Central Nebraska Public Power and Irrigation District

E65 New Water Supply Siphon and Canal to Elwood Reservoir

WaterSMART Drought Resiliency Projects for Fiscal Year 2025
NOFO No. R25AS00013

October 7, 2024

Applicant:	**Project Manager:**
Central Public Power and Irrigation District	Scott Dicke, Irrigation and Water Services Manager
Scott Dicke, Irrigation and Water Services Manager	415 Lincoln Street / PO Box 740
415 Lincoln Street / PO Box 740	Holdrege, NE 68949
Holdrege, NE 68949	sdicke@cnppid.com
	308-995-3562

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1 TECHNICAL PROPOSAL AND EVALUATION CRITERIA

1.1 EXECUTIVE SUMMARY

1.1.1 Application Information

Date: October 7, 2024
Applicant: Central Nebraska Public Power and Irrigation District (Central)
City, County, State: Holdrege, Phelps, Nebraska
Applicant Eligibility: Central is a locally governed political subdivision of the State of Nebraska authorized to manage water and power.
Applicant Tasks Area and Category: Central is a Category A applicant.
Funding Group: Funding Group II, up to $3,000,000

1.1.2 Project Summary

The E65 Canal is Central's second largest irrigation canal, providing water to 150 customers and covering more than 42,000 acres in Gosper and Phelps Counties in South Central Nebraska. Since operations began in 1941, recharged groundwater has created a 'mound' as high as 60 to 80 feet throughout a three county region. The groundwater mound is a critical drought mitigation tool for the thousands of people who rely on groundwater for irrigation or domestic water supplies. Over the last two years, drought has been widespread in the area including the early months of 2024. The E65 Canal conveys 350 cubic feet per second (cfs) water directly to the irrigated lands and water to Elwood Reservoir for storage and summertime releases necessary to meet the total 510 cfs irrigation demand downstream of the reservoir. Central's E65 New Water Supply and Canal to Elwood Reservoir Project (Project) will install a new E65 Siphon and canal, hereinafter referred to as the new E65 Siphon, for approximately 5,400 linear feet having a 450 to 500 cfs design capacity. This Project replaces the existing 4.5 mile system. The new alignment is two miles shorter and eliminates the need to pump water into Elwood Reservoir. The requested funds will provide resources needed for the construction phase specific to the purchase of pipe.

1.1.3 Project Timeline

Project planning was initiated in July 2021, with completion of the E65 Elwood Water Supply Feasibility Report. The Project design started in January 2024 is currently underway and anticipated to be completed February 2025. Phase II – Construction, which is anticipated to start in August of 2025 will conclude by July of 2027. The Project is estimated to be complete and operating on or before August of 2027.

1.1.4 Federal Facility

The Project is not located on federal ground and is not part of a federal facility.

1.1.5 Water Supplies

Central's facilities begin with its main storage reservoir, Lake McConaughy. Formed by Kingsley Dam, a 3.1-mile-long hydraulic fill dam across the North Platte River, Lake McConaughy is

Nebraska's largest reservoir with a storage capacity of almost 2 million acre-feet. The lake is 22 miles long, more than three miles wide and covers 30,500 surface acres at maximum fill. Central, in collaboration with other entities, manages flow out of Lake McConaughy, including releases for irrigation through the E65 system.

Central manages water rights and supplies for irrigation, power, instream use for fish and wildlife, and groundwater recharge. All water is derived from the flow in the Platte River and can be managed by releases from Lake McConaughy. A summary of Central Water Rights is shown in Table 1. Central has long-term (10+ years) agreements for groundwater recharge with the Platte River Recovery and Implementation Program (PRRIP) and Nebraska Dept. of Natural Resources (NeDNR).

Table 1 – Central Water Rights Summary

IRRIGATION			
WATER RIGHT	ACRES	USE	
Storage Use	124,972.2	Irrigation & Incidental U/G Storage	
Natural Flow	124,226.8	Irrigation & Incidental U/G Storage	
Incidental Underground Water Storage	355,999.92	Approved under Appropriation U-2 (Portions of Gosper Phelps, and Kearney Cos.)	
	53,844.45	Appropriation U-12 (portions of Lincoln, Dawson, and Frontier Cos.)	
POWER			
WATER RIGHT	DATE	SUPPLY	LOCATION
A-2354 / Platte River Power	1934	1,500 CFS	Jeffery, J-1 & J-2
A-3474 / Platte River Power	1941	Power Head	Increased Jeffrey J-1 & J-2
A-3475 / Kingsley Reservoir Supp. Power	1941	500,000 AF	Kingsley Reservoir*
A-4674 / Platte River Power	1950	700 CFS	Jeffrey, J-1 & J-2
A-15923 / North Platte River Power	1981	5,720 CFS	Kingsley Power Plant
*At Lake McConaughy			
INSTREAM USE FOR FISH & WILDLIFE			
WATER RIGHT	DATE	VOLMUME	
A-17695 Instream Storage / Kingsley Reservoir	1998	215,000 AF	
GROUNDWATER RECHARGE			
WATER RIGHT	USE	LOCATIONS	
A-19979	Recharge	E65 Canal, Phelps Canal, Elwood Reservoir, Cottonwood Ranch, Waterfowl Production Areas (Cottonwood Funk Lagoon, Johnson Linder and Victor).	

Completion of the Project would equate to upwards of 245,000 AF of benefits over a ten-year period, depending on the availability of Platte River excess flows. With the new E65 Siphon and canal to Elwood Reservoir, the total additional water supply estimated by Central includes: 1) the ability to capture a minimum of 11,000 AF annually of 'rejected irrigation water' and, 2) another 13,500 AF from freed up storage capacity available to other project partners due to the increased conveyance rate of the new E65 Siphon meeting the irrigation demand. Essentially, Elwood Reservoir's storage can become a water resources management tool to support other beneficial uses helping to create resiliency during drought conditions.

1.1.6 Background Information

Central is the largest surface water irrigation project in Nebraska delivering irrigation water to over 108,000 acres in south central Nebraska, operates four hydroelectric generation plants, supports cooling water for one coal fired energy production facility. Central's water also provides groundwater recharge, recreation, and wildlife habitat. The location and a summary of Central's system is shown in Figure 1.

Figure 1 – Central's Supply Canal System

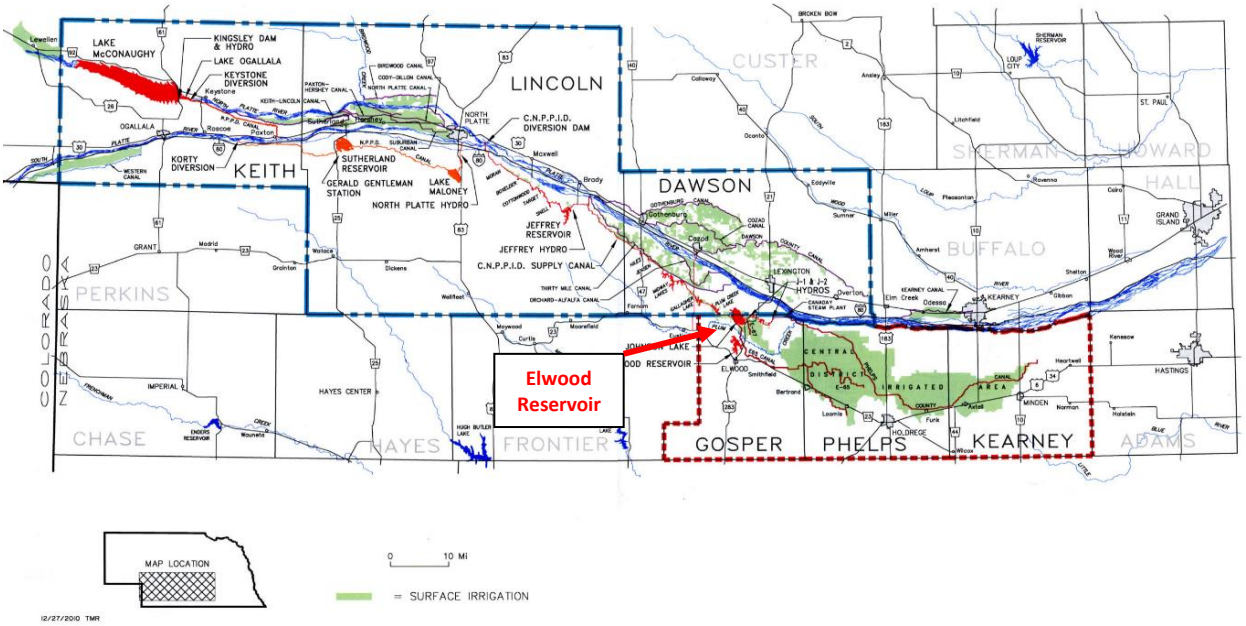


Figure 2 shows the full Central canal service area including E65, E67, and Phelps, stretching approximately 55 miles from west to east and 4 to 12 miles north to south of Interstate 80 and the Platte River in south-central Nebraska. This area is predominantly row crop agriculture consisting of a corn-soybean rotation, mixed with areas of rolling grasslands and livestock operations. The Project is situated approximately 5 miles north of Elwood, Nebraska and south of Johnson Lake in Gosper County, Nebraska. The anticipated linear construction area for the new E65 Siphon and canal lies between Johnson Lake and Elwood Reservoir as shown in Figures 2 and 3. The location of the new E65 Siphon, at the approximately center of the new alignment, is latitude 40.665193N and the longitude is -99.863784W.

Figure 2 – Central Canal Service Areas (E65, E67, Phelps)

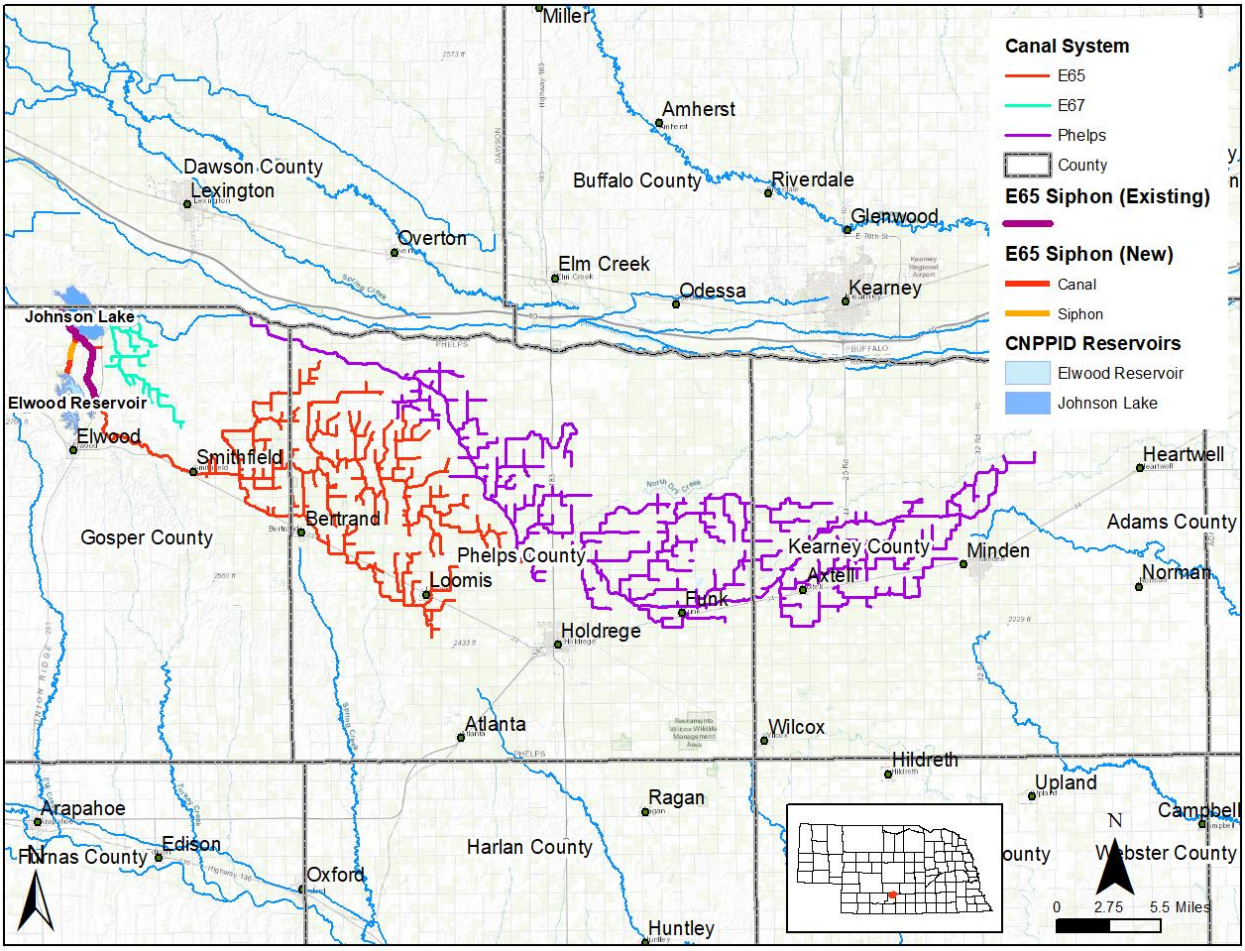
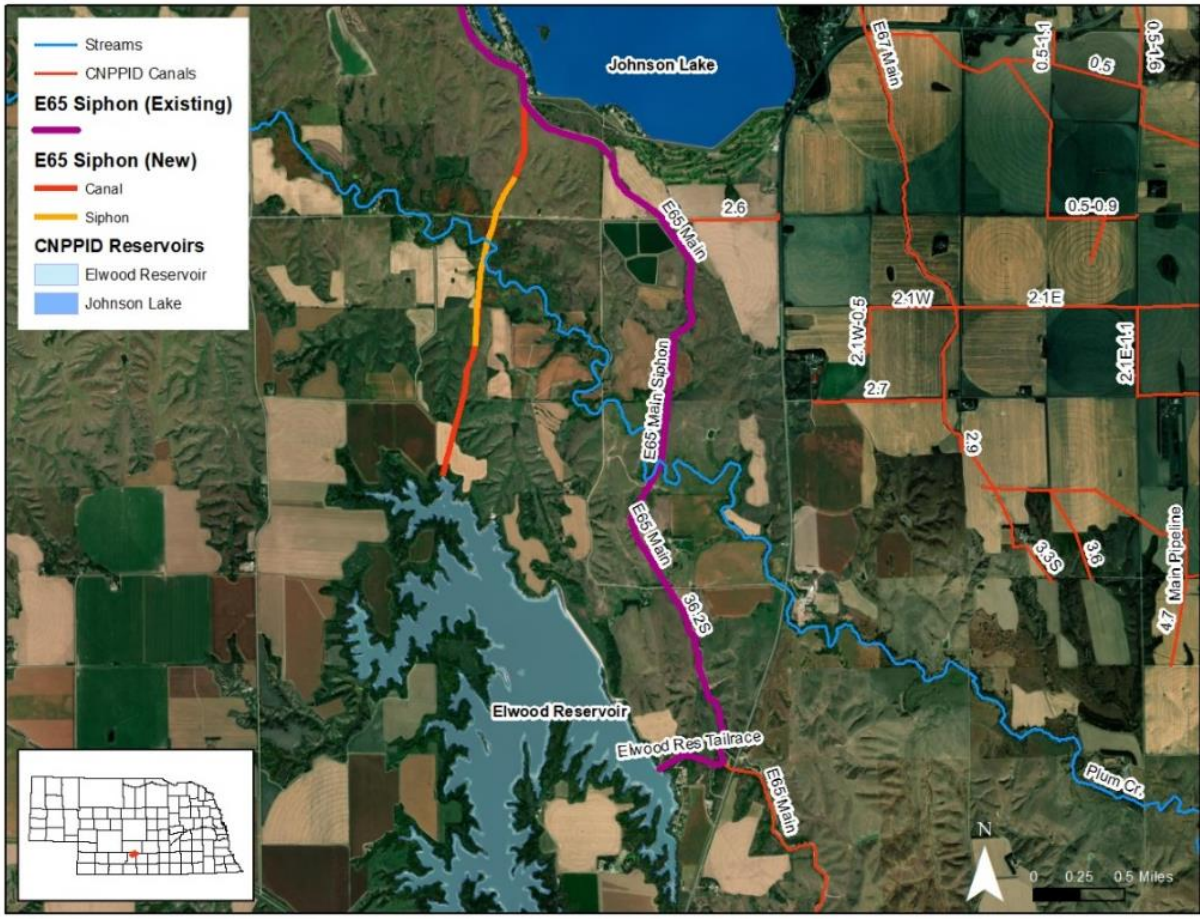


