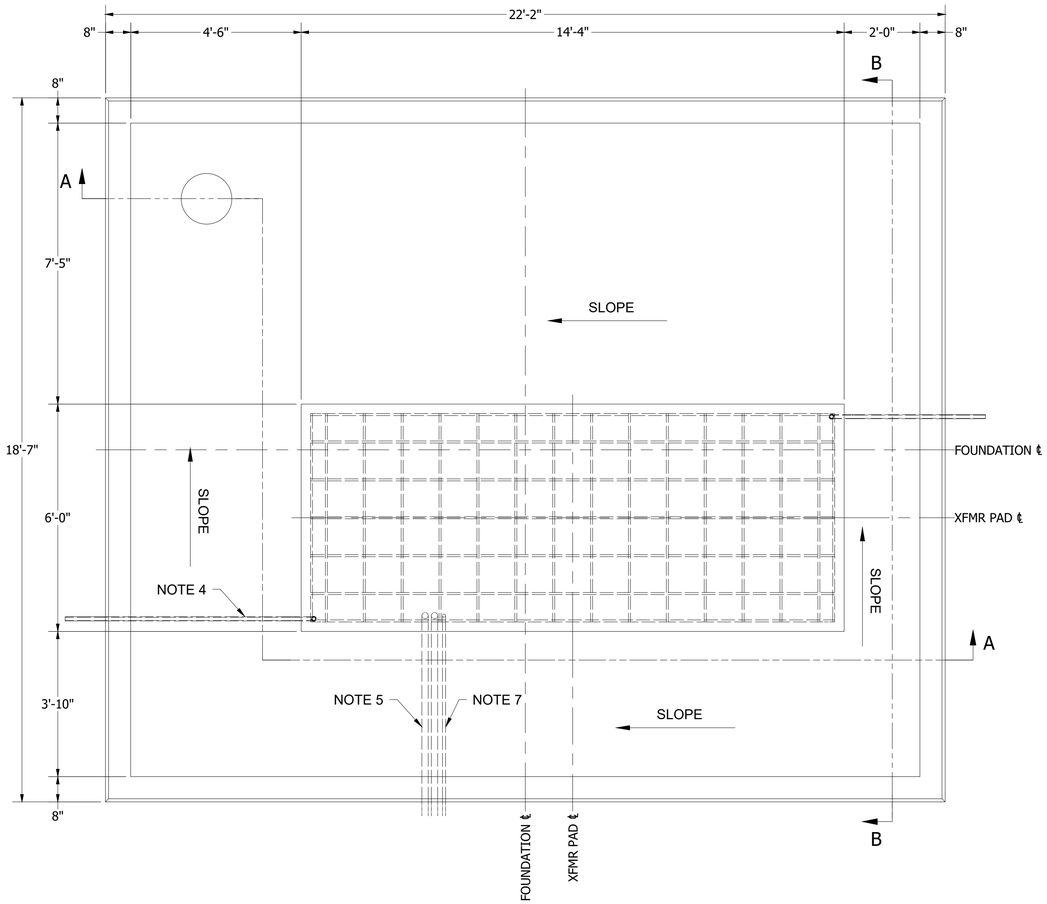
2025

SEWARD, NEBRASKA

drawn by: DRR
checked by: DRR
approved by: JDC
QA/QC by: WJK
project no.: 024-05881
drawing no.: 27
date: 2025-05-22

SHEET 27 of 34

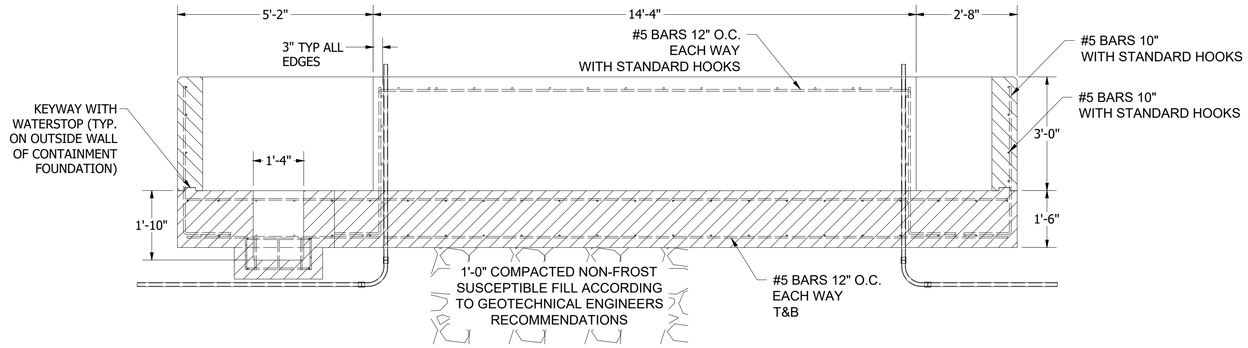
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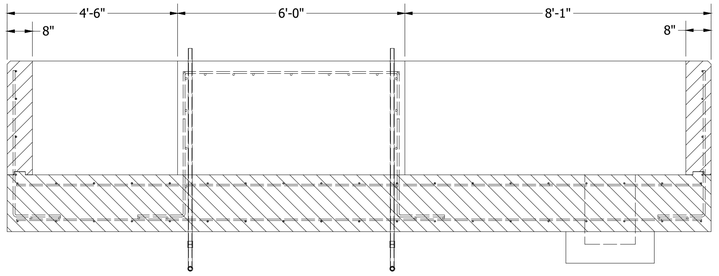
TRANSFROMER T2 PAD AND CONTAINMENT PLAN

H
7

THIS DETAIL TO BE INSTALLED 1 TIME(S) PER 2025 SUBSTATION EXPANSION



SECTION A-A



SECTION B-B

STRUCTURAL CONCRETE

CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF:
ACI 301 - "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
ACI 302 - "RECOMMENDED PRACTICE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION:
ACI 304 - "ACI MANUAL OF CONCRETE INSPECTION"
ACI 311 - "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE"
ACI 315 - "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"
ACI 318 - "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
ACI 347 - "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK"

PROVIDE LAP SPLICES AS INDICATED BELOW UNLESS OTHERWISE NOTED IN THE DRAWINGS.

ALL HOOKS SHALL BE "STANDARD" PER ACI SPECIFICATIONS.

CLEAR COVER SHALL BE 3"

MECHANICAL COUPLERS CAPABLE OF SUSTAINING 125% OF THE BAR ULTIMATE TENSILE CAPACITY SHALL BE USED. COUPLERS SHALL BE STAGGERED.

NOTES:

1. CONTAINMENT FLOOR SLOPE SHALL BE MINIMUM 1" PER 10'-0"
2. 1" PVC CAST IN PAD AND INSTALLED APPROXIMATELY AS SHOWN, FOR FUTURE GROUND CABLE. 2 REQUIRED IN LOCATIONS SHOWN, APPROXIMATELY 4" FROM EDGES OF PAD.
3. 2" PVC CAST IN PAD, AND INSTALLED APPROXIMATELY AS SHOWN FOR FUTURE LV POWER/CONTROL. 2 REQUIRED IN LOCATIONS SHOWN, NOT LESS THAN 3" FROM THE EDGE OF PAD. AVOID TRANSFORMER DRAINS.
4. COORDINATE WITH ENGINEER FOR LOCATIONS OF SLEEVE IN CONTAINMENT PIT WALL FOR SUMP PUMP DISCHARGE.
5. 1" PVC CAST IN PAD AND INSTALLED APPROXIMATELY AS SHOWN, FOR FUTURE COMMUNICATION CABLE TO BECKWITH CONTROLLER (BY OTHERS).
6. SEE SHEET 29 FOR TRANSFORMER T2 CONTAINMENT PIT GRATING AND FRAMING DETAILS.

GENERAL NOTES

G1. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UNDERGROUND STRUCTURES AND UTILITIES BEFORE CONSTRUCTING NEW FOUNDATIONS.

G2. THE CONTRACTOR SHALL FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE DRAWINGS.

G3. CONCRETE IS TO HAVE A MINIMUM COMPRESSIVE STRENGTH AFTER 28 DAYS OF 4,500 PSI.

G4. ALL REINFORCING SHALL BE STRUCTURAL GRADE 60 PER ASTM-A615 AND HAVE AT LEAST 3" OF CONCRETE COVER UNLESS NOTED OTHERWISE.