Figure 3 – New E65 Siphon Alignment



1.1.7 Project Description

The E65 Canal was part of the original project construction in the late 1930s and has been in service since 1941. The three existing siphons are essential to conveying water to 150 irrigation customers at 414 separate turn-out points serving more than 42,000 acres. As irrigation expanded during the 1960 and 1970s, the existing siphon and canal capacity at 350 cfs was not capable of meeting irrigation demand, which exceeds 500 cfs. In the late 1970s, the 1,300 acre Elwood Reservoir was added to the E65 system as a pump storage facility. The total storage capacity of Elwood Reservoir is 37,800 AF. Water is currently pumped into Elwood Reservoir through three pumps with a total capacity of 240 cfs. Pumping typically starts in March or April and the reservoir fills just prior to June. The primary Project goals are:

1) Address aging infrastructure.
2) Construction of a new 500 cfs two-mile gravity flow canal and siphon to eliminate the need for pumping, and be able to capture “rejected irrigation water.”
3) Improving the management and ensuring the long-term sustainability of water resources by making excess storage in Elwood Reservoir to other agencies working to achieve instream flow and groundwater recharge goals and to improve threatened and endangered species habitat.

1.1.8 Project Planning

The planning phase, part of Phase 1, was completed in July 2021 with the completion of the E65 Elwood Reservoir Water Supply Feasibility Report. The recommendation was an approximately 2-mile-long canal/siphon system between Johnson Lake inlet and Elwood Reservoir that consist of:

- One siphon pipe made of steel or high-density polyethylene (HDPE) pipe approximately 5,400 linear feet and approximately 108 to 111 inch inside diameter pipe,
- Two earthen canal sections at both ends of the siphon totaling approximately 5,400 linear feet.
- One diversion gate structure off the existing E65 canal,
- One gate structure at the siphon inlet,
- One siphon outlet structure,
- One gate structure at the new alignment outfall to Elwood Reservoir,
- One drain structure for siphon maintenance, and
- Elimination of the need to use pumps to fill the Elwood Reservoir.

The design is part of Phase 1 and is currently underway. Central is currently engaged with a team of engineers to complete final design and permitting. The draft design can be found in Attachment A, Project Design. The team is also completing permitting and regulatory compliance actions to authorize construction. Environmental field surveys are complete and regulatory clearance letters are being finalized. No significant roadblocks are present.

The construction (Phase 2) is anticipated to begin August of 2025 and will include material purchase, bidding, and construction. This application will support Phase 2.

1.1.9 Performance Measures

This system will provide verification that the Project achieves water supply goals the following measures will be taken into consideration:

- Achieving the goal flow capacity of at least 450 - 500 cfs through the new E65 Siphon and canal system, into Elwood Reservoir thus allowing Central to better meet irrigation demands.
- Reducing reliance on greenhouse gas-emitting power sources by measuring power generation savings through the elimination of the need to pump water into Elwood Reservoir via the existing pump station. Currently Central pays an average of $75,000 annually in electricity costs, with expenditures reaching up to $150,000.
- Achieving long-term sustainability though the replacement of the dilapidated siphon and canal system.
- Recording increased water storage from rejected irrigation water.
- Monitoring available excess storage capacity in Elwood Reservoir for the benefit of the state’s water resources management goals by Central partners (PRRIP, Nebraska NeDNR).

2 Evaluation Criteria

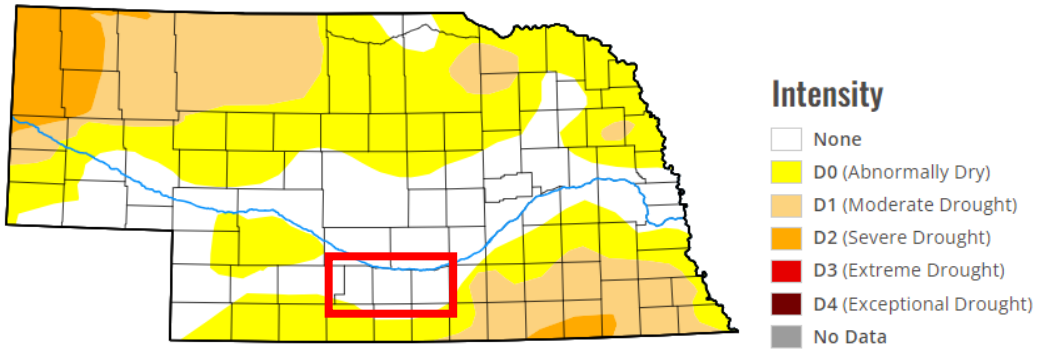
2.1 Evaluation Criterion A. Severity of Drought or Water Scarcity and Impacts

Describe the severity of the impacts that will be addressed by the project. Describe recent, existing, or potential drought or water scarcity conditions in the project area.

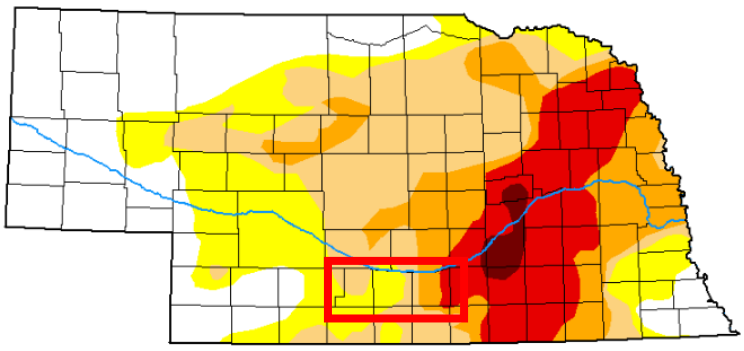
Statewide, and including Central service area, has experienced significant periods of drought historically and have recently experience drought conditions during 2022, 2023, and early into 2024. Until relief seen during the spring and summer of 2024, the last time the vast majority of the project area was in no state of drought was December 7, 2021. The most current map, and conditions one year ago, are shown in Figure 4. Other historic examples of extreme droughts can be found in Attachment B, Additional Figures (Historical Drought Conditions and Climate Analysis).

Figure 4 – Drought Conditions 2024 and 2023

U.S. Drought Monitor – September 5, 2024



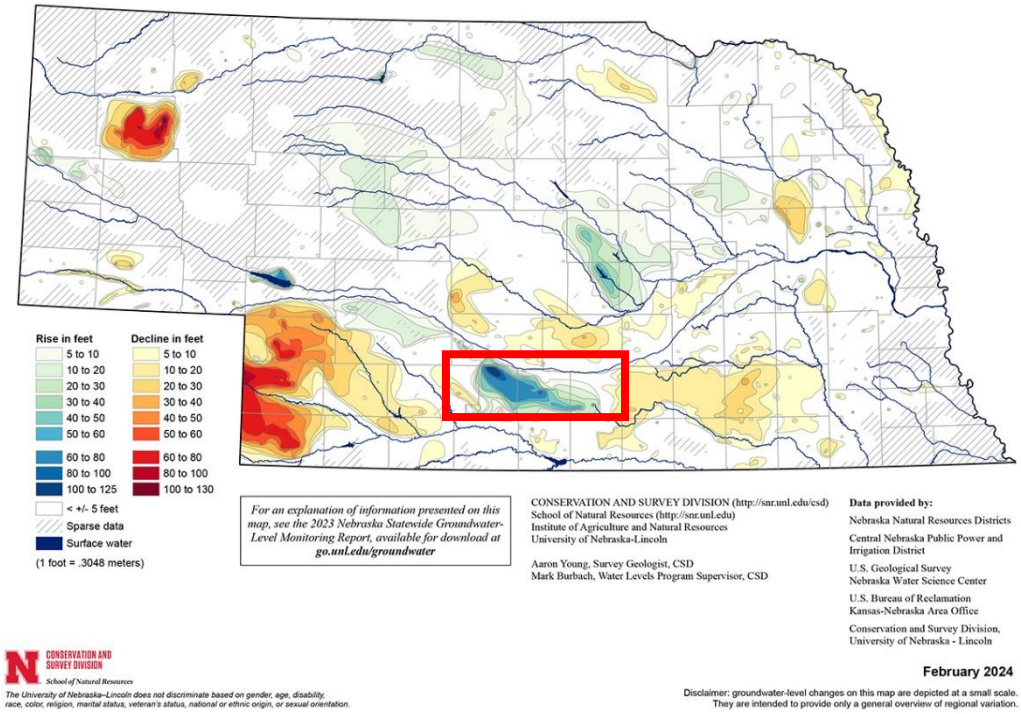
U.S. Drought Monitor – September 5, 2023



What are the ongoing or potential drought or water scarcity impacts to specific sectors in the project area if no action is taken (e.g., impacts to agriculture, environment, hydropower, recreation, tourism, forestry), and how severe are those impacts?

The initial adverse impacts will be experienced by the agricultural sector who depend solely on surface water for irrigation during a drought. Irrigators who rely on the surface water delivery for crop production will experience financial hardship immediately. A failure of the existing system would instantly remove groundwater recharge from excess flows and the source of groundwater mound supporting thousands of wells used for domestic, agricultural, and public water suppliers would be affected. The groundwater mound, formed from decades of incidental recharge from canals, drainages, and reservoirs, has been documented by the University of Nebraska Conservation and Survey Division (UNL CSD), as shown in Figure 5.

Figure 5 – Groundwater Level Changes in Nebraska (Pre-development to Spring 2023)



Another immediate impact would be Elwood Reservoir, which could no longer received water. The fisheries would be lost within two years. Furthermore, no water could be placed into the WPAs along with any other recharge facility on the Central's canal systems that are currently used to support ESA critical habitat baseflows.

There are also secondary, or "third party" impacts to those providing goods and services to raise the crop and the damage to those depending on using the crops for feeding livestock and producing energy. These third-party impacts consist of both indirect impacts to input suppliers and induced impacts to the households of the suppliers' employees.

The primary benefit is the avoidance of the economic losses due to a failure of the existing system and the reliable long-term delivery of irrigation water and sustainability of the groundwater mound currently providing ample drought resiliency. Based on the 2021 economic analysis provided by Central and utilized in the Feasibility Study, the total economic losses caused by the E65's eventual failure would be $33.36 million and 99 jobs across the State of Nebraska. The economic study is based upon shutting off the E65 irrigation system impacting approximately 42,000 acres. The study provides evidence that there would be a decline in agricultural commodities in the Project area. Additional details are shown in Tables 2 and 3.

Table 2 – Estimated Economic Output Impact to the State of Nebraska Resulting from a Siphon Failure (Average Moisture Year)

		Multipliers			Estimated impacts			
Crop	**Direct impact**	**Direct impact multiplier**	**Indirect impact multiplier**	**Induced impact multiplier**	**Direct impacts (million)**	**Indirect impacts (million)**	**Induced impacts (million)**	**Total (million)**
Corn (2/3 of acreage)	($15.65)	1.000	0.4673	0.1669	($15.65)	($7.31)	($2.61)	($25.58)
Soybeans (1/3 of acreage)	($5.58)	1.000	0.1441	0.2505	($5.58)	($0.80)	($1.40)	($7.78)
Totals	($21.23)				($21.23)	($8.12)	($4.01)	($33.36)

Table 3 – Estimated Employment Impact to the State of Nebraska Resulting from a Siphon Failure (FTE's) (Average Moisture Year)

		Multipliers (impact for every million dollar of direct impact)			Estimated impacts			
Crop	**Direct impact**	**Direct impact multiplier**	**Indirect impact multiplier**	**Induced impact multiplier**	**Direct impacts (FTE)**	**Indirect impacts (FTE)**	**Induced impacts (FTE)**	**Total (FTE)**
Corn (2/3 of acreage)	($15.65)	1.07	2.65	1.335	(17)	(41)	(21)	(79)
Soybeans (1/3 of acreage)	($5.58)	0.46	0.83	2.02	(3)	(5)	(11)	(20)
Totals	($21.23)				(20)	(46)	(32)	(99)

Describe any projected increases to the severity or duration of drought or water scarcity in the project area resulting from changes to water supply availability and climate change. Provide support for your response (e.g., reference a recent climate informed analysis, if available).

Without the new E65 Siphon, a failure of the existing infrastructure would result in the loss of water supply availability, mainly irrigation and the subsequent loss of the economy supported

by this irrigation as well as base flow to the Platte River. A canal failure in combination with 42,000 more acres accessing the groundwater mound would create an impossible scenario; water supply would fail for all irrigators in this area, recharge efforts would fail and the wetlands would be lost. Groundwater flow to the east would be greatly diminished, affecting additional irrigators and municipal wells as the deficit spread. In addition to the regional economic effect from lost agricultural income due to a failure, multiple ancillary or secondary benefits would be lost too, such as groundwater recharge and recreation.

A climate and drought analysis was performed to document findings on the potential of increased drought severity under climate impact conditions using climate model simulations from 2006 to 2099 made available by the BOR. According to the BOR, Nebraska will see increases of 50-100% in drought duration. Additional information from the climate analysis, including historic Lake McConaughy levels can be found in Attachment B.

2.2 Evaluation Criterion B. Project Benefits

2.2.1 Sub-Criterion B.1. Project Benefits

What is the estimated quantity of additional supply the project will provide and how was this estimate calculated?

Completion of the Project would equate to upwards of ***245,000 AF*** of benefit over a ten-year period, depending on the availability of Platte River excess flows, in addition to meeting irrigation demand at the peak of the season that requires 500 cfs. With the new E65 Siphon and canal to Elwood Reservoir boosting capacity, reservoir storage becomes available, the total additional water supply estimated by Central includes; 1) the ability to capture a minimum of ***11,000 AF annually*** of 'rejected irrigation water' and, 2) another 13,500 AF from freed up storage capacity due to the increased conveyance rate. The annual total 24,500 AF into Elwood Reservoir will support other beneficial uses helping to create resiliency during drought conditions.

What percentage of the total water supply does the project's water yield represent? How was this estimate calculated?

The 'rejected irrigation water' that can be routed into Elwood Reservoir is defined as; water released by Central from Lake McConaughy that was scheduled to flow into the irrigation canal system but was instead returned to the stream unused. Water released from Lake McConaughy requires approximately five days to reach the E65 Canal headgate. At times, the region receives sufficient rainfall within the five day period after Lake McConaughy releases the irrigation water, producers don't have to irrigate and the water is rejected. This rejected irrigation is returned to the river because there is no place to store it or put it to beneficial use. Rather than letting water released under Central water rights be returned to the Platte River, this new system allows Central to route water back into Elwood Reservoir's storage for future beneficial

use. Currently, Central is not able to capture rejected irrigation water due to the excessive cost of pumping water into the reservoir and the lack of capacity in the existing siphon and canal.

The newly created storage opportunity becomes available due to the increased conveyance rate of the new siphon, estimated at 450 to 500 cfs, to meet the maximum irrigation demand of approximately 510 cfs. This reduces the dependence on Central to store water in Elwood Reservoir for irrigation use. New water utilizing this additional storage capacity can further enhance streamflow by retiming the water through recharge, or other beneficial uses, which ultimately mitigates drought impacts. The storage previously used to meet irrigation demand can now support other uses including the existing water market currently utilized by NeDNR and PRRIP for recharge. Their recharge efforts retime water so that it eventually increases stream baseflows for the Platte River. Both the NeDNR and the PRRIP have executed Water Service Agreements with Central for recharge in 2023 that will extend for the next ten years.

How will the project build long-term resilience to drought or other water reliability issues? Include factors such as the predictability of supply, variability in availability, and the likelihood of interruptions or failures.

The new E65 Siphon and canal supplying water to Elwood Reservoir will ensure that the continued hydrologic benefits achieved by the Elwood Reservoir and the E65 canal system are sustained over the next 100-years. Designing with HDPE or poly coated steel provides a 100-year lifespan, along with Centrals ongoing investment to rehabilitate the dam at Elwood Reservoir builds long-term regional resilience to drought. It secures a functioning siphon that is the critical infrastructure component of the system. This security allows water to be supplied for storage and the replenishment of supplies as recharge. Recharged water from the canal system benefits at least five public water systems within the groundwater mound by safeguarding the quantity of their water supply. The recharge also drastically dilutes high nitrates that exist in groundwater helping to make is safe as a potable source.

Provide a qualitative description of the degree/significance of the benefits associated with the additional water supplies.

The Project is twofold, as it will address aging critical infrastructure in order to sustain the existing system into the future that provides stored Platte River water that can be utilized during drought when flow in the Platte is low. This Project maintains the groundwater mound supply which provides significant benefits to water supply, stream flow augmentation, recharge, threatened and endangered species habitat, recreation, and Interstate Compact Compliance. Specific benefits include:

- Groundwater Recharge - The Elwood Reservoir and E65 canal areas also provide substantial recharge annually, benefitting both the Platte and Republican Basin by increasing the water supplies that allow state and federal obligations to be met

including the Republican River Interstate Compact and efforts related to Endangered Species Act compliance through PRRIP.

- Municipal Water Supplies - The recharge provided by the Central system is used by thousands of private wells and at least five municipalities for drinking water within the groundwater mound area. This provides a buffer against water shortages and enhances drought resiliency. It also serves to dilute high concentration of Nitrates in the groundwater, thus improving water quality.

- Reduced Power Demand - A new alternative alignment would provide a gravity source of water to Elwood Reservoir, thus eliminating the for costly pumping that relies on greenhouse gas-emitting sources.

- Recreation - Elwood Reservoir is considered a trophy fishery and supports no-wake boating including kayaking and canoeing.

- Flood Control - The E65 system has provided flood mitigation by receiving diverting flows when the Platte River floods. This flood mitigation effort was realized on the most recent events along the Platte (2013 and 2019).

- Agriculture - The E65 Siphon is solely responsible for water delivery to over 42,000 irrigated acres and for the existence of water placed into Elwood Reservoir.

- Wildlife Habitat - Central also provides water through the E65 system to Cottonwood, Victor Lakes, and Linder WPA in Phelps and Gosper Counties, a total of 819-acres of wetland areas, for waterfowl and groundwater recharge benefits. Since the infrastructure was installed in 2019, 3,209-AF of water has been placed into Victor Lakes, 2,609 AF into Cottonwood WPA, and 60 AF into Linder WPA. Whooping Cranes, which are a listed endangered species, have been observed using the WPA's after delivering excess flows through the E65 Canal.

2.3 Sub-Criterion B.3. Additional Project Benefits

2.3.1 Sub-Criterion B.3.a. Climate Change

In addition to drought resiliency measures, does the proposed project include other natural hazard risk reductions for hazards such as wildfires or floods?

The E65 system has provided flood mitigation by diverting flows when the Platte River floods to canals and reservoirs. This flood mitigation effort was realized on the most recent events along the Platte River (2013 and 2019). In 2022, water was extracted out of Elwood Reservoir by helicopter to fight a 40,000-acre wildfire (the Elwood, Nebraska fire chief died responding to that wildfire). Elwood Reservoir provided a large enough pool with adequate water supply that the helicopter could access.

Will the proposed project establish and use a renewable energy source?

This specific Project will not establish a renewable energy source, however design considerations contemplate future opportunities such as solar over the canal and hydro-electric pump storage generation. Within other parts of Central's system, there are four hydro-power plants, including at Kingsley Dam (Lake McConaughy), Jeffrey Hydro, and nearby the E65 system past Johnson Lake (J-1 and J-2 hydro production facilities). Central remains committed to system-wide project improvements that will sustain and expand hydro-power in the future.

Will the proposed project reduce greenhouse gas emissions by sequestering carbon in soils, grasses, trees, and other vegetation?

The Project has a green solution element through the elimination of the need to use a pump to fill the 1,300-acre Elwood Reservoir and will reduce energy demands once completed by providing water through gravity to Elwood Reservoir, rather than using power to pump water from the canal up 30-feet vertically into the lake. Central annually pays on average $95,000 in electricity and has paid as high as $150,000. Since 2004, Central has paid $1,328,005 which includes usage and demand charges. Based on the ten year average of electrical pumping into Elwood Reservoir, this Project is estimated to save approximately 5,118 kwh of energy per year.

Does the proposed project seek to reduce or mitigate climate pollutions such as air or water pollution?

Central is a green producer of energy, however Central is required to purchase power for pumping into Elwood Reservoir that originates from the Nebraska Public Power District, which includes coal-fire electrical plant generation. The Project will remove the need to pump water into Elwood Reservoir, which can reduce the need to use electricity from coal fired plants.

Does the proposed project have a conservation or management component that will promote healthy lands and soils or serve to protect water supplies and its associated uses?

The primary goal of the Project is to sustain an existing water supply for a system of canals that have multiple beneficial uses beyond providing a source of irrigation. Continued use of the E65 system will protect municipal water supplies that are within the groundwater mound and help sustain water supplies in time of drought. Throughout the area, producers have installed conservation practices, such as no-till, cover crops, etc. that improve soil health and reduce water consumption. Collectively, CNPPD and local NRDs support actions that reduce water consumption, which equates to increase storage in Lake McConaughy for other beneficial uses including production of hydropower.

Does the proposed project contribute to climate change resiliency in other ways not described above?

Lake McConaughy is the largest reservoir in Nebraska and is located 130 miles west of Elwood Reservoir in a more arid area. Being able to utilize additional storage in Elwood Reservoir can reduce releases from Lake McConaughy water upstream. Significantly, Kingsley Dam at Lake McConaughy requires refacing which will result in the likelihood of reduced storage during construction. If the new E65 Siphon is made operational prior the Kingsley Dam refacing project, water management and storage will be improved should drought conditions arise while water conditions are anticipated to be lower at Lake McConaughy. Further, support of this project allows Central contributions to go further for the Kingsley Dam project.

As mentioned previously, groundwater has risen up to 60-80 feet within the irrigated areas served by the E65 system. In the areas encompassing the water table rise, which is over 500,000 acres, the amount of energy needed to pump water for irrigation is reduced signficantly. The shorter the distance to groundwater, the less energy is needed for pumps to pull water to irrigate. The new system will sustain the groundwater mound into the future and thus reduce pumping energy demands within one of the most productive agricultural areas in the U.S.

Additionally, a portion of the corn produced from the E65 canal is used to produce ethanol. Producers are working to get a carbon rating on their farm under the 45Z Clean Fuel Production Tax Credit that becomes active in 2025. Because our water produces renewable energy, establishes cover crops and eliminate or reduces the need for pumping groundwater, we are being told that it may be highly desirable for farmers for scoring related to the tax credit.

2.4 Sub-Criterion B.3.b. Ecological Benefits

Does the project seek to improve the ecological resiliency of a wetland, river, or stream in the face of climate change?

Yes. Central also provides water through the E65 system to Cottonwood, Victor Lakes, and Linder WPA in Phelps and Gosper Counties, a total of 819-acres of wetland areas, for waterfowl and groundwater recharge benefits. Whooping Cranes, an endangered species, have been known to utilize these WPAs. The WPAs are managed by the United States Fish and Wildlife Service (USFWS).

The Project is a catalyst to aiding specific efforts by the PRRIP, NeDNR, and other partners working to optimize the use of excess flow diversions from the Platte River. Storing excess flows in Elwood Reservoir are later utilized to reduce streamflow deficits or USFWS target flows, set to support ESA critical habitat for the Platte River. Currently, the PRRIP and NeDNR are exploring alternatives to convey water in Elwood Reservoir directly to the Platte River, through Plum Creek, to help met target flows established by the USFWS to benefit critical habitat for threatened and endangered species.

Identify ecological benefits expected to result from project implementation.

As described previously, the PRRIP will utilize excess storage in Elwood Reservoir that becomes available with the addition of the new E65 Siphon. As of 2024, the PRRIP is exploring options to release surface water from Elwood Reservoir, through Plum Creek, and then directly to the Platte River to help offset endangered species target flows in the Platte River. This Project will help increase stream flow in the central Platte River during critical periods, restore habitat, and protect endangered species.

Will the proposed project reduce the likelihood of a species listing or otherwise improve the species status? Identify the species of interest, explain how the project will positively impact the species and potential contribute to delisting.

Over the last four years, direct evidence shows Whooping Crane uses at the Cottonwood WPA after receiving excess flows diverted through the existing siphon. Increasing usable habitat for endangered species helps to support their recovery. The new siphon addresses the aging infrastructure concerns with the existing siphon and improves the conveyance rate allowing for greater diversion of excess flows. Securing the future will allow the realized benefits for increased critical habitat to be maintained, in addition to the recharge from these sites aiding recovery of the groundwater mound and boosting drought resiliency. Additionally, the larger siphon capacity provides better opportunities for PRRIP and NeDNR to achieve goals for instream flow. The efforts to reestablish and enhance habitat by PRRIP and partner agencies such as Central have already proven successful, such as the Interior least tern was delisted in Nebraska on February 12, 2021.