G5. ALL ABOVE GRADE FOUNDATION SURFACES SHALL BE STEEL TROWEL FINISHED UNLESS NOTED OTHERWISE.

G6. ALL ABOVE GRADE FOUNDATION EDGES SHALL HAVE A 3/4" CHAMFER UNLESS NOTED OTHERWISE.

G7. THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO PREVENT DAMAGE AND/OR SETTLEMENT OF EXISTING OR NEW CONSTRUCTION INSIDE OR OUTSIDE THE PROJECT LIMITS DURING EXCAVATION AND FOUNDATION CONSTRUCTION. ANY DAMAGE TO NEW OR EXISTING CONSTRUCTION INSIDE OR OUTSIDE OF THE PROJECT LIMITS CAUSED BY CONSTRUCTION TECHNIQUES IS THE RESPONSIBILITY OF THE CONTRACTOR.

G8. THE FOLLOWING REQUIREMENTS SHALL GOVERN THE PLACEMENT OF CONCRETE WHEN THE ATMOSPHERE TEMPERATURE IS LESS THAN 40° F.
1. WHEN THE AIR TEMPERATURE IS BETWEEN 32° F. AND 40° F. THE TEMPERATURE OF THE MIXED CONCRETE SHALL NOT BE LESS THAN 50° F.
2. WHEN THE AIR TEMPERATURE IS BELOW 32° F. THE TEMPERATURE OF THE MIXED CONCRETE SHALL NOT BE LESS THAN 60° F.
3. THE CONCRETE AND SURROUNDING AIR SHALL BE MAINTAINED AT A TEMPERATURE BETWEEN 50° F. AND 90° F. FOR THE FIRST 72 HOURS AFTER PLACEMENT AND AT A TEMPERATURE BETWEEN 40° F. AND 90° F. FOR THE NEXT 48 HOUR PERIOD.

G9. CEMENT SHALL CONFORM TO ASTM C1250, TYPE I/II.

G10. MAXIMUM AGGREGATE SIZE: 1 1/2"

G11. READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C94.

G12. THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATE FORMWORK DESIGN FOR THE CONSTRUCTION OF CAST-IN-PLACE CONCRETE, AND SHALL EMPLOY COMPETENT PROFESSIONAL ENGINEERING SERVICES TO DESIGN AND SUPERVISE THE FORM WORK.

G13. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301 (LATEST EDITION) "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", EXCEPT AS MODIFIED BY THESE NOTES.

G14. ADMIXTURES MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER. ADMIXTURES SHALL COMPLY WITH ASTM C494 AND BE OF A TYPE THAT INCREASES THE WORKABILITY OF THE CONCRETE, BUT SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT (CALCIUM CHLORIDE SHALL NOT BE USED).

G15. THE PROPORTIONS OF AGGREGATES TO CEMENT FOR ANY CONCRETE SHALL BE SUCH AS TO PRODUCE A MIXTURE WHICH WILL WORK READILY INTO CORNERS AND ANGLES OF THE FORMS AND AROUND REINFORCEMENT WITH THE METHOD OF PLACING EMPLOYED ON THE WORK BUT WITHOUT PERMITTING THE MATERIAL TO SEGREGATE OR EXCESS FREE WATER TO COLLECT ON THE SURFACE.

G16. CONTRACTOR SHALL SUBMIT MIX DESIGNS FOR APPROVAL 10 DAYS PRIOR TO FABRICATION AND INSTALLATION. ALL CONCRETE MIXES SHALL BE DESIGNED AND CERTIFIED BY A MATERIALS TESTING COMPANY.

G17. APPROXIMATE SLUMP RANGE: 4 - 6, ±1
SLUMP DOES AFFECT THE EASE WITH WHICH CONCRETE CAN BE TRANSPORTED, PLACED, AND SCREED, AND IS ONLY AN INDICATOR OF BATCH-TO-BATCH VARIABILITY.

G18. PROJECTING CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH A 3/4" CHAMFER UNLESS DETAILED OR NOTED OTHERWISE.

G19. CONCRETE FLOOR SHALL BE CURED IN ACCORDANCE WITH ASTM C309. CONCRETE SHALL BE PROTECTED FROM MOISTURE LOSS FOR A MINIMUM OF 14 DATS, USING AN APPROVED SHEET MEMBRANE IN ACCORDANCE WITH ASTM C171.

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REVISIONS

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0	07-30-2025	SUBSTATION EXPANSION

TRANSFORMER FOUNDATION AND CONTAINMENT PIT DETAILS (1 OF 2)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

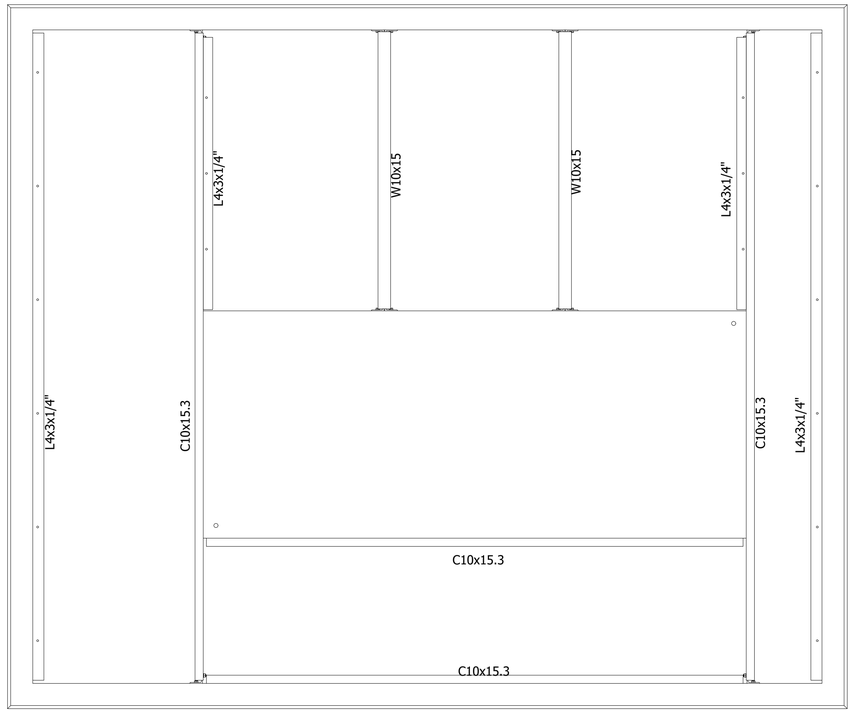
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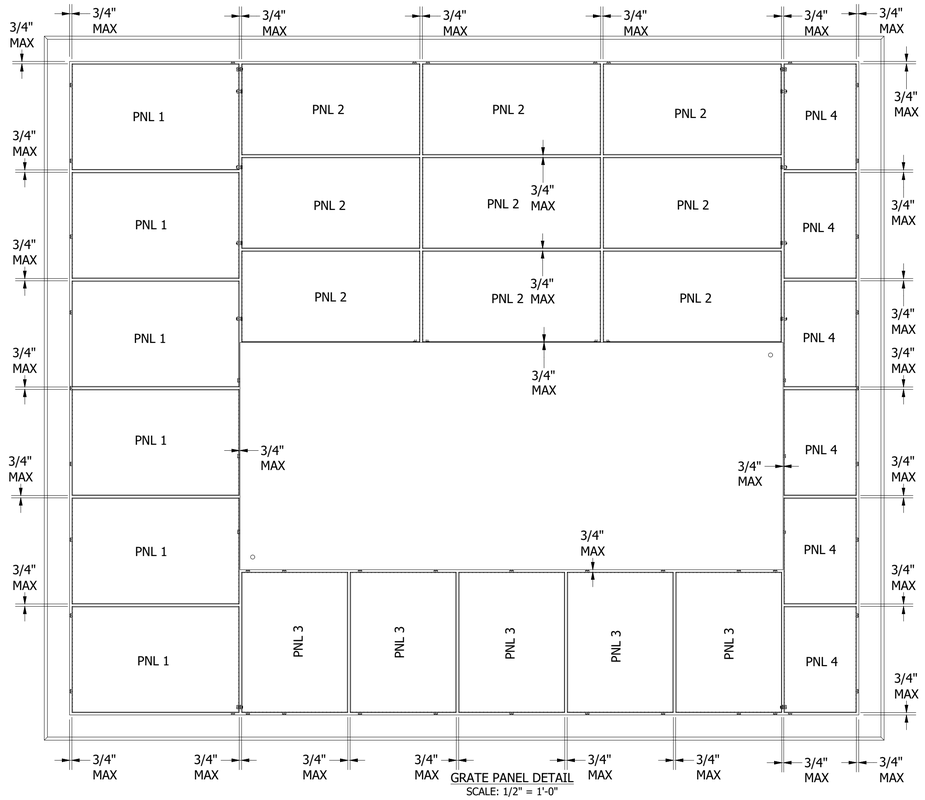
drawn by:	DRR
checked by:	DRR
approved by:	JDC
QA/QC by:	WJK
project no.:	024-05881
drawing no.:	28
date:	2019-11-14