2.4.1 Sub-Criterion B.3.c. Other Benefits

Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)?

This Project directly helps the State of Nebraska meet two interstate compacts for the Platte and Republican River basins. Additionally, the Project supports local Natural Resources District's to meet Integrated Management Plan (IMP) goals which are agreements between the NeDNR and local NRDs to address conjunctive water use.

Republican River Compact

The Republican River Compact (RRC), established in 1943, allocates water from the Republican River among Colorado, Kansas, and Nebraska. In Central Nebraska, several tributaries of the Republican River, such as Muddy Creek, Elk Creek, Turkey Creek, and Spring Creek, have experienced increase base flows over time. This increase is attributed to a rise in the groundwater table due to decades of irrigation and seepage from canals and reservoirs. The

delivery of surface water for irrigation through the E65 system originating from the Platte River is the reason for the water table rise, resulting in greater Republican tributary base flows.

These increase baseflows have created annual credits exceeding 10,000 AF in the Republican Basin Compact Accounting for Nebraska. Additionally, the Elwood Reservoir contributes approximately 10,000 AF to the groundwater mound (calculated as imported water supply under the RRC) further benefiting stream baseflow in the Republican River Basin which supports the RRC and the three states which are partners under the compact.

Platte River Recovery Implementation Program

The PRRIP utilizes federal, and state provided financial resources, water monitoring, and scientific monitoring and research to support the recovery of threatened and endangered species that inhabit areas of the central and lower Platte rivers while allowing for continued agricultural water use and hydropower. PRRIP is a multi-state agreement (Colorado, Wyoming, and Nebraska) with support from federal agencies including the Department of Interior. The PRRIP uses Central's canal works, specifically for recharge projects such as the groundwater recharge projects on the Phelps County Canal and Elwood Reservoir. Central works together with PRRIP to manage excess flow measurements and to deliver the program's goals. Recharge benefits of PRRIP projects also benefit water management goals for the Platte River and provides indirect benefits to the Republican River.

Overall, this Project is vital to assisting with compliance for Interstate Compacts. Without a functioning siphon, the E65 system is inoperable. Addressing the critical aging infrastructure of the siphon and increasing the conveyance with a new siphon enhances the capability to support Interstate Compact Compliance.

Will the project benefit a larger initiative to address sustainability?

Central is currently constructing a six million dollar improvement to the toe drain for the Elwood Reservoir Dam. The Project will sustain the facilities use into the indefinite future. The Elwood Reservoir Dam project is scheduled for completion in October of 2024.

As described earlier, a prominent area referred to as the groundwater mound, has created a water table rise located below the lands irrigated by Central facilities. In 2014 the groundwater mound was subject to a detailed study that delineated the approximate boundary and volume. The groundwater mound study area, defined by studying historic groundwater rises, is approximately 1,620-square miles, or 1,036,800 acres. The Elwood Reservoir subarea contains approximately 1,012,747 acre-feet (AF), or 26 % of the total. Elwood Reservoir itself is estimated to provide recharge of up to 20,000 to 25,000-AF per year.

Will the project help to prevent a water-related crisis or conflict? Is there frequently tension or litigation over water in the basin?

There are multiple stakeholders with an interest in water within the Project area. This includes Central, NeDNR, PRRIP, water users (mainly irrigators), NRDs, USFWS, among others. How water is managed by Central is constantly being observed by other water interest who are receiving benefits from Centrals irrigation system. Should the siphon fail, it is expected that tensions will rise rapidly from irrigators whose well-being is largely depending upon the ability to receive water for irrigation. Particularly high tensions are expected if the region is experiencing drought conditions. For this reason, construction of the new E65 Siphon is viewed as an action with state-wide significance and statewide support. Letters of Support for this project come from the NeDNR, the Nebraska Water Resources Association, PRRIP, the Nebraska State Irrigation Association, and the Central District Water Users and can be found in Attachment C.

The artificially high water table created by the groundwater mound has slowly been declining on the east half. Local groundwater managers have options to address their concerns. Current litigation does not exist but concerns on managing the mound are discussed with enthusiasm between surface and groundwater users and have been for decades. Because of the artificially high water table the mound creates, pumping cost to irrigators using wells are reduced. Statutorily, Central is recognized as having the water right to the mound. The mound water is often thought of as a future water supply for surface water users, should there ever be a time when the reservoirs are unable to supply irrigation water or during severe drought. Both users appreciate the benefits derived from the mound and are vocal to say as much. The NeNDR and the local NRD have developed an IMPs to ensure the mound is sustained, ultimately protecting Interstate Compact compliance, and saving the water ultimately provides a critical drought mitigation water supply. The IMP process has allowed multiple water stakeholders to work together and managed groundwater and surface water conjunctively.

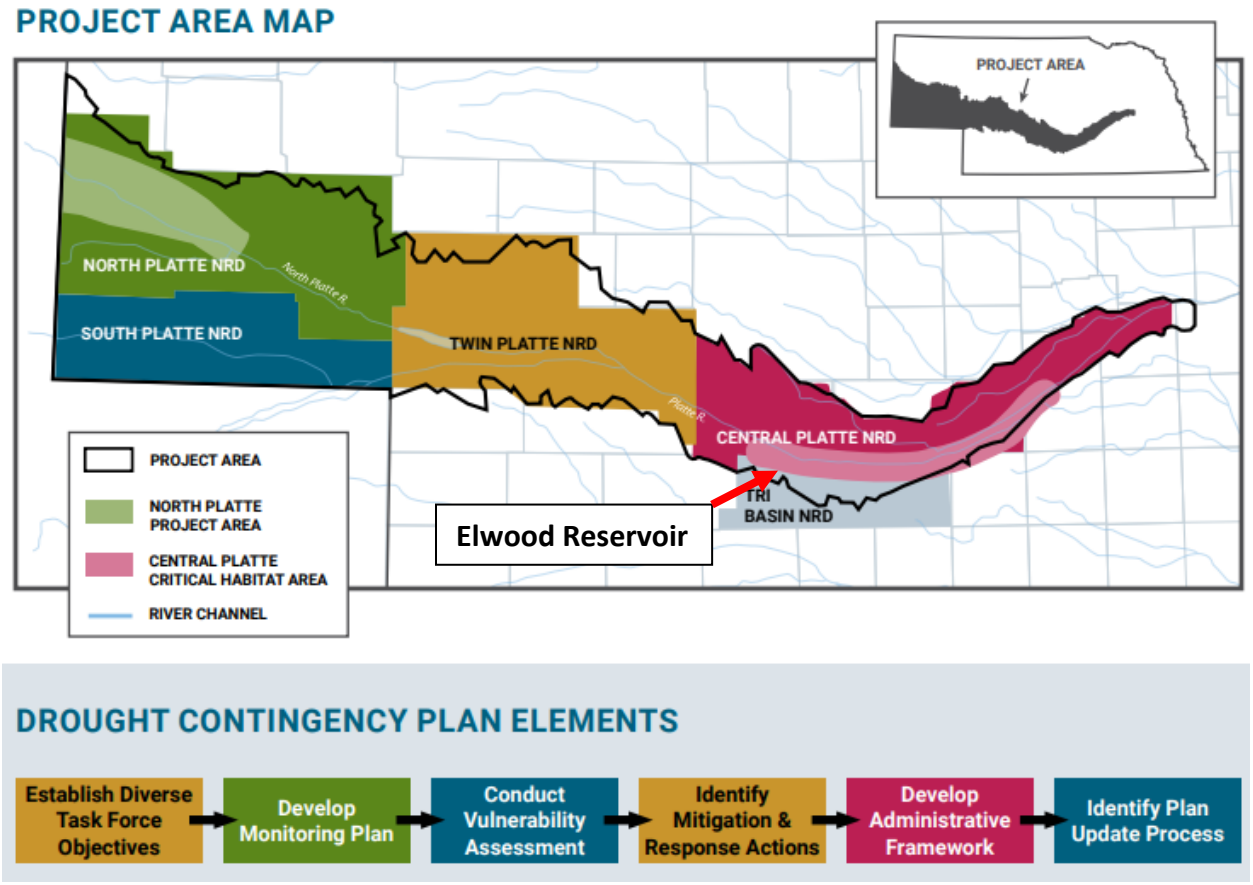
2.4.2 Evaluation Criterion C. Planning and Preparedness

Plan Description and Objective: Is your proposed project supported by a specific planning document?

The NeDNR is leading the development of a Drought Contingency Plan for the Upper Platte Basin Coalition (Coalition) funded under WaterSmart. The Coalition, along with other partners providing direct support such as Central, is developing this plan in order to refine the understanding of drought vulnerabilities and impacts in the Upper Platte Basin. Central efforts and facilities are a key component of the plan, such as recharge and Lake McConaughy levels. The plan will serve to provide more robust monitoring and forecasting tools paired with timely triggers, new mitigation strategies, and responsive actions that will create sound operational framework and improve critical water supply needs of the area during drought periods. This plan will support, contribute, and utilize pre-existing Integrated Management Plans and

Drought Mitigation or Contingency Plans. The project area map for the Upper Platte Basin Drought Contingency Plan (DCP) and key plan elements are shown in Figure 6.

Figure 6 – UPRDCP Project Area and Plan Elements



Describe how the drought plan includes consideration of climate change impacts to water resources or drought.

Based on the UPRDCP Draft Work Plan, Task 2.2 – Vulnerability Assessment, the DCP will include projections of drought that "will be reviewed with newly available climate change information to further expand the range of vulnerabilities that may exist under future drought conditions".

The UPRDCP is currently under development by NeDNR and the Phase One work plan is complete and has been accepted by USBR. The DCP, once complete and approved by the USBR, will be updated every five years. More information on the UPRDCP can be found in Attachment D or at the web link below: https://dnr.nebraska.gov/water-planning/drought-planning/upperplattebasin.

Plan Development Process: Was the plan(s) developed through a collaborative process?

Six water management agencies, that are part of the Coalition, are leading the effort including the Central Platte Natural Resources District (CPNRD), North Platte Natural Resources District (NPNRD), South Platte Natural Resources District (SPNRD), Tri-Basin Natural Resources District (TBNRD), Twin Platte Natural Resources District (TPNRD), and the NeDNR have partnered with the USBR and begun a collaborative effort to develop a Drought Contingency Plan for the Upper Platte Basin in Nebraska.

Other participants have included Central, Central, Western Irrigation District, Western Sugar Co-op, Nebraska Game and Parks Commission, Ducks Unlimited, Audubon Great Plains, Nebraska Public Power District, and Nebraska Association of Resources District.

Thus far, NeDNR has hosted four Drought Tasks Force meetings, the first occurring in July 2022 and the most recent, Meeting 4, on June 27, 2023. Each meeting has included an agenda, informational handouts, DCP overview, information on stakeholder specific projects, such as recharge and flow augmentation efforts, and presentations. The plan is scheduled to be completed in late 2024 or early 2025.

Does the plan identify the proposed project by name and location as a potential mitigation or water management action?

Central facilities and the groundwater mound are a well-documented water source and has been identified as a drought mitigation source. Continued recharge efforts with Central facilities including E65 with Elwood are recognized as a state water management priority by the NRC, NeDNR, TBNRD, the PRRIP, and agricultural producers and is anticipated to be a priority within the DCP. Central has long-term recharge agreements in place with the NeDNR and PRRIP.

Explain how the proposed project was prioritized in the plan over other potential projects/measures.

As mentioned, the DCP is currently being developed by NeDNR and participating stakeholders. It is likely that the new E65 Siphon will be a recognized as a crucial action that supports long-term drought mitigation for groundwater recharge, a source of water for irrigation, and sustainability of the groundwater mound, which supports thousands of private domestic and irrigation wells and at least five public water systems.

If the proposed project is not specifically identified in the plan, does implementing the proposed project achieve a goal or need identified in the plan? Is the supported goal or need prioritized within the plan? If so, how is it prioritized?

Currently, Coalition members have eight plans with recognized water planning and drought planning efforts, including the State of Nebraska Drought Mitigation and Response Plan, North

Platte NRD's Drought Contingency Plan, and six other Integrated Management Plans. These plans have several goals and objectives that are related to the UPRDCP benefits. Examples of these goals include the following:

1) Actions related to offsetting depletive effects of water uses.
2) Encourage water users to minimize water use while optimizing benefits.
3) Ensure a sustainable water supply is available in the amounts and location of the demands through management actions to meet the short- and long-term needs.
4) Develop and implement water use policies and practices that contribute to the protection of existing surface and groundwater uses while allowing for future water development.

The DCP will support, contribute to, and utilize these goals when developing drought mitigation planning procedures. This Project would help achieve the generalized goals listed above by ensuring a long-term, sustainable water supply. Central will remain to be an active partner in the DCP in the future.

2.4.3 Evaluation Criterion D. Readiness to Proceed and Project Implementation

In 2021, Central decided to proceed with the planning and feasibility for the new E65 Siphon. At that time, the E65 Elwood Water Supply Feasibility Report was completed and utilized to obtain state funding through the Nebraska Natural Resources Commission's Water Sustainability Fund (WSF). Since this time, Central has secured contracts for engineering design, part of Phase I – Design and final design is underway. Permitting has commenced as the final design occurs. Central has agreements for to acquire easement for project construction. A summary of the schedule showing major remaining milestones is shown in Table 4 and is subject to change based upon availability of material.

Table 4 – Project Schedule

TASK	ACTIVITY	START DATE	COMPLETION DATE
1	Project Planning/Feasibility	January 2021	July 2021
2	Land Rights	July 2023	February 2025
3	Final Design	July 2023	March 2025
4	Permitting	January 2024	March 2025
5	Bidding	January 2025	June 2025
6	Construction	August 2025	July 2027

Describe any permits or approvals that will be required (e.g., water rights, water quality, stormwater, other regulatory clearances).

Threatened and Endangered Species Consultation

- Compliance with Section 7 of the Endangered Species Act using NGPC's Conservation and Environmental Review Tool. Additionally, a field survey for ESA species was conducted should Section 7 of the Endangered Species Act consultation become necessary. No ESA species were detected. The project will need coordination with Nebraska Game and Parks Commission under their Nebraska Non-Game and Endangered Species Conservation Act, which is ongoing.

Cultural Resources Evaluation

- Consultation with History Nebraska to determine impacts on cultural or historical resources has been conducted along with a field evaluation of the entire project. The cultural resources report as part of Section 106 of the National Historic Preservation Act (NHPA) was conducted with Nebraska State Historical Society and no finding were determined to be eligible for listing under NHPA.

USACE Section 404 Permit and Clean Water Act Compliance

- Temporary impacts to Waters of the U.S. during construction. No permanent impacts are anticipated. Because this project is part of the Central Irrigation works, it is likely exempt from requiring a Section 404 Permit. Central has had meetings with the USACE to discuss the exemption and at this time we understand that a permit may not be necessary. Concurrence for exemption from the U.S. Army Corps of Engineers has been requested.

NeDNR Surface Water Right

- Central will use existing water rights; no additional rights are needed.

Gosper County Floodplain Permit

- Temporary impacts within the floodplain; a permit may be required, to be obtained mid-2025.

NPDES Permit

- An NPDES permit and SWPPP are anticipated due to construction disturbance exceeding one acre, to be obtained before construction in 2025.

Identify and describe any engineering or design work performed specifically in support of the proposed project.

Central completed the E65 Elwood Water Supply Feasibility Report in July 2021. The feasibility report evaluated no-action, repair, and new alignment alternatives. The new alignment met this goal and was carried forward. An Engineering contractor was secured and currently the project is at 50% design. A key component of design is the evaluating the cost and need between poly-coated steel an HDPE pipe. A material will be determined by the November 2024.

1) Topography: The entire site has had a topographic survey completed.

2) Soils: A full geotechnical evaluation with over twenty bore holes has been completed.
3) Land Cover: Area is pastureland.
4) Land and Water Rights: Identified affected parcels and contacted property owners early. An agreement for an easement has been signed with one of the two property owners. The second agreement is hoping to be finalized by end of 2024 or early 2025.
5) Utility Crossings: Coordination with Trailblazer Gas Pipeline for siphon placement has been placed into the engineering design.
6) Design criteria for the two-mile length (one mile siphon, one mile open canal):
    a. Hydrologic Feasibility: Designed for 450-500 cfs, located along ridgelines.
    b. Hydraulic Feasibility: Ensured system delivers water as intended.
    c. Velocity: Kept below 10 ft/s in long siphons.
    d. Utility and Terrain: Minimum 2 ft clearance for gas line, 7 ft below pipeline, 5 ft cover to avoid freezing.
7) Operation and Maintenance: Central is responsible for new system and has experience operating water systems and siphons for over 80 years.

The preferred alternative is a single HDPE pipe for reduced maintenance and longer lifespan. However, review of poly-coated and mortar lined steel pipe is ongoing due to pipe price fluctuation associated with overall project cost increases since project initiation. Final design updates ensure head loss does not exceed potential head. Additional underground piping to Elwood Reservoir is being considered. The most recent design plan set can be found in Attachment A.

Describe any land purchases that must occur before the project can be implemented, and the status of the purchase.

Central has communicated with the property owners since project conception. There are two property owners along the project. Central has an option for easement with one property owner that was acquired on in early 2024. Central hopes to secure the remaining easement in late 2024 or early 2025. The project does not cross federal lands.

Describe any new policies or administrative actions required to implement the project.

On January 5, 2023, Central's Board of Directors (BOD) voted completed a procurement process by hiring a consulting engineering team to complete final design and permitting. Central committed over two million in deign fees through an approved budget. The Central BOD has established a pipe selection committee to further support the project. The Board action will required to approve a contractor to build the Project.

2.5 Evaluation Criterion E. Presidential and Department of the Interior Priorities

2.5.1 Benefits for Disadvantaged Communities

The project is not located within a CEJST area.

2.6 Evaluation Criterion F. Nexus to Reclamation

Describe the nexus between the proposed project and a Reclamation project or Reclamation activity.

Currently, there are no active contracts with Reclamation and there are no tribes associated with the Project. However, Central undertook a major rehabilitation project when it initiated planning and design work on the E65 Canal system in 1969. Construction of Elwood Reservoir was part of the plan. Local government leaders led efforts to obtain a loan from the federal government necessary to fund the project. As a result, Central obtained a $10 million interest-free loan from the BOR in 1974 to invest -- along with $2.5 million in District funds -- in the complete rehabilitation of the E65 system. Construction of Elwood Reservoir and the Curtis Dam and Pump Station were the major part of the rehabilitation project completed in the 1978. Additionally, BOR grants were provided to the E65 system in 1997 (CA #5-FC-60-05410) and in 2007 (CA #7-FC-602233) as part of the water challenge

Central is not a Reclamation contractor and does not receive Reclamation water. Central does provide storage in Lake McConaughy for the Glendo Canals in Nebraska, which is Reclamation water.

Central does have a Water Service Agreement with the PRRIP for groundwater recharge operations in Elwood Reservoir. The Department of Interior is a Signatory to the PRRIP and Reclamation is the lead federal agency for Program NEPA compliance. Reclamation provides approximately 80% of cash contributions to the PRRIP. That money is used, in part, to acquire the water necessary to meet Program Milestones and ensure ESA compliance for federal water-related activities in the Platte Basin.

The Imported Water Supply (IWS) going into the Republican Basin is derived from the E65 System and it provides baseflow to tributaries in the Republican basin, which is located along the Frenchman – Cambridge Irrigation Canal System. The IWS reduces the need for the NeDNR to administer surface water in order to meet Interstate Compact Compliance, resulting in natural flow for the Frenchman Cambridge Irrigation District. This also provides water into Harlan County Lake that further supports the Bostwick Irrigation Districts.

2.7 Evaluation Criterion G. Stakeholder Support for Proposed Project

Support for the Project is very strong, including support from the NeDNR and PRRIP. Central has provided letters of support in Attachment C. The Nebraska Natural Resources Commission (NRC), who governs the NeDNR, has provided cost-share from the WSF, in the amount of $8,982,946, approved on December 15, 2021. The WSF funding is state funding, administered by NeDNR, and is allowed to be used as match to federal funding sources.

The Project is supported by a diverse group of statewide and local representatives as summarized below:

- Nebraska Natural Resources Commission (NRC): Manages legislation on water, power, environment, energy, and recreation. Administers the Nebraska WSF and awarded nearly $9 million to the Project in 2021.
- Nebraska Department of Natural Resources (NeDNR): Manages surface water and has agreements with Central for water storage in Elwood Reservoir to be used for recharge.
- Nebraska Game and Parks Commission (NGPC): Maintains fishery and Wildlife Management Area around Elwood Reservoir.
- Nebraska State Irrigation Association (NSIA): Supports irrigation activities in Nebraska.
- Nebraska Water Resources Association (NWRA): Advocates for water and land resource management statewide.
- Platte River Recovery Implementation Program (PRRIP): Focuses on endangered species, water management, and habitat restoration. Has rechargewater agreements with Central.
- Central District Water Users Association (CDWU): Represents Central's surface water customers for irrigation.

3 BUDGET NARRITIVE

3.1 Total Project Cost

The Project cost for the pipeline and installation was updated in September 2024 after at 50% design. A breakdown of the total cost of major categories is shown in Table 5. Details of the cost breakdown are provided in the budge narrative section below. BOR funding would be applied to the purchase of pipe.

Table 5 – Project Cost Summary

E65 New Siphon Installation Cost Estimate		
No.	Cost	Description
1	$ 21,596,428.00	108" HDPE Siphon Pipe, Flowfill and Installation
2	$ 2,170,170.00	Engineering Design and Construction Oversight
3	$ 4,414,580.00	New Canal Excavation and Liner

4	$ 4,584,800.00	Structures
5	$ 643,300.00	Bonding and Insurance
6	$ 3,496,785.00	Mobilization, Site Grading, Erosion Control, and Restoration
7	$ 250,000.00	Land and Right-of-way
8	$ 37,156,063.00	Estimated Total Project Cost

Table 6 provides a breakdown of funding sources, which includes USBR, Central, and funding from the State of Nebraska WSF. The funding request from USBR would be applied to the purchase and installation of the siphon.

Table 6 – Funding Source Summary

FUNDING SOURCES	AMOUNT	PERCENT
Non-Federal Entities		
1. Water Sustainability Fund (State of Nebraska)	$8,982,945	24
2. Central	$25,173,118	68
Non-Federal Subtotal	$34,156,063	92
REQUESTED RECLAMATION FUNDING	$3,000,000	8
TOTAL PROJECT BUDGET	$37,156,063	100

3.2 Budget Narrative

The 50% cost estimate has been produced by JEO Consulting Group, Inc. of Lincoln, Nebraska and will likely change has pipe prices fluctuate. Other design considerations could affect the final design and cost opinion. The E65 Siphon and canal life expectancy is 100-years. The design and permitting components of Phase I are underway and these cost are included in Phase 1. The BOR funding would not be used in Phase I but would be used to support the purchase of pipe for construction. See table 7 below for Phase II construction cost estimate.

Central does not intend to include and track estimated district staff hours nor do they intend to collect funding that was spent after the application was submitted. Furthermore, Central does not intend to utilize their own equipment for construction of the Project. Central will be responsible for operation and maintenance cost, which are not included in the budget. Environmental and regulatory cost have been included within Phase I. NEPA costs were not included in the contractual category as it is assumed USBR staff in Nebraska will incur most of that cost along with Central staff. The NEPA process will benefit from the completed permitting documentation that will be available at the end of 2024.

Table 7 – Engineers Conceptual Opinion of Probable Construction Cost

ENGINEER'S OPINION OF PROBABLE COST - 50% DESIGN-ESTIMATE OF QUANTITIES -Date Prepared: October 3, 2024					
Item #	Description	Unit	Quantity	Unit Price	Total
BASE BID - INSTALL/BUILD CANAL AND HDPE SIPHON					
1.	Mobilization	LS	1	$1,929,800.00	$1,929,800
2.	Bonding and Insurance	LS	1	$643,300.00	$643,300
3.	Temporary Traffic Control Measures	LS	1	$7,500.00	$7,500
4.	Clearing and Grubbing			$268,275	$268,275
12.	Construction Entrance	EA	5	$3,500.00	$17,500
13.	Temporary Construction Access	LS	1	$200,000.00	$200,000
14.	Temporary Construction Access in Wetlands	LS	1	$200,000.00	$200,000
15.	Temporary Stream Diversion/ Restoration	LS	1	$75,000.00	$75,000
16.	Dewatering	LS	1	$750,000.00	$750,000
17.	Utility (Gas) Crossing	EA	2	$20,000.00	$40,000
18.	Excavation, Spoil On-Site (Established Qty)	CY	364,863	$8.00	$2,918,904
19.	Trench Excavation and Saftey Measures	LS	1	$829,008.00	$829,008
20.	Earthwork Measured as Embankment (Established Qty)	CY	132,803	$8.00	$1,062,424
21.	HDPE Canal Liner, 80 Mil, Textured	SY	46,997	$1.00	$46,997
22.	Concrete Canal Liner	CY	81	$1,100.00	$89,100
23.	Controled Low Strength Material Backfill	CY	37,233	$150.00	$5,584,920
24.	Diversion Structure w/ Radial Gates	EA	1	$640,000.00	$640,000
25.	Flow Rating Section - Reinforced Concrete	EA	1	$55,000.00	$55,000
26.	Siphon Intake Structure	EA	1	$990,000.00	$990,000
27.	108" HDPE	LF	5,757	$2,500.00	$14,392,500
28.	Siphon Outlet Structure	EA	1	$880,000.00	$880,000
29.	Canal Outlet Structure with Stoplogs	EA	1	$1,380,000.00	$1,380,000
30.	Access Structure w/ PRV	EA	1	$207,900.00	$207,900
31.	Drawdown Valve Box	EA	1	$125,400.00	$125,400
32.	36" PVC Pipe	LF	905	$300.00	$271,500
33.	Drain Outfall Structure	EA	1	$25,000.00	$25,000
34.	Water Delivery Turnout	EA	1	$10,000.00	$10,000
35.	20" PVC Pipe	LF	20	$175.00	$3,500
36.	Placement of Salvaged Rock Riprap	TONS	595	$20.00	$11,900
37.	Rock Riprap	TONS	2,718	$100.00	$271,800
38.	Nonwoven Geotextile Fabric	SY	1,991	$5.00	$9,955
39.	Rock and Restoration			$798,710	$798,710
			Construction Subtotal	Base Bid	$34,735,893
				Total Opinion of Construction Cost	**$34,735,893**
PROFESSIONAL SERVICES					
1.	Engineering Design				$2,170,170
2.	Land and Right-of-Way				$250,000
				Subtotal Professional Services	$2,420,170
				Total Opinion of Project Cost	**$37,156,063**

4 ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

4.1 H.1 Environmental and Cultural Resource Considerations

Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts, as well as any other past, present, or reasonably foreseeable future developments that you are aware of that will affect these same resources in the surrounding area.