ISSUED FOR BID
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7-30-2025

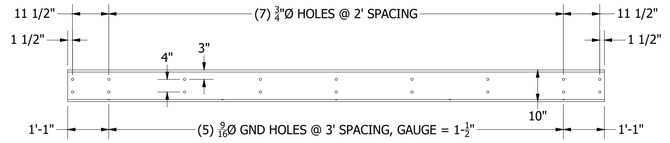
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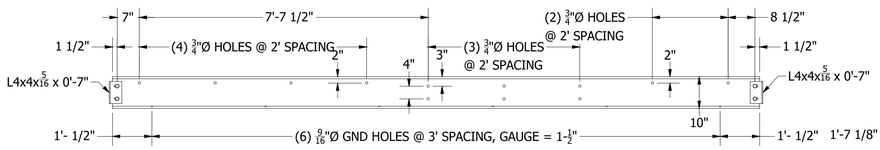




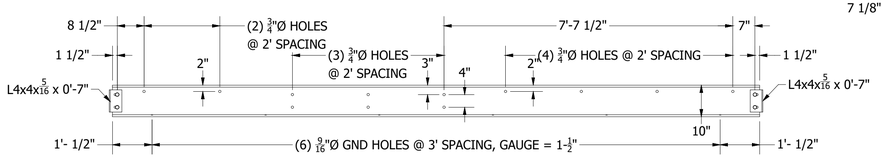
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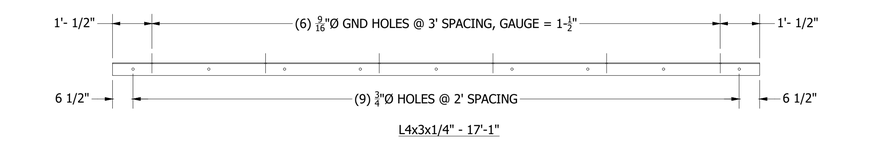
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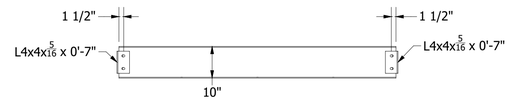
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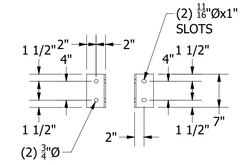
C10x15.3 - 17'-1"



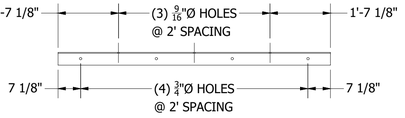
L4x3x1/4" - 17'-1"



W10x15 - 7"-3 3/4"



L4x4x5/16" x 0'-7" - MOUNTING BRACKET DETAIL

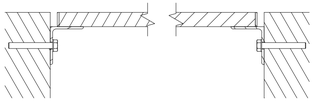


L4x3x1/4" - 7'-2 1/4"

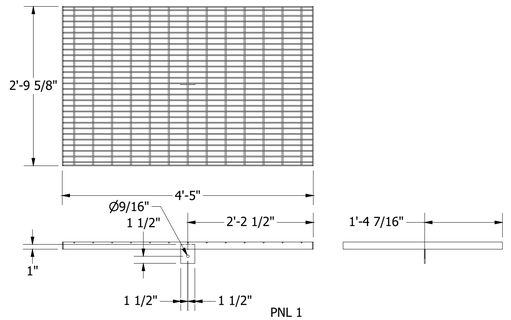
NOTES:

1. GRATING SUPPORT ANGLES TO BE INSTALLED ALONG INSIDE WALLS OF CONTAINMENT PIT AND ALONG PERIMETER OF TRANSFORMER PAD.

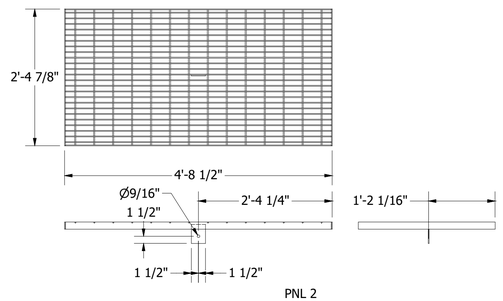
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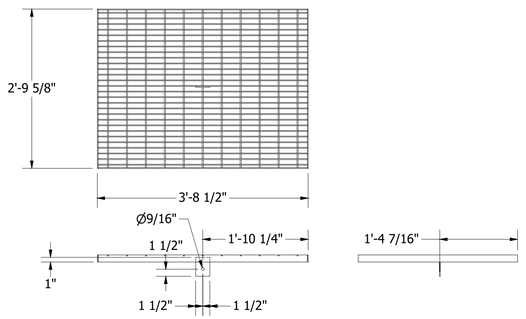
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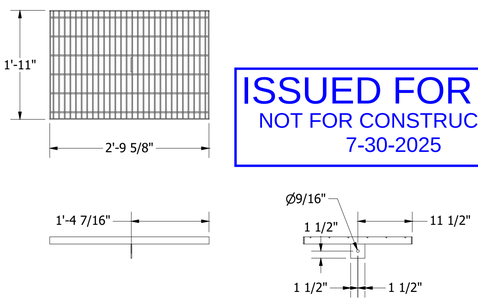
PNL 1



PNL 2



PNL 3



PNL 4

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TRANSFORMER FOUNDATION AND CONTAINMENT PIT DETAILS (2 OF 2)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

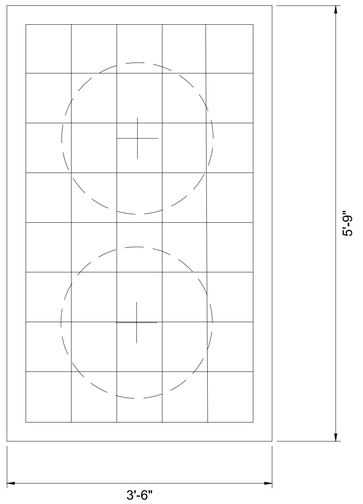
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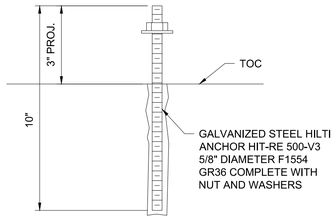
SEWARD, NEBRASKA

drawn by:	DRR
checked by:	DRR
approved by:	JDC
QA/QC by:	WJK
project no.:	024-05881
drawing no.:	29
date:	2019-11-14

SHEET
29 of 34

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DETAIL 1

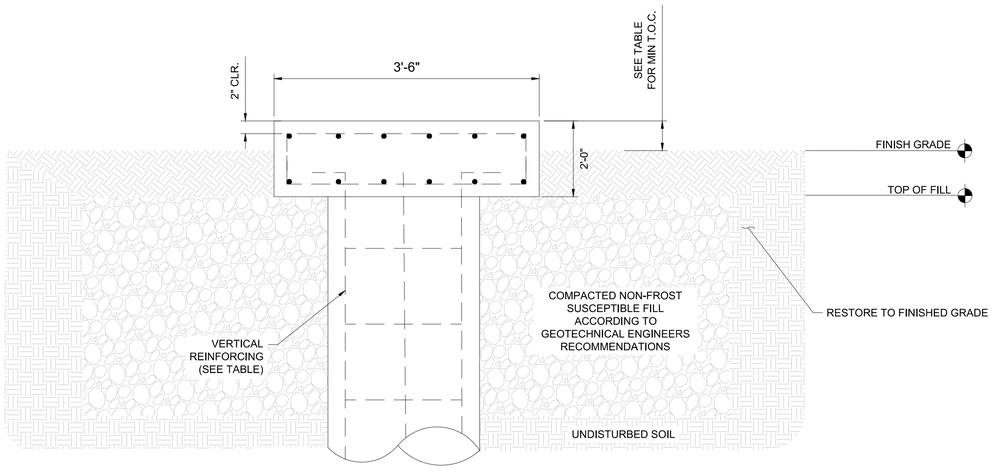
RECLOSER ANCHOR BOLT
SCALE: NOT TO SCALE