The majority of the construction will occur on land currently used as a cattle pasture. The limits of construction are generally described as 150-feet wide along the canal and 100-feet wide along the siphon. There will be approximately 10-acres of undisturbed land for stockpiling supplies, mainly pipe, and other construction materials. Other earth disturbances will occur at the inlet and outlet to the reservoir, plus construction access locations. Temporary impacts will be mitigated through the use of best management practices (BMPs) to limit stormwater runoff around the Project site. The Storm Water Pollution Prevention Plan (SWPPP) as part of a NPDES permit will outline BMPs to limit erosion and sediment runoff. There are no past, present, or foreseeable future developments in the project area.

Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?

Initial desktop reviews have indicated the project was on the edge of habitat for the endangered species American Burying Beetle (ABB). A field trapping survey was conducted in coordination with the USFWS and not ABBs were found in the project area. Construction activities will comply with the Migratory Bird Treaty Act. The current toe-drain improvements at Elwood Reservoir Dam were consulted for permitting and it is expected that because this Project is in nearly the same location, that no federally listed species or critical habitat will be affected.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States?" If so, please describe and estimate any impacts the proposed project may have.

Through meetings with the USACE in 2024, this may be considered exempt under Section 404 because it is part of the Central Irrigation works. There is less than one acre of wetlands and surface waters inside the Project area where the siphon would cross Plum Creek and not all of this area may be impacted. The riparian area at that location is approximately 1,400 feet wide. Any impacts to wetlands or WOUS will be temporary during construction.

When was the water delivery system constructed?

This E65 Siphon and canal will involve the construction of a new water delivery system to replace an existing structures installed during the late 1930s and made operational in 1941. The new E65 Siphon will be nearly 2,600 linear feet shorter than the existing siphon system.

Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.

It is not anticipated that any changes will be required to the existing E65 Canal system above or below Elwood Reservoir other than what is necessary for operation of the new siphon.

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.

No. A desktop and phase I pedestrian field survey was conducted by walking the alignment and it was determine that none of the findings are eligible for listing under NRHP.

Are there any known archeological sites in the proposed project area?

No. A phase I pedestrian field survey was conducted by the State Archeology Office (SAO) and they no sites were recommended for NRHP. Additionally, Archeological sites are considered in Central's Cultural Resources Management Plan Programmatic Agreement with the Nebraska SHPO should any unknown site become observed during construction.

Will the proposed project have an adverse and disproportionate effect on communities with environmental justice concerns (as discussed in E.O. 14096)?

There are no residences or communities within the Project area.

Will the proposed project limit access to, and ceremonial use of, Indian sacred sites or result in other impacts on Tribal lands?

No. There are no impacts anticipated to ceremonial or sacred sites. Central will work with local USBR NEPA staff to ensure there is no impact.

Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?

Post construction, Central's operation and maintenance procedures will include ensuring newly seeded areas are void of noxious or non-native invasive species.

4.2 H.1.1. National Environmental Policy Act (NEPA)

Central will review and comply with all NEPA and BOR requirements. Central staff will coordinate all required NEPA documentation in collaboration with the BOR as required. Based on the current status of the project at 50% design and completion of most environmental field work with agency consultation complete, we hope this project would have the opportunity to qualify as a categorical exclusion.

4.3 National Historic Preservation Act (NHPA)

A phase I pedestrian field survey was conducted by the State Archeology Office (SAO) and the cultural resources report did not make recommendation for any finding to be eligible for NRHP.

4.4 Endangered Species Act (ESA)

Initial desktop reviews have indicated the project was on the edge of habitat for the endangered species American Burying Beetle (ABB). A field trapping survey was conducted in coordination with the USFWS and no ABBs were found in the project area. Although no ESA appear to be located on the project site, Central intends to comply with all ESA Section 7 and BOR requirements.

5 REQUIRED PERMITS OR APPROVALS

Many required permits and approvals are currently being finalized. Information from the permitting and approval process should help the NEPA process review required by USBR, prior to any ground disturbing work. The Project may have the opportunity to qualify for a Categorical Exclusion under NEPA base environmental field work already being completed. The following items are complete will likely be complete by 2024:

Threatened and Endangered Species Consultation

- Field trapping survey for ABB was completed with USFWS coordination and no species were found. No other surveys were recommend to comply with Section 7 consultation.

Cultural Resources Evaluation

- Consultation with History Nebraska has been completed and no sites were eligible for NHPA.

USACE Section 404 Permit and Clean Water Act Compliance

- Based on meetings with the USACE it appears that this project and the Central Irrigation works is exempt and does not require a section 404 permit for temporary impacts to Waters of the U.S. during construction. Central has requested concurrence for the exemption from the USACE.

NeDNR Surface Water Right

- Central will use existing water rights; no additional rights are needed.

Gosper County Floodplain Permit

- Temporary impacts within the floodplain; a permit may be required, to be obtained mid-2025.

NPDES Permit

- An NPDES permit and SWPPP are anticipated due to construction disturbance exceeding one acre, to be obtained before construction in 2025.

6 OVERLAP OR DUPLICATION OF EFFORTS STATEMENT

Central does not have any overlap between the proposed Project and any other active or anticipated proposed projects.

Central would like to acknowledge that the project has received funding from the Nebraska WSF, which does not originate from federal appropriations. This application is for the same project that was supported by the WSF and may support as federal cost match.

7 CONFLICT OF INTEREST DISCLOSURE STATEMENT

Central does not have a Conflict of Interest.

8 UNIFORM AUDIT REPORTING STATEMENT

Central was not required to submit a Single Audit report.

9 SF-LLL: DISCLOSE OF LOBBYING ACTIVITY (if Applicable)

Not applicable.

10 LETTERS OF SUPPORT

Letters of support from the following entities are included in Attachment C.

11 OFFICIAL RESOLUTION

Central, if selected, will provide a Board of Directors resolution prior to award and provide a financial statement documenting sufficient funds necessary to complete the project.

12 LETTERS OF FUNDING COMMITMENT

Central has received state funding from the WSF and if selected for award, Central will provide a letter of support should those funds be used as a third-party cost share.

13 UNIQUE ENTITY IDENTIFIER

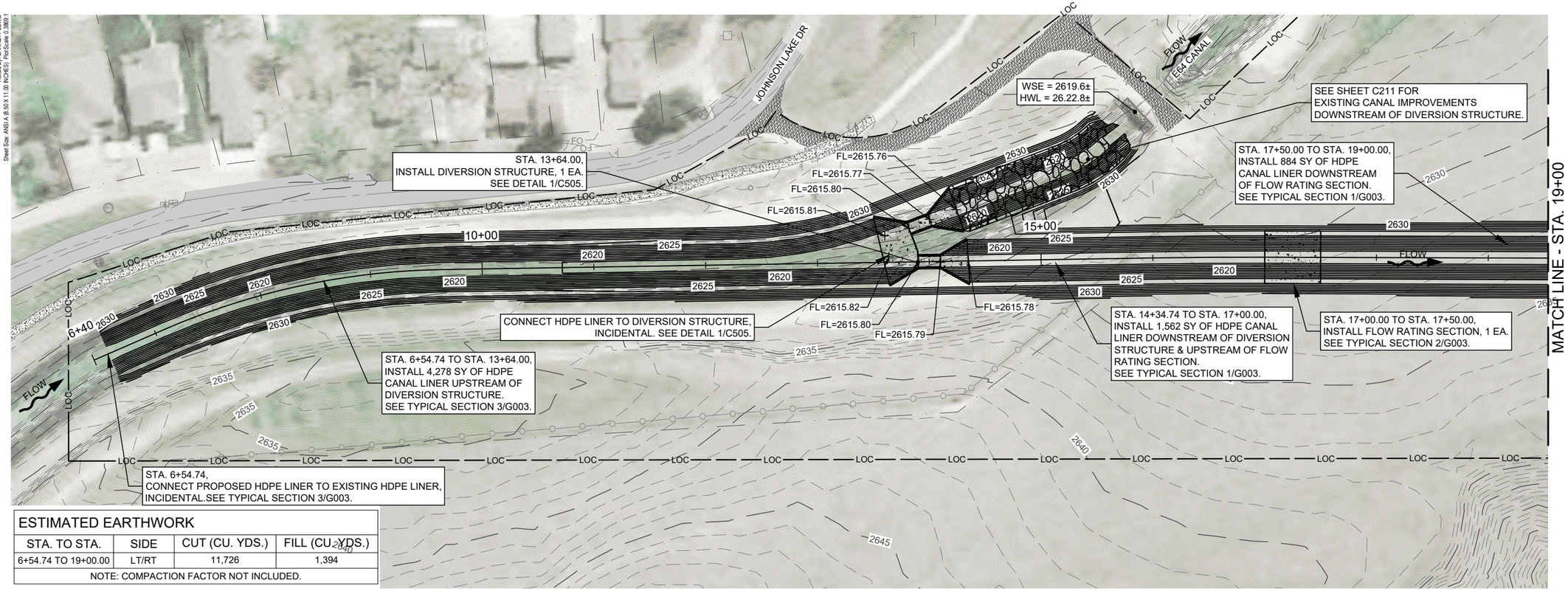
CLGZJG2BLM23

14 Mandatory Federal Forms

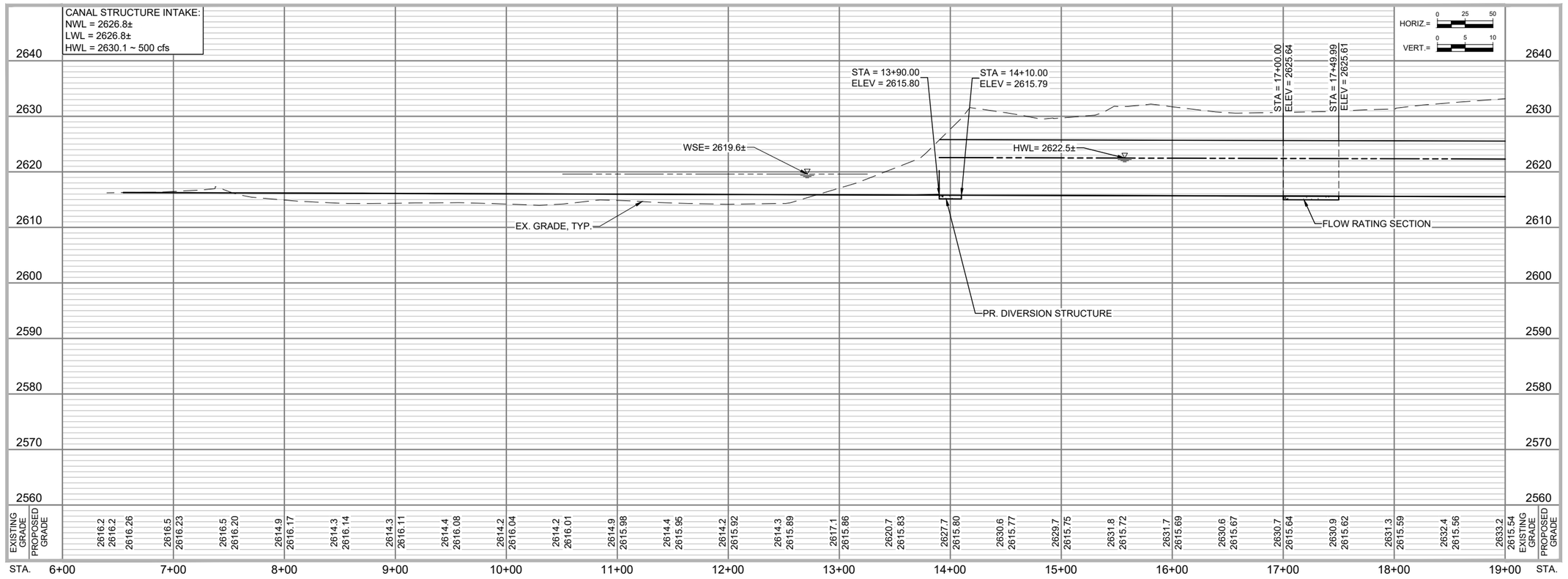
ENGINEER'S OPINION OF PROBABLE COST - 50% DESIGN-ESTIMATE OF QUANTITIES -Date Prepared: October 3, 2024

Item #	Description	Unit	Quantity	Unit Price	Total
BASE BID - INSTALL/BUILD CANAL AND HDPE SIPHON					
1.	Mobilization	LS	1	$1,929,800.00	$1,929,800
2.	Bonding and Insurance	LS	1	$643,300.00	$643,300
3.	Temporary Traffic Control Measures	LS	1	$7,500.00	$7,500
4.	Clearing and Grubbing			$268,275	$268,275
12.	Construction Entrance	EA	5	$3,500.00	$17,500
13.	Temporary Construction Access	LS	1	$200,000.00	$200,000
14.	Temporary Construction Access in Wetlands	LS	1	$200,000.00	$200,000
15.	Temporary Stream Diversion/ Restoration	LS	1	$75,000.00	$75,000
16.	Dewatering	LS	1	$750,000.00	$750,000
17.	Utility (Gas) Crossing	EA	2	$20,000.00	$40,000
18.	Excavation, Spoil On-Site (Established Qty)	CY	364,863	$8.00	$2,918,904
19.	Trench Excavation and Saftey Measures	LS	1	$829,008.00	$829,008
20.	Earthwork Measured as Embankment (Established Qty)	CY	132,803	$8.00	$1,062,424
21.	HDPE Canal Liner, 80 Mil, Textured	SY	46,997	$1.00	$46,997
22.	Concrete Canal Liner	CY	81	$1,100.00	$89,100
23.	Controled Low Strength Material Backfill	CY	37,233	$150.00	$5,584,920
24.	Diversion Structure w/ Radial Gates	EA	1	$640,000.00	$640,000
25.	Flow Rating Section - Reinforced Concrete	EA	1	$55,000.00	$55,000
26.	Siphon Intake Structure	EA	1	$990,000.00	$990,000
27.	108" HDPE	LF	5,757	$2,500.00	$14,392,500
28.	Siphon Outlet Structure	EA	1	$880,000.00	$880,000
29.	Canal Outlet Structure with Stoplogs	EA	1	$1,380,000.00	$1,380,000
30.	Access Structure w/ PRV	EA	1	$207,900.00	$207,900
31.	Drawdown Valve Box	EA	1	$125,400.00	$125,400
32.	36" PVC Pipe	LF	905	$300.00	$271,500
33.	Drain Outfall Structure	EA	1	$25,000.00	$25,000
34.	Water Delivery Turnout	EA	1	$10,000.00	$10,000
35.	20" PVC Pipe	LF	20	$175.00	$3,500
36.	Placement of Salvaged Rock Riprap	TONS	595	$20.00	$11,900
37.	Rock Riprap	TONS	2,718	$100.00	$271,800
38.	Nonwoven Geotextile Fabric	SY	1,991	$5.00	$9,955
39.	Rock and Restoration			$798,710	$798,710
				Construction Subtotal Base Bid	$34,735,893
				Total Opinion of Construction Cost	**$34,735,893**
PROFESSIONAL SERVICES					
1.	Engineering Design				$2,170,170
2.	Land and Right-of-Way				$250,000
				Subtotal Professional Services	$2,420,170
				Total Opinion of Project Cost	**$37,156,063**

ATTACHMENT A – PROJECT DESIGN



ESTIMATED EARTHWORK			
STA. TO STA.	SIDE	CUT (CU. YDS.)	FILL (CU. YDS.)
6+54.74 TO 19+00.00	LT/RT	11,726	1,394
NOTE: COMPACTION FACTOR NOT INCLUDED.			



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Authorization Number: CA-0069

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50%
PRELIMINARY PRELIMINARY

ISSUE

MARK	DATE	DESCRIPTION
01	{07/xx/2024}	50% PRELIM DESIGN

NEW E65 CANAL AND SIPHON TO ELWOOD RESERVOIR
GOSPER COUNTY, NEBRASKA

CENTRAL NEBRASKA PUBLIC POWER AND IRRIGATION DISTRICT
HOLDREGE, NEBRAKSA

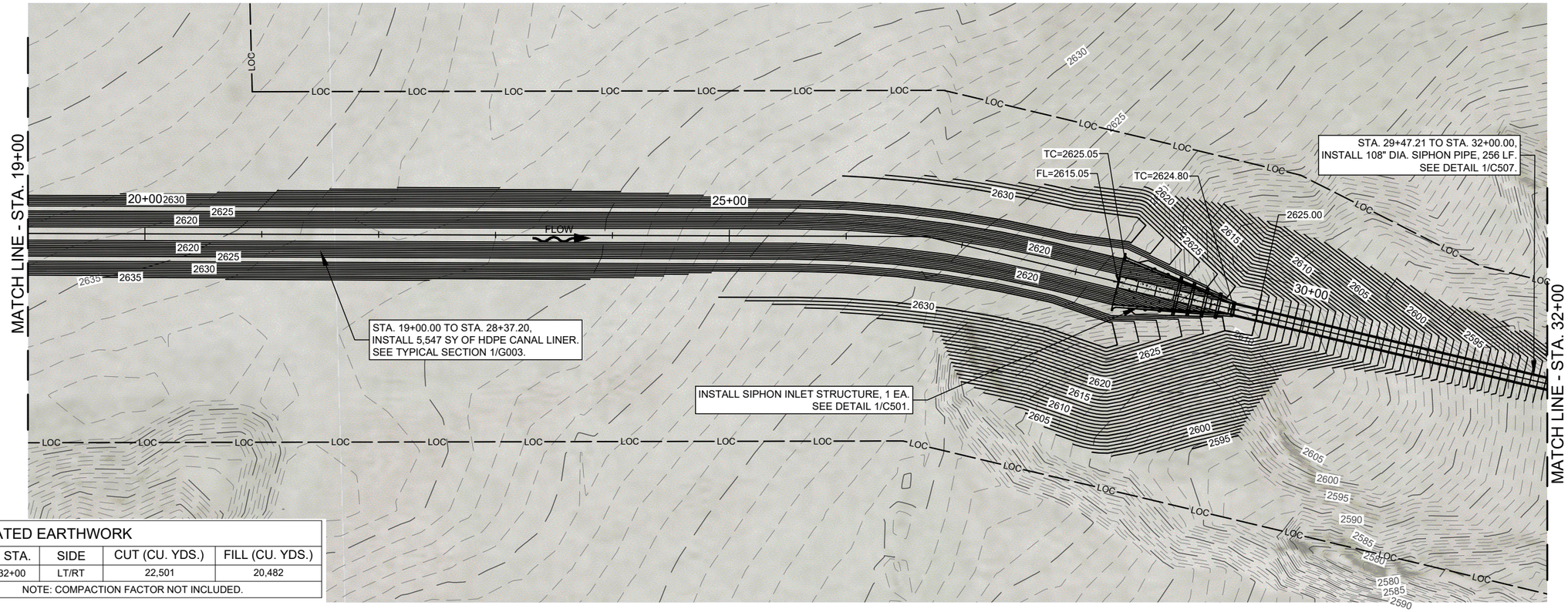
JEO Project No.:	210635.00
Drawn by:	GTL
QAQC:	KWK

US SURVEY FEET (sFT)

PLAN & PROFILE

STA. 6+40 TO STA. 19+00

C201



ESTIMATED EARTHWORK			
STA. TO STA.	SIDE	CUT (CU. YDS.)	FILL (CU. YDS.)
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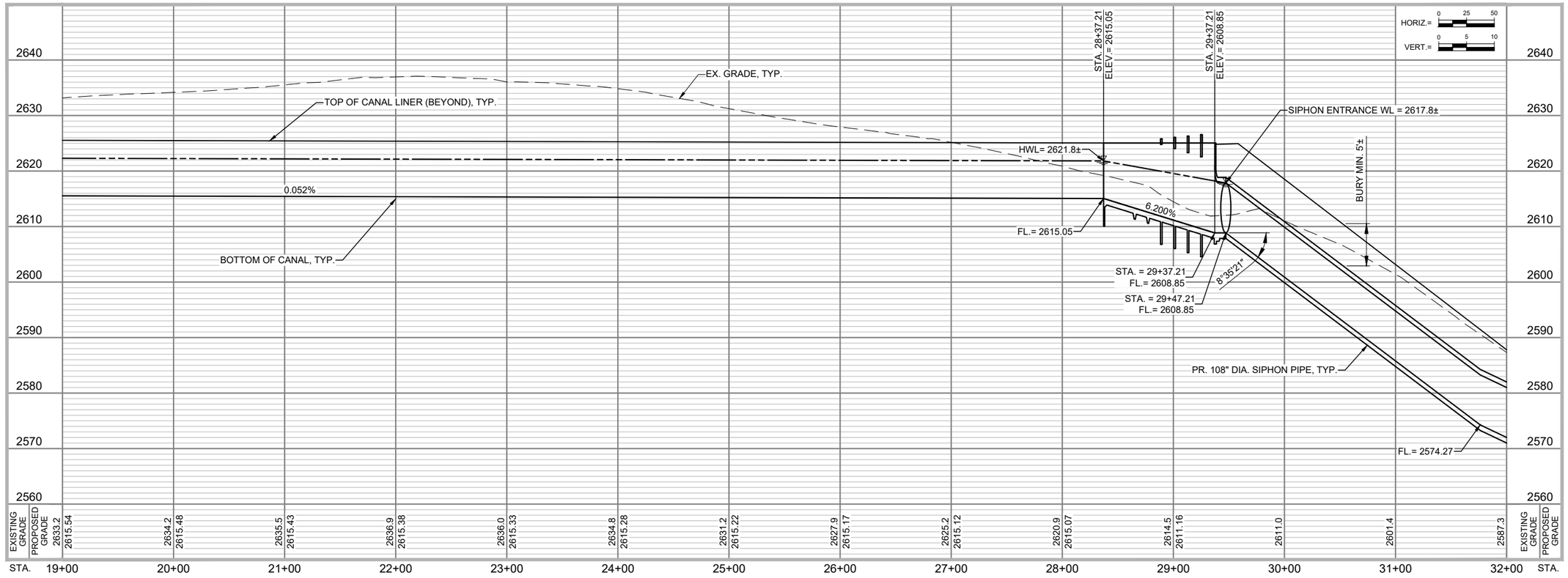
NOTE: COMPACTION FACTOR NOT INCLUDED.			



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HOLDREGE, NEBRAKSA

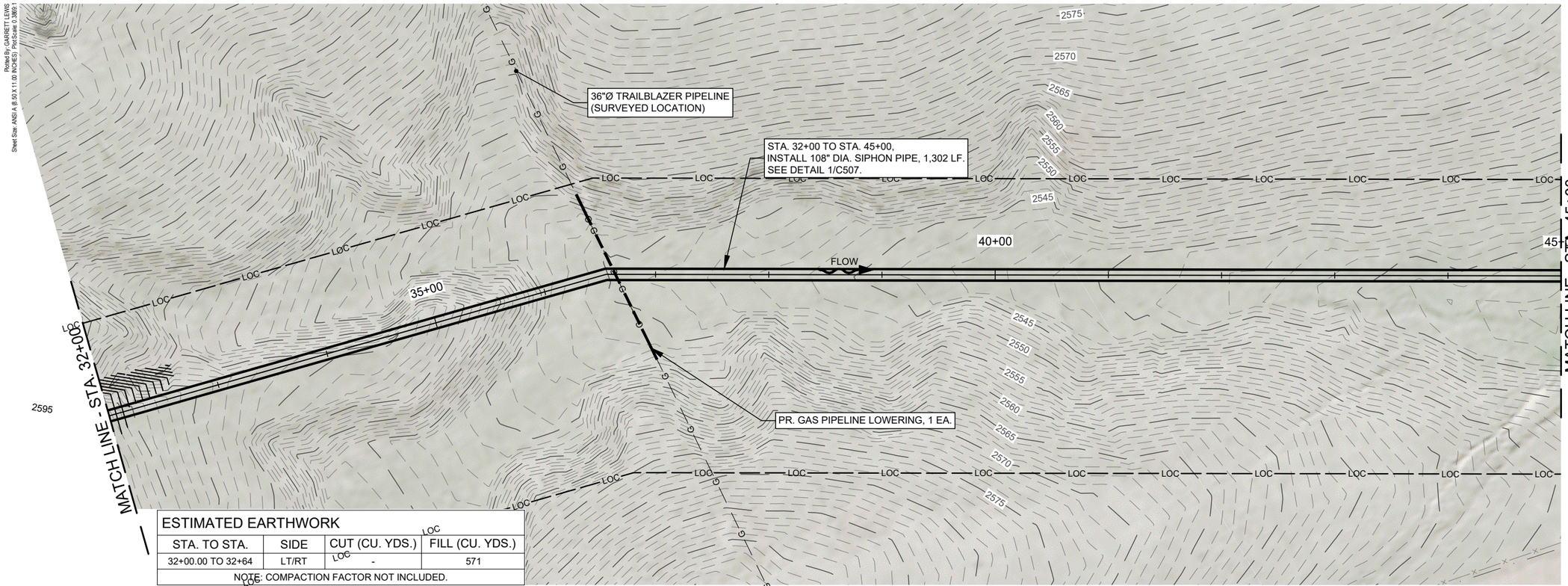
JEO Project No.: 210635.00
Drawn by: GTL
QAQC: KWK

US SURVEY FEET (sFT)

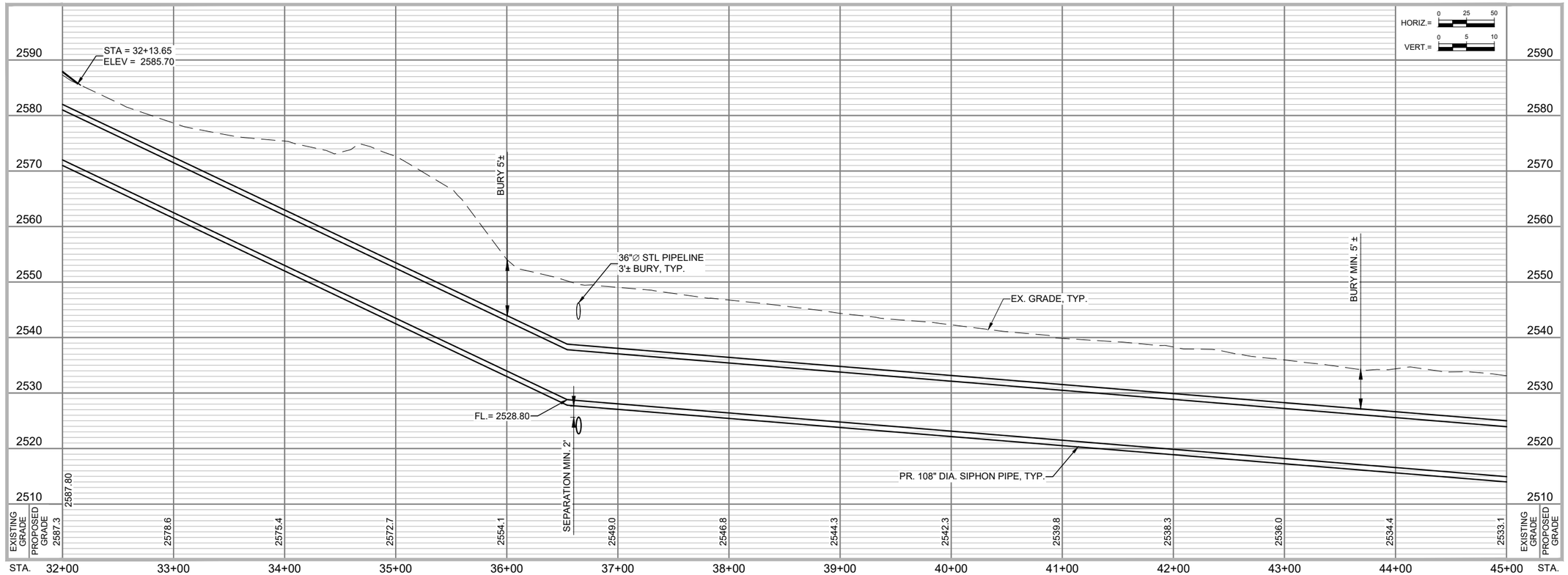
PLAN & PROFILE

STA. 19+00 TO STA. 32+00

C202



ESTIMATED EARTHWORK			
STA. TO STA.	SIDE	CUT (CU. YDS.)	FILL (CU. YDS.)
32+00.00 TO 32+64	LT/RT	-	571
NOTE: COMPACTION FACTOR NOT INCLUDED.			