THIS DETAIL TO BE UTILIZED PER 2025 SUBSTATION EXPANSION

PLAN VIEW - RECLOSER PAD

SCALE: 1" = 1'-0"

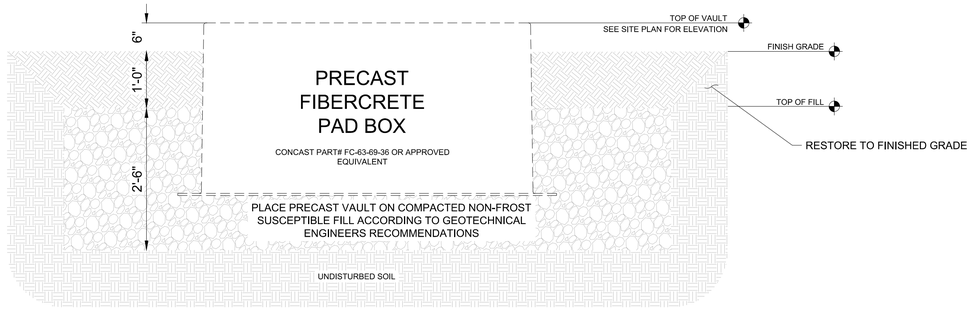
THIS DETAIL TO BE INSTALLED 7 TIME(S) PER 2025 SUBSTATION EXPANSION



SECTION VIEW - RECLOSER PAD

SCALE: NTS

THIS DETAIL TO BE INSTALLED 7 TIME(S) PER 2025 SUBSTATION EXPANSION



SECTION VIEW - PRECAST VAULT FOR SWITCHGEARS

SCALE: 3/4" = 1'-0"

THIS DETAIL TO BE INSTALLED 4 TIME(S) PER 2025 SUBSTATION EXPANSION

GENERAL NOTES

1. TOP OF VAULTS SHALL BE LEVEL WITHIN 1/4".
2. EQUIPMENT TO BE PLACED ON CENTER OF VAULT WITH CONTROL CABINET CENTERED ON THE CABLE ENTRANCE.
3. FOUNDATION DESIGN ON HOLD PENDING EQUIPMENT MANUFACTURING DRAWINGS.
4. SEE SHEET 28 FOR NOTES.

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7-30-2025

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E-21354
STATE OF NEBRASKA
7/30/2025

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
0	07-30-2025	SUBSTATION EXPANSION

EQUIPMENT FOUNDATION DETAILS

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

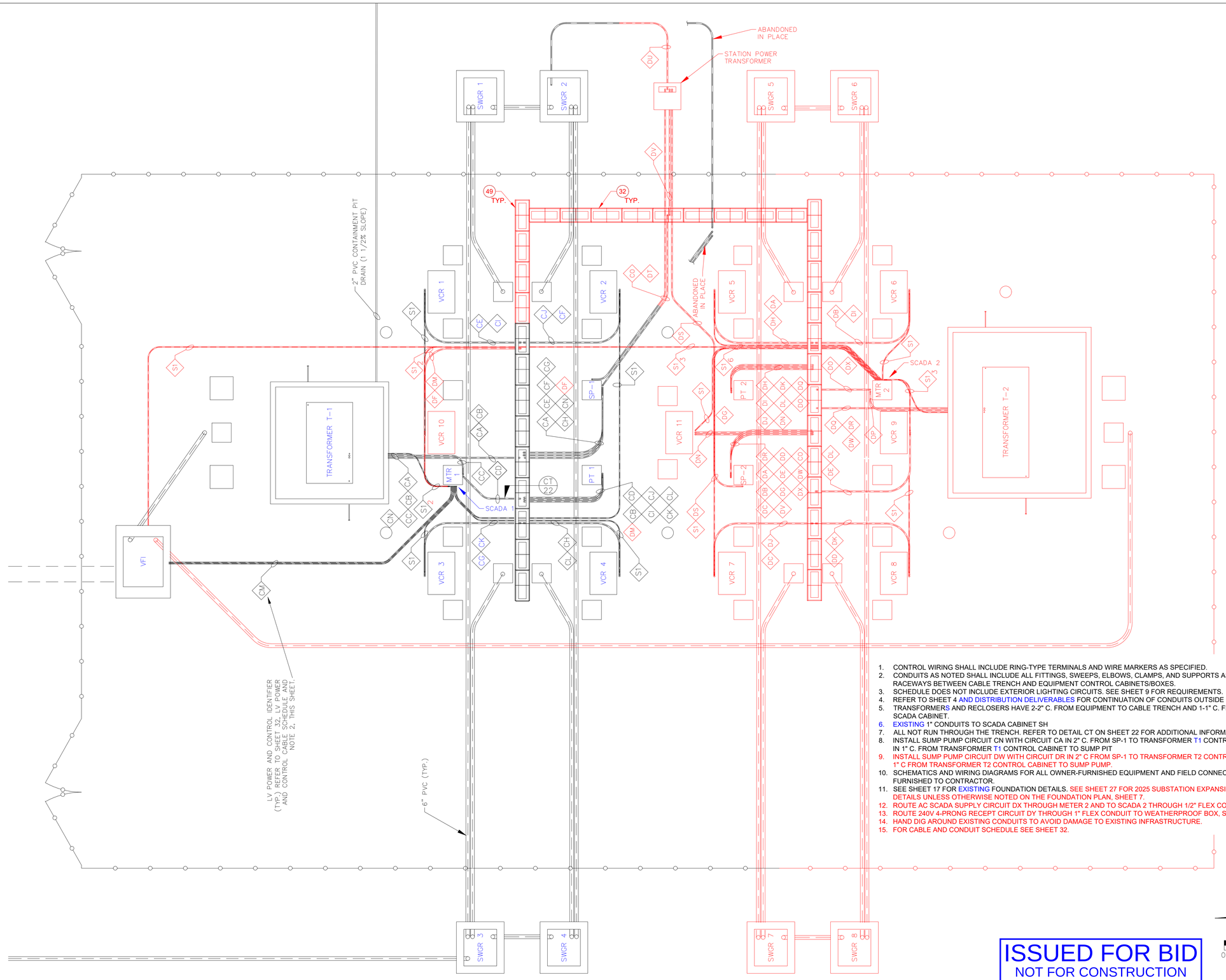
SEWARD, NEBRASKA

2025

drawn by:	DRR
checked by:	DRR
approved by:	JDC
QA/QC by:	WJK
project no.:	024-05881
drawing no.:	30
date:	2025-05-22

SHEET
30 of 34

DWG: F:\2024\05501-060000\024-05881\40-Design\AutoCAD\Preliminary Plans\Sheets\TRDWORKING\PHYSICAL\E_FND_024058881-EQUIPMENT FOUNDATION DTLS.dwg USER: ccarrigan
DATE: Jul 28, 2025 4:15pm XREFS:



1. CONTROL WIRING SHALL INCLUDE RING-TYPE TERMINALS AND WIRE MARKERS AS SPECIFIED.
2. CONDUITS AS NOTED SHALL INCLUDE ALL FITTINGS, SWEEPS, ELBOWS, CLAMPS, AND SUPPORTS AS NEEDED FOR RACEWAYS BETWEEN CABLE TRENCH AND EQUIPMENT CONTROL CABINETS/BOXES.
3. SCHEDULE DOES NOT INCLUDE EXTERIOR LIGHTING CIRCUITS. SEE SHEET 9 FOR REQUIREMENTS.
4. REFER TO SHEET 4 AND DISTRIBUTION DELIVERABLES FOR CONTINUATION OF CONDUITS OUTSIDE OF SUBSTATION.
5. TRANSFORMERS AND RECLOSERS HAVE 2-2" C. FROM EQUIPMENT TO CABLE TRENCH AND 1-1" C. FROM EQUIPMENT TO SCADA CABINET.
6. EXISTING 1" CONDUITS TO SCADA CABINET SH
7. ALL NOT RUN THROUGH THE TRENCH. REFER TO DETAIL CT ON SHEET 22 FOR ADDITIONAL INFORMATION.
8. INSTALL SUMP PUMP CIRCUIT CN WITH CIRCUIT CA IN 2" C. FROM SP-1 TO TRANSFORMER T1 CONTROL CABINET. INSTALL IN 1" C. FROM TRANSFORMER T1 CONTROL CABINET TO SUMP PIT
9. INSTALL SUMP PUMP CIRCUIT DW WITH CIRCUIT DR IN 2" C FROM SP-1 TO TRANSFORMER T2 CONTROL CABINET. INSTALL 1" C FROM TRANSFORMER T2 CONTROL CABINET TO SUMP PUMP.
10. SCHEMATICS AND WIRING DIAGRAMS FOR ALL OWNER-FURNISHED EQUIPMENT AND FIELD CONNECTIONS WILL BE FURNISHED TO CONTRACTOR.
11. SEE SHEET 17 FOR EXISTING FOUNDATION DETAILS. SEE SHEET 27 FOR 2025 SUBSTATION EXPANSION FOUNDATION DETAILS UNLESS OTHERWISE NOTED ON THE FOUNDATION PLAN, SHEET 7.
12. ROUTE AC SCADA SUPPLY CIRCUIT DX THROUGH METER 2 AND TO SCADA 2 THROUGH 1/2" FLEX CONDUIT.
13. ROUTE 240V 4-PRONG RECEPT CIRCUIT DY THROUGH 1" FLEX CONDUIT TO WEATHERPROOF BOX, SAME LEG.
14. HAND DIG AROUND EXISTING CONDUITS TO AVOID DAMAGE TO EXISTING INFRASTRUCTURE.
15. FOR CABLE AND CONDUIT SCHEDULE SEE SHEET 32.

THIS DRAWING SUPERSEDES SHEET 7 REV 2 DATED 11-21-2019

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N
0' 6.25' 12.5'
SCALE IN FEET

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
0	07-30-2025	SUBSTATION EXPANSION

CONDUIT PLAN

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

2025

SEWARD, NEBRASKA

drawn by:	KEW
checked by:	CSC
approved by:	JDC
QA/QC by:	CAS
project no.:	024-05881
drawing no.:	31
date:	2025-07-21

SHEET 31 of 34

DWG: C:\Temp\AcPublish_4012\E_FND_024O5881.dwg USER: ccarrigan
DATE: Jul 23, 2025 1:19pm XREFS: E_CONDUIT_MASTER_81509

LV POWER AND CONTROL CABLE SCHEDULE

ITEM	DESCRIPTION	QUANTITY AND SIZE	FROM	TO	RACEWAY
A	T-1 AC ACCESSORY POWER	3 – #10 + GND	PANEL SP-1	TRANSFORMER T-1	2" PVC AND CABLE TRENCH
B	LTC REFERENCE VOLTAGE	2 – #12	PT PANELBOARD	TRANSFORMER T-1	2" PVC AND CABLE TRENCH
C	T-1 METERING CTS	4/C #10	TRANSFORMER T-1	STATION METER	2" PVC AND CABLE TRENCH
D	STATION METERING PTS	4 – #12	PT PANELBOARD 1	STATION METER	2" PVC AND CABLE TRENCH
E	VCR 1 AC ACCESSORY POWER	3 – #12 + GND	PANEL SP-1	VCR 1 CONTROL CABINET	2" PVC AND CABLE TRENCH
F	VCR 2 AC ACCESSORY POWER	3 – #12 + GND	PANEL SP-1	VCR 2 CONTROL CABINET	2" PVC AND CABLE TRENCH
G	VCR 3 AC ACCESSORY POWER	3 – #12 + GND	PANEL SP-1	VCR 3 CONTROL CABINET	2" PVC AND CABLE TRENCH
H	VCR 4 AC ACCESSORY POWER	3 – #12 + GND	PANEL SP-1	VCR 4 CONTROL CABINET	2" PVC AND CABLE TRENCH
I	VCR 1 POTENTIALS	4/C #14	PT PANELBOARD 1	VCR 1 CONTROL CABINET	2" PVC AND CABLE TRENCH
J	VCR 2 POTENTIALS	4/C #14	PT PANELBOARD 1	VCR 2 CONTROL CABINET	2" PVC AND CABLE TRENCH
K	VCR 3 POTENTIALS	4/C #14	PT PANELBOARD 1	VCR 3 CONTROL CABINET	2" PVC AND CABLE TRENCH
L	VCR 4 POTENTIALS	4/C #14	PT PANELBOARD 1	VCR 4 CONTROL CABINET	2" PVC AND CABLE TRENCH
M	COMM FOR VFI	BY OTHERS	VFI	SCADA CABINET	2 – 1" PVC
N	SUMP PUMP	2 – #12 + GND	PANEL SP-1	TRANSFORMER T-1	NOTE 8
O	STATION SERVICE	3 -1/0 + #6 GND	PANEL SP-2	PANEL SP-1	2" PVC AND CABLE TRENCH
S	SPARE/VACANT CONDUIT	S1 = 1", S2 = 2"	VARIOUS	VARIOUS	VARIOUS
AA	VCR 5 AC ACCESSORY POWER	4C#10	PANEL SP-2	VCR 5 CONTROL CABINET	2" PVC AND CABLE TRENCH
AB	VCR 6 AC ACCESSORY POWER	4C#10	PANEL SP-2	VCR 6 CONTROL CABINET	2" PVC AND CABLE TRENCH
AC	VCR 7 AC ACCESSORY POWER	4C#10	PANEL SP-2	VCR 7 CONTROL CABINET	2" PVC AND CABLE TRENCH
AD	VCR 8 AC ACCESSORY POWER	4C#10	PANEL SP-2	VCR 8 CONTROL CABINET	2" PVC AND CABLE TRENCH
AE	VCR 9 AC ACCESSORY POWER	4C#10	PANEL SP-2	VCR 9 CONTROL CABINET	2" PVC AND CABLE TRENCH
AF	VCR 10 AC ACCESSORY POWER	4C#10	PANEL SP-1	VCR 10 CONTROL CABINET	2" PVC AND CABLE TRENCH
AG	VCR 11 AC ACCESSORY POWER	4C#10	PANEL SP-2	VCR 11 CONTROL CABINET	2" PVC AND CABLE TRENCH
AH	VCR 5 POTENTIALS	4C#10	PT PANELBOARD 2	VCR 5 CONTROL CABINET	2" PVC AND CABLE TRENCH
AI	VCR 6 POTENTIALS	4C#10	PT PANELBOARD 2	VCR 6 CONTROL CABINET	2" PVC AND CABLE TRENCH
AJ	VCR 7 POTENTIALS	4C#10	PT PANELBOARD 2	VCR 7 CONTROL CABINET	2" PVC AND CABLE TRENCH
AK	VCR 8 POTENTIALS	4C#10	PT PANELBOARD 2	VCR 8 CONTROL CABINET	2" PVC AND CABLE TRENCH
AL	VCR 9 POTENTIALS	4C#10	PT PANELBOARD 2	VCR 9 CONTROL CABINET	2" PVC AND CABLE TRENCH
AM	VCR 10 POTENTIALS	4C#10	PT PANELBOARD 1	VCR 10 CONTROL CABINET	2" PVC AND CABLE TRENCH
AN	VCR 11 POTENTIALS	4C#10	PT PANELBOARD 2	VCR 11 CONTROL CABINET	2" PVC AND CABLE TRENCH
AO	STATION METERING PTS	4C#10	PT PANELBOARD 2	STATION METER 2	2" PVC AND CABLE TRENCH
AP	T-2 METERING CTS	4C#10	TRANSFORMER T-2	STATION METER 2	2" PVC AND CABLE TRENCH
AQ	LTC REFERENCE VOLTAGE	4C#10	PT PANELBOARD 2	TRANSFORMER T-2	2" PVC AND CABLE TRENCH
AR	T-2 AC ACCESSORY POWER	4C#10	PANEL SP-2	TRANSFORMER T-2	2" PVC AND CABLE TRENCH
AS	STATION SERVICE	1 – 1/0 15kV w/ CONC NEUT	12.47KV BUS 2	STATION POWER TRANSFORMER	2" PVC
AT	STATION SERVICE	1 – 1/0 15kV w/ CONC NEUT	12.47KV BUS 1	STATION POWER TRANSFORMER	2" PVC
AU	STATION SERVICE	1 – 1/0 15kV w/ CONC NEUT	12.47KV DIST. SWGR	STATION POWER TRANSFORMER	2" PVC
AV	STATION SERVICE	3 – 4/0 + #6 GND	STATION POWER TRANSFORMER	PANEL SP-2	2" PVC AND CABLE TRENCH
AW	SUMP PUMP	4C#10	PANEL SP-2	TRANSFORMER T-2	2" PVC AND CABLE TRENCH
AX	SCADA ACCESSORY POWER	4C#10	PANEL SP-2	SCADA 2	2" PVC, CBL TRENCH, & $\frac{1}{2}$" FLEX
AY	240V 4-PRONG OUTLET	4C#6	PANEL SP-2	WEATHERPROOF RECEPT	1" FLEX

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STATE OF NEBRASKA
7/30/2025

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
0	07-30-2025	SUBSTATION EXPANSION

LV POWER AND CONTROL CONDUIT SCHEDULE

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

2025

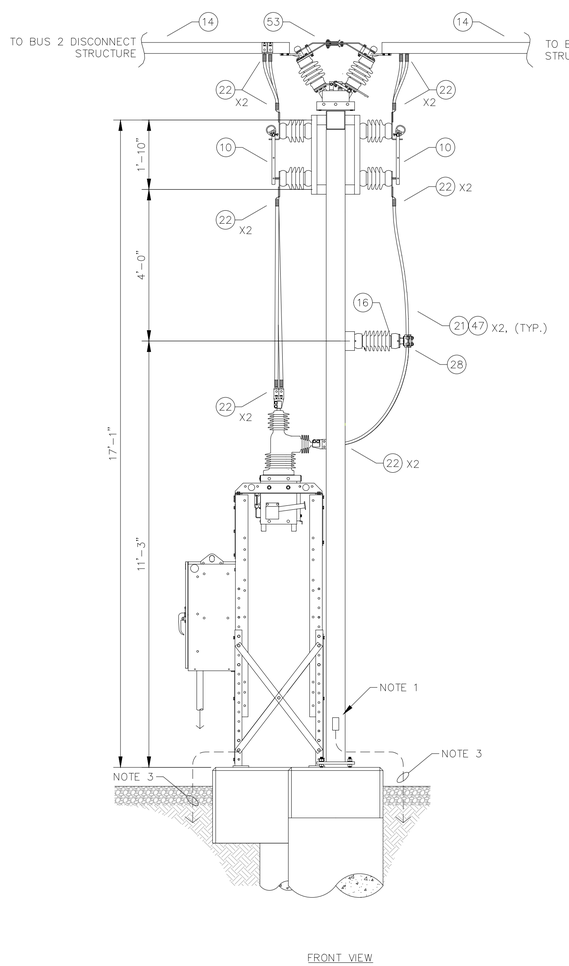
drawn by: AJF
checked by: CSC
approved by: JDC
QA/QC by: CAS
project no.: 024-05881
drawing no.: 32
date: 2025-07-21

SHEET 32 of 34

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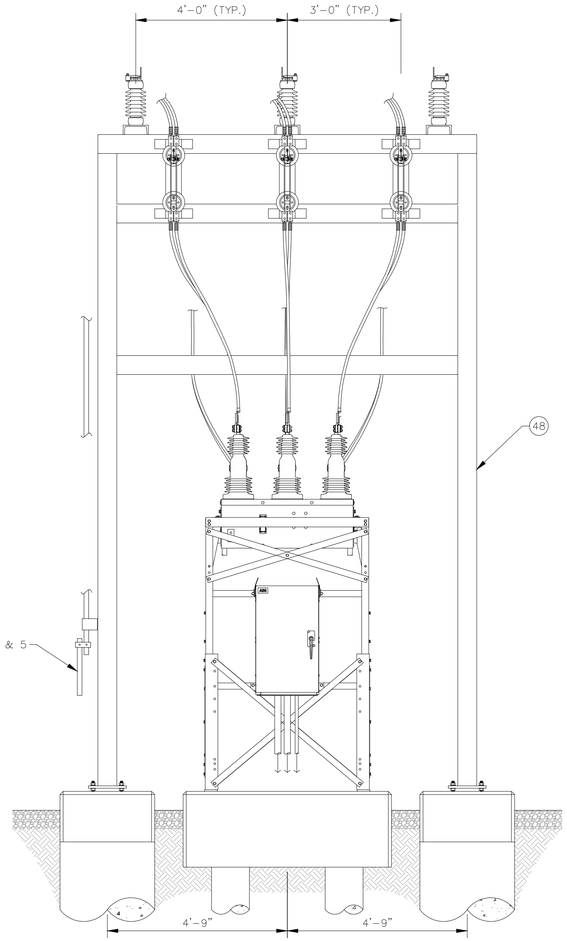
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DATE: Jul 30, 2025 1:02pm XREFS: E_FDTM_81509 E_CONDUIT_MASTER_81509



FRONT VIEW

NOTES:

1. PROVIDE GROUND PADS FOR CONNECTION OF GROUNDING CLAMPS ON STEEL STRUCTURES. MINIMUM 3 PADS PER COLUMN, 4'-0" MAXIMUM SPACING. THREADED INSERTS OF 1/2" DIA. AND 13 THD/INCH MAY BE USED IN LIEU OF GROUNDING PADS.
2. REFER TO STANDARD ALUMINUM ANGLE BUS CONNECTIONS DETAIL "AC" ON SHEET 18.
3. BOND STRUCTURE AND EQUIPMENT GROUND WIRE TO GROUND GRID USING EXOTHERMIC "CADWELD" CONNECTION. REFER TO SHEET 8 FOR ADDITIONAL GROUNDING REQUIREMENTS.
4. SWITCH OPERATOR REPRESENTATIVE ONLY, SWITCH MANUFACTURER TO CONDUCT DETAILED DESIGN DURING PROCUREMENT. CONTRACTOR TO INSTALL PER MANUFACTURER RECOMMENDATIONS.
5. BOND SWITCH OPERATOR TO STRUCTURE GROUND USING BRAIDED COPPER STRAP.



SIDE VIEW

THIS DETAIL TO BE INSTALLED 1 TIME(S) PER 2025 SUBSTATION EXPANSION

12.47 KV BUS TIE PORTAL STRUCTURE (S5/5)

SCALE: 1/2" = 1'-0"

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
0	07-30-2025	SUBSTATION EXPANSION

12.47KV PORTAL STRUCTURE DETAIL

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

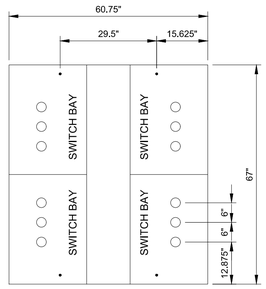
SEWARD, NEBRASKA

2025

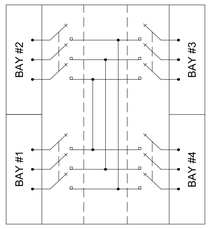
drawn by:	KEW
checked by:	CSC
approved by:	JDC
QA/QC by:	CAS
project no.:	024-05881
drawing no.:	33
date:	2025-07-21

SHEET 33 of 34

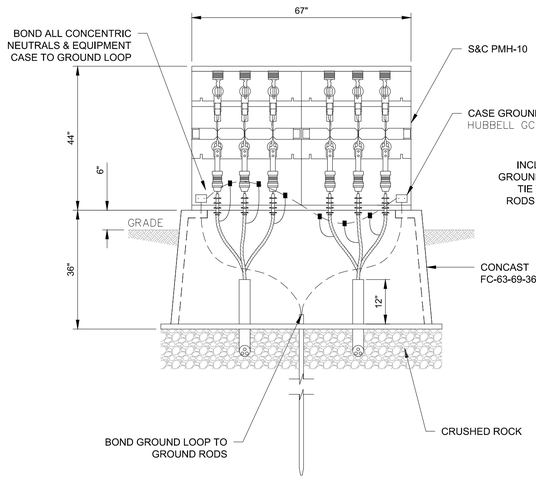
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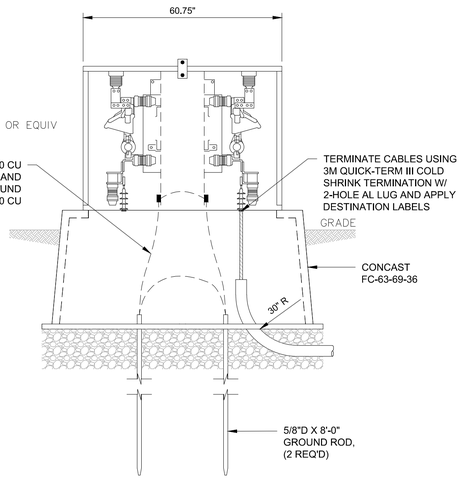
TOP VIEW



CONNECTION DIAGRAM



SIDE VIEW



FRONT VIEW

PADMOUNT SWITCHGEAR DETAIL — SG5 5 / SG6 5 / SG7 5 / SG8 5

SCALE: NOT TO SCALE

THIS DETAIL TO BE INSTALLED 4 TIME(S) PER 2025 SUBSTATION EXPANSION

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
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MISCELLANEOUS DETAILS (6 OF 6)

34.5 - 12.47 KV INDUSTRIAL SUBSTATION CONSTRUCTION

SEWARD, NEBRASKA

2025

drawn by:	KEW
checked by:	CSC
approved by:	JDC
QA/QC by:	CAS
project no.:	024-05881
drawing no.:	34
date:	2025-07-21

SHEET
34 of 34

DWG: F:\2024\05501-06000\024-05881\40-Design\Exhibits\AutoCAD\SHEETS\E_DTL_02405881.dwg USER: ccarrigan
DATE: Jul 28, 2025 2:17pm XREFS:

INDUSTRIAL SUBSTATION EXPANSION
SEWARD, NEBRASKA

2025

024-05881

3. Authorization for the Mayor to Sign a Maintenance Agreement with the Nebraska Department of Transportation for 2026 - City Administrator Butcher

NEBRASKA
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DEPARTMENT OF TRANSPORTATION

AGREEMENT RENEWAL

Maintenance Agreement No. 28
Maintenance Agreement between the Nebraska Department of Transportation and the Municipality of Seward
Municipal Extensions in Seward

We hereby agree that Maintenance Agreement No. 28 described above be renewed for the period January 1, 2026 to December 31, 2026.

All terms and attachments to remain in effect as per the original agreement with revised rates per Attachment B attached hereto.

In witness whereof, the parties hereto have caused these presents to be executed by their proper officials thereunto duly authorized as of the dates indicated below.

Executed by the City this _____ day of _____, 202 .

ATTEST: City of Seward

_____ _____

City Clerk/Witness *Mayor/Designee*

Executed by the State this _____ day of _____, 202 .

ATTEST: State of Nebraska

_____

District Engineer, Department of Transportation

NDOT Form 507, August 17

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Attachment "A"

MAINTENANCE OPERATION AND RESPONSIBILITY
Municipal extensions and connecting links
(Streets Designated Part of the State Highway System excluding Freeways)

Maintenance Operation Neb. Rev. Stat. § 39-1339	Maintenance Responsibility Neb. Rev. Stat. § 39-2105 Metropolitan Cities (Omaha)	Primary Cities (Lincoln)	1st Class Cities	2nd Class Cities & Villages
Surface maintenance of the traveled way equivalent to the design of the rural highway leading into municipality.	Department	Department	Department	Department
Surface maintenance of the roadway exceeding the design of the rural highway leading into the municipality including shoulders and auxiliary lanes.	City	City	City	City
Surface maintenance on parking lanes.	City	City	City	Department
Maintenance of roadway appurtenances *(including, but not limited to, sidewalks, storm sewers, guardrails, handrails, steps, curb or grate inlets, driveways, fire plugs, or retaining walls)*	City	City	City	City or Village
Mowing of the right-of-way, right-of-way maintenance and snow removal.	City	City	City	City or Village
Bridges from abutment to abutment, except appurtenances.	Department	Department	Department	Department

Maintenance Operation Neb. Rev. Stat. § 39-1339	Maintenance Responsibility Neb. Rev. Stat. § 60-6, 120 & § 60-6, 121 Metropolitan Cities (Omaha)	Primary Cities (Lincoln)	1st Class Cities > 40,000	1st Class Cities < 40,000	2nd Class Cities
Pavement markings limited to lane lines, centerline, No passing lines, and edge lines on all connecting links except state maintained freeways	City	City	City	Department	Department
Miscellaneous pavement marking, including angle and parallel parking lanes, pedestrian crosswalks, school crossings, etc.	City	City	City	City	City
Maintenance and associated power costs of traffic signals and roadway lighting as referred to in original project agreement.					
Procurement, installation and maintenance of guide and route marker signs	City	City	City	Department	Department
Procurement, installation and maintenance of regulatory and warning signs.	City	City	City	Department	Department

NEBRASKA
Good Life. Great Journey.
DEPARTMENT OF TRANSPORTATION

City Maintenance Agreement

Attachment B

City of: Seward

Date: 11/14/25

☒ Surface Maintenance

From Attachment "C", it is determined that the State's responsibility for surface maintenance within the City limits is 11.66 lane miles. Pursuant to Sections 1a, 8a, 8d of the Agreement and to Attachment "C" made part of this Agreement through reference, the State agrees to pay to the City the sum of $2,030.00 per lane mile for performing the surface maintenance on those lanes listed on Attachment "C".

Amount due the City for surface maintenance:

11.66 lane miles x $2,030.00 per lane mile = $23,669.80.

☒ Snow Removal

From Attachment "A", it is determined that snow removal within City limits is the responsibility of the City. Pursuant to Section 8d of the Agreement and to Attachment "C" made a part of this Agreement through reference, the City agrees to pay to the State the sum of $1,430.00 per lane mile for performing snow removal on those lanes listed on Attachment "C".

Amount due the State for snow removal:

3.94 lane miles x $1,430.00 per lane mile = $5,634.20

☐ Other *(Explain)*

ATTACHMENT "C"
CITY OF SEWARD

STATE OF NEBRASKA
DEPARTMENT OF TRANSPORTATION

RESPONSIBILITY FOR SURFACE MAINTENANCE OF MUNICIPAL EXTENSIONS

NEBRASKA REVISED STATUTE 39-1339 AND NEBRASKA REVISED STATUE 39-2105

Description	Hwy No.	Beginning R.P.	End R.P.	Length (MI)	Driving Lanes Total	Lane Miles Total	State	City
W. City Limit to begin Divided Highway	34	299.13	299.27	0.14	2	0.28	0.28	0
Begin Divided Highway to End Divided Highway	34	299.27	300.31	1.04	4	4.16	2.08	2.08
End Divided Highway to East City Limits	34	300.31	301.17	0.86	2	1.72	1.72	0
South Limits (Fletcher Street) to Leave City Limits	15	64.03	65.82	1.79	2	3.58	3.58	0
Re-Enter City Limits to Ash Street	15	66.08	66.26	0.18	2	0.36	0.36	0
Ash Street to North City Limits (Waverly Rd)	15	66.26	68.08	1.82	2	3.64	3.64	0
				0		0		
				0		0		
				0		0		
				0		0		
				0		0		
				0		0		
				0		0		
				0		0		
Total Lane Miles				**5.83**		**13.74**	**11.66**	**2.08**

4. Authorization for the Mayor to Sign a Certificate of Compliance with the Nebraska Department of Transportation for 2026 - City Administrator Butcher

NEBRASKA
Good Life. Great Journey.
DEPARTMENT OF TRANSPORTATION

CERTIFICATE OF COMPLIANCE

Maintenance Agreement No. 28 QE 2205 Supp 3
Maintenance Agreement between the Nebraska Department of Transportation and the Municipality of Seward
Municipal Extensions in Seward

We hereby certify that all roadway snow removal and surface maintenance has been accomplished as per terms of the Maintenance Agreement specified above.

As per Section 8d of the Agreement, we are submitting this certificate to District Engineer Brandon Varilek, Department of Transportation, Lincoln, Nebraska.

ATTEST: _____ day of _____, 202 .

_____ _____
City Clerk *Mayor/Designee*

I hereby certify that all roadway snow removal and surface maintenance was performed as per the above listed agreement and payment for the same should be made.

_____
District Engineer, Department of Transportation

For Office Use Only

Agreement No.: _____
Pay/Bill Code: _____
Contractor No.: _____
Amount: $ _____

NDOT Form 508, January 2018

NEBRASKA

Good Life. Great Journey.

DEPARTMENT OF TRANSPORTATION

City Maintenance Agreement

Attachment B

City of: Seward

Date: 11/18/2024

☒ Surface Maintenance

From Attachment "C", it is determined that the State's responsibility for surface maintenance within the City limits is 11.66 lane miles. Pursuant to Sections 1a, 8a, 8d of the Agreement and to Attachment "C" made part of this Agreement through reference, the State agrees to pay to the City the sum of $2,030.00 per lane mile for performing the surface maintenance on those lanes listed on Attachment "C".

Amount due the City for surface maintenance:

11.66 lane miles x $2,030.00 per lane mile = $23,669.80.

☒ Snow Removal

From Attachment "A", it is determined that snow removal within City limits is the responsibility of the City. Pursuant to Section 8d of the Agreement and to Attachment "C" made a part of this Agreement through reference, the City agrees to pay to the State the sum of $1,430.00 per lane mile for performing snow removal on those lanes listed on Attachment "C".

Amount due the State for snow removal:

3.94 lane miles x $1,430.00 per lane mile = $5,634.20

☐ Other *(Explain)*

ATTACHMENT "C"
CITY OF SEWARD

STATE OF NEBRASKA
DEPARTMENT OF TRANSPORTATION

RESPONSIBILITY FOR SURFACE MAINTENANCE
OF MUNICIPAL EXTENSIONS

NEBRASKA REVISED STATUTE 39-1339
AND NEBRASKA REVISED STATUE 39-2105

Description	Hwy No.	Beginning R.P.	End R.P.	Length (MI)	Driving Lanes Total	Lane Miles Total	State	City
W. City Limit to begin Divided Highway	34	299.13	299.27	0.14	2	0.28	0.28	0
Begin Divided Highway to End Divided Highway	34	299.27	300.31	1.04	4	4.16	2.08	2.08
End Divided Highway to East City Limits	34	300.31	301.17	0.86	2	1.72	1.72	0
South Limits (Fletcher Street) to Leave City Limits	15	64.03	65.82	1.79	2	3.58	3.58	0
Re-Enter City Limits to Ash Street	15	66.08	66.26	0.18	2	0.36	0.36	0
Ash Street to North City Limits (Waverly Rd)	15	66.26	68.08	1.82	2	3.64	3.64	0
				0		0		
				0		0		
				0		0		
				0		0		
				0		0		
				0		0		
				0		0		
				0		0		
Total Lane Miles				**5.83**		**13.74**	**11.66**	**2.08**

5. Authorization to Add Joel Brase & Jamie Fields as Signers to the Wellness Center Checking Account with Jones Bank - City Administrator Butcher **(Added 12/1 at 12P)**

CITY ADMINISTRATOR'S REPORT

CITY ADMINISTRATORS REPORT – 12/2/25

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 (seeding), design of 5th and Bradford/Roberts Drainage, Design of Lindell and Jackson Reconstruction, construction of Worthmann Blvd extension.
- Water Tower project underway. Working on cellular installations, electric connections, fiber connections and demolition planning for old tower.
- Check in meeting with Building and Zoning Staff.
- Met weekly with Jonathan Jank (SCCDP) to update on the status of economic development items.
- Met with NDOT District 1 Engineer and staff to discuss the crossing and safety issues at Highway 15 and Northern Heights.
- Fill out forms, prepare items, and prepare for auditors visit this week.
- Held weekly Department Head Meetings.
- Met with DARI Project reps to review items and projects status, and to coordinate schedules and planning. Weekly onsite trailer meetings.
- Reviewed Handbook Changes and Updates with City Clerk/Finance Director.
- Finalize TIF payments, provide amortization schedules to County, finalize payments to Cline Williams/Andrew Willis, and prepare Dec 1 report with TIF Attorney Andrew Willis.
- Attended the Dairy Quarter ribbon cutting with Mayor Eickmeier put on by SCCDP.
- In person meeting with new NPPD Wholesale Customer Representative Rachel Kreikemeier.
- Off two (2) days for Thanksgiving and Friday after.
- Held LB 840 Committee Meeting for SCCDP Application for updated five (5) year housing study.
- Reviewed Easement item for wastewater service line for Senior Center.
- Weekly review with City Engineer of Project Priorities.
- Follow up items with Wellness Center Staff (6 month report and financials, coaches meetings for flag football and soccer, program expense reviews for basketball and volleyball, building planning, capital loan closeout items, staffing).
- Review Civic Center items with Mark Kolterman.
- Working with SCCDP to get holiday lights reactivated, review future project planning.
- Met with owners of local businesses on possibilities to lease City spaces.
- Review burnsite policies draft resolution.
- Assist the Mayor with a number of appointments to various boards and commissions.
- Finalized items related to City conversion to Allo at all locations.

Police Department

- Chief in online training
- Holiday Parade Saturday – extra staff to help

City Clerk/Human Resources/City Hall

- Personnel, Finance & Audit Committee (Council) planning to meet December 2
- Ameritas 1-on-1 meetings – signups ongoing for 12/3
- March Blizzard items submitted, awaiting FEMA review
- Review Job Descriptions: Public Properties Director & Street Superintendent
- Open positions: Custodian

Water/Wastewater Department

- Sampling for SHE – will give profile for temporary treatment possibilities
- Meeting with Xylem and Dari on Monday to discuss process

- JEO begin hydrant testing for Water Study
- Put in new water main for Worthman/Dari into Service

Parks and Rec/Cemetery/Golf/Pool

- Put growth tarp on baseball infield
- Put cabs on mowers
- Get truck ready for parade
- Last week for campgrounds to be open
- Fall clean up
- 2 funerals Saturday

Civic Center

- Building open Friday for set up for the weekend activities
- Met with Mark Kolterman on south ramp project and other issues

Electric Department

- Planned outage on North 5th street Tuesday
- Put Santa House Tuesday
- Work with College electrician Tuesday to deenergize Jesse Hall
- Pull poles that are ready
- FR clothing vendor coming Tuesday
- Work with Mike Oneby on state right of way permit for Walmart streetlights

Street Department

- Put up snow fence Worthman first then Waverly
- Trim trees on parade route, 2 pin oaks between 2nd and 3rd
- Fill potholes
- Start leaf clean up on streets

Library

- Meeting with Friends members to monitor east entrance magazines
- Hot chocolate packet assembly by Friends for Saturday
- Closing at 5:00pm for Holiday
- Saturday – Christmas Festival crafts for kids in the morning and story walk around square

Building Inspection/Planning Department

- Planning Commission – Weber, Rumery and Urwin Rezones, R-4 text amendment, Peery TIF
- Plan Reviews – waiting on Parker Baby from Rich Burton, Hughes Brothers
- Chapters Books- Connor Roofing will be completed today weather permitting and will for sure be our Wed.
- City Hall – Bachmann quote follow-up
- Walmart – Convenience store follow-up questions, RTU's permitting follow-up main store. Store remodel inquiries continue to come in

Engineering

- East Hillcrest Drive – design meeting prepare R.O.W and easement docs.
- DARI LLC – Xylem meeting, metering manhole quote, stormwater outfall, Section 404 permit,
- Water System Study – field work agreement, develop detailed scope.
- Rail Campus Watermain Extension Phase III – review bid documents, BNSF license, advertise Dec 10, 17, 24; Bid date Jan 8.

- WWTP Upgrade – memo on DARI loadings, update metering manhole bid documents, temporary treatment options, Facility Plan Update (deferred per NDWEE)
- 500k Water Tower – disinfection procedure, site electrical, termination letters to AT&T and US Cellular, AT&T equipment relocation.
- Worthman Blvd Extension – Pine & Worthman closure, paving
- Rail Campus Watermain Extension Phase II – disinfection, closeout
- Plum Creek Bridge – PS&E review, Feb 12 bid letting

Finance Department

- Creating Caselle's MiExcel spreadsheets for financial reports
- Utility bills mailed out Wednesday
- Payroll
- Claims – NO invoices after Monday

Seward Wellness Center

- Closed on Thursday, all other days regular hours
- Josh the Otter program meeting

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