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CENTRAL NEBRASKA PUBLIC POWER AND IRRIGATION DISTRICT
HOLDREGE, NEBRAKSA

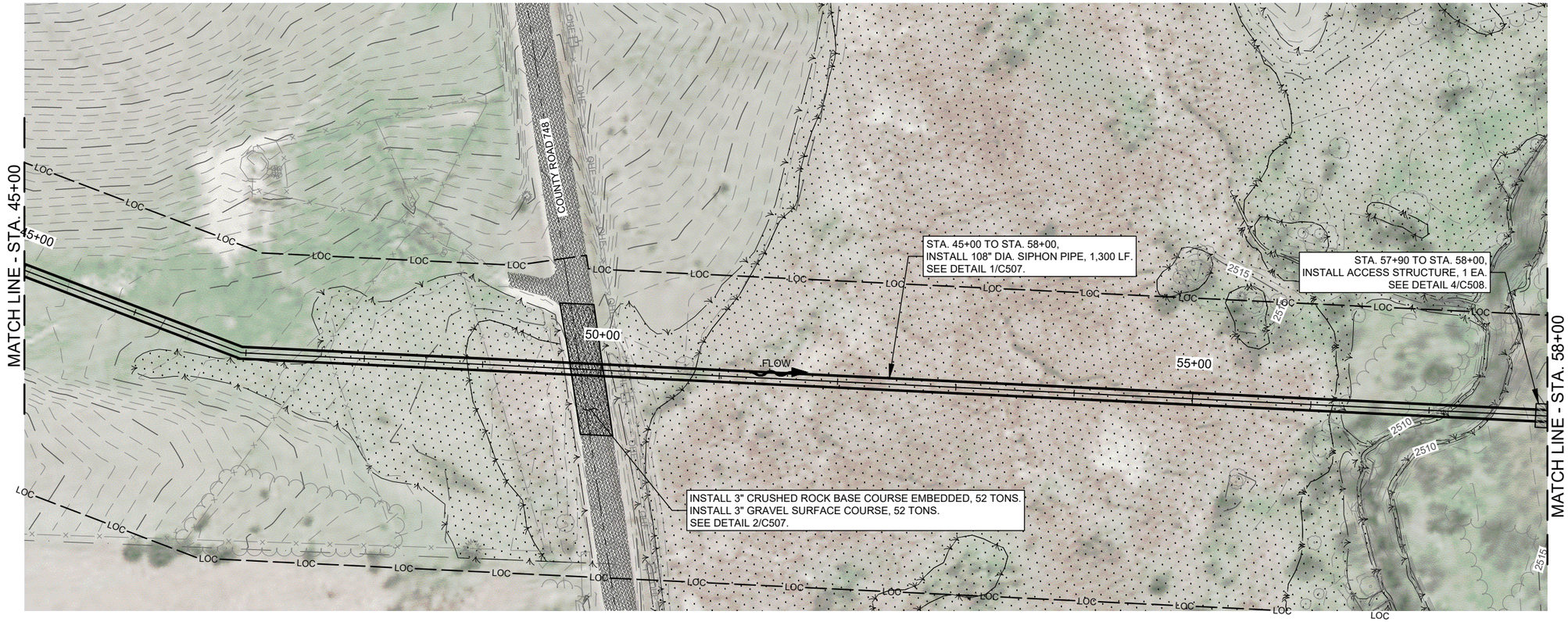
JEO Project No.:	210635.00
Drawn by:	GTL
QAQC:	KWK

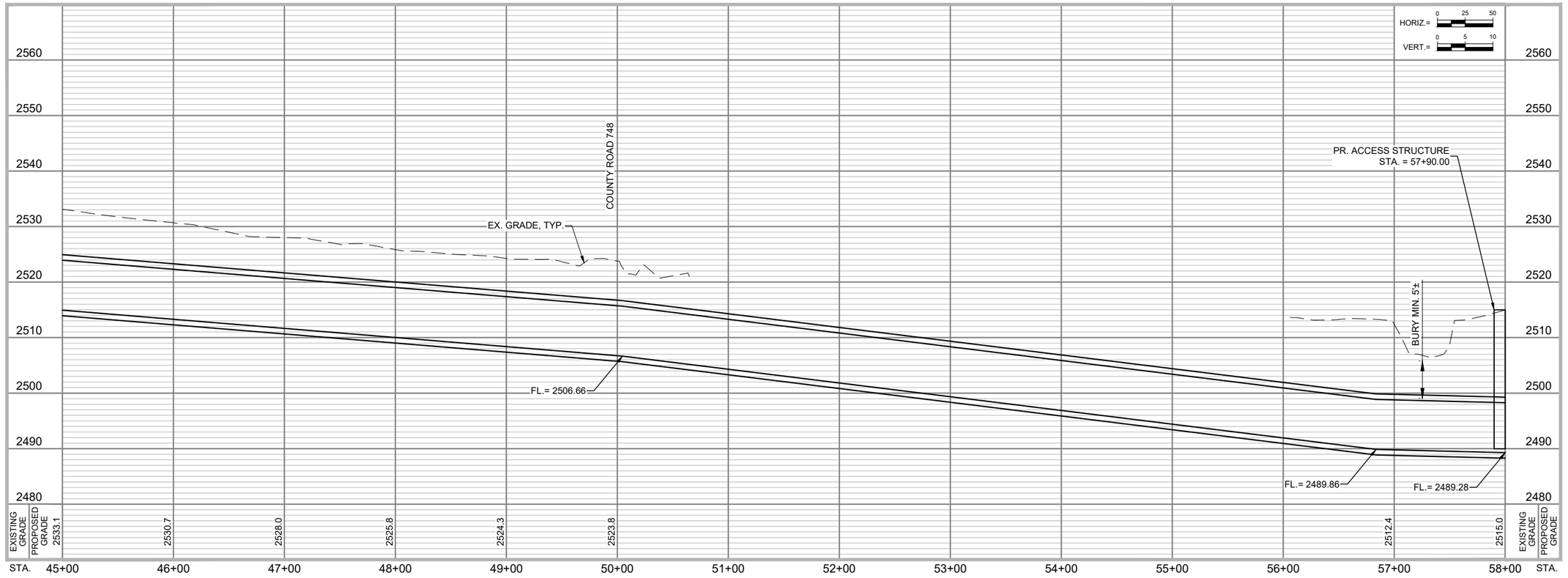
US SURVEY FEET (sFT)

PLAN & PROFILE

STA. 32+00 TO STA. 45+00

C203





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HOLDREGE, NEBRAKSA

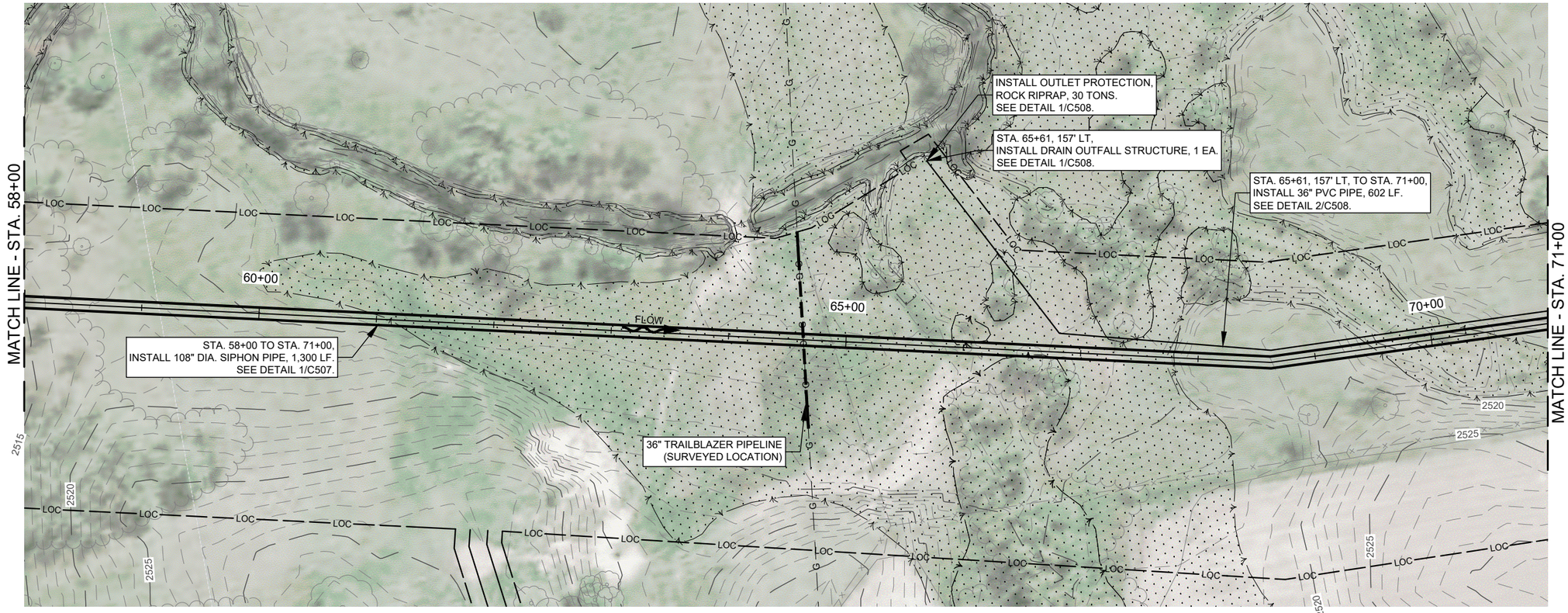
JEO Project No.:	210635.00
Drawn by:	GTL
QAQC:	KWK

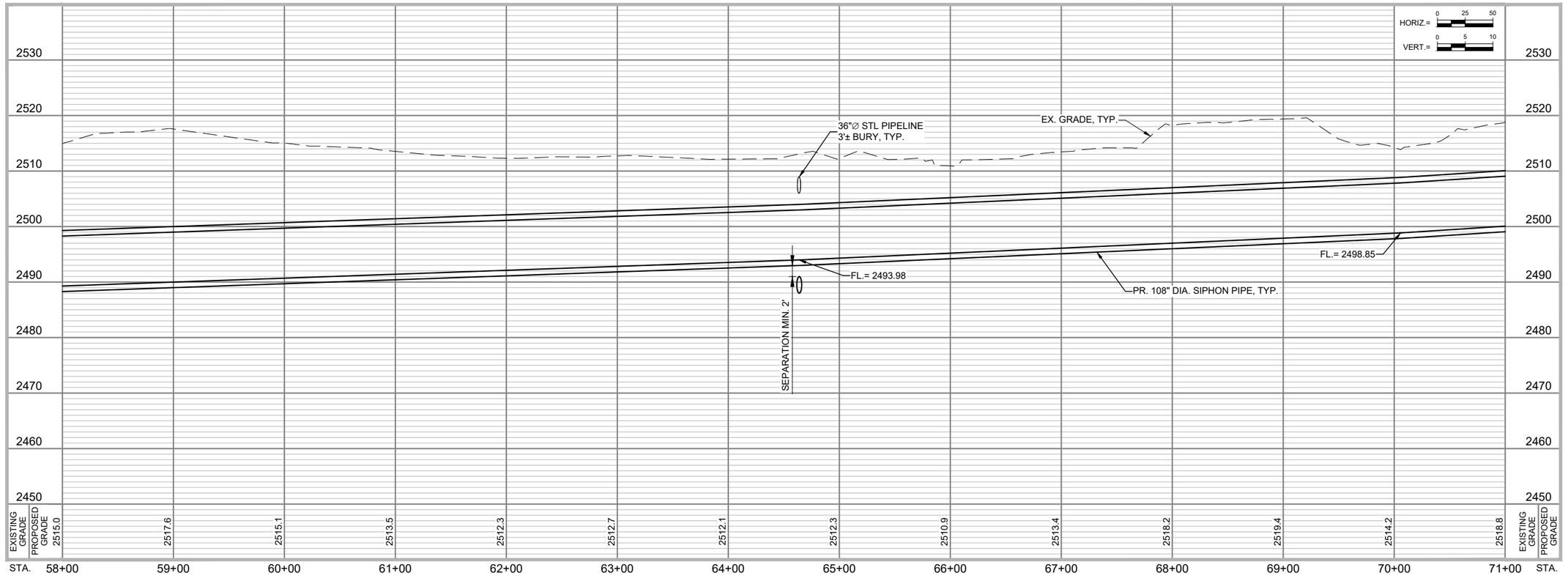
US SURVEY FEET (sFT)

PLAN & PROFILE

STA. 45+00 TO STA. 58+00

C204





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CENTRAL NEBRASKA PUBLIC POWER AND IRRIGATION DISTRICT
HOLDREGE, NEBRAKSA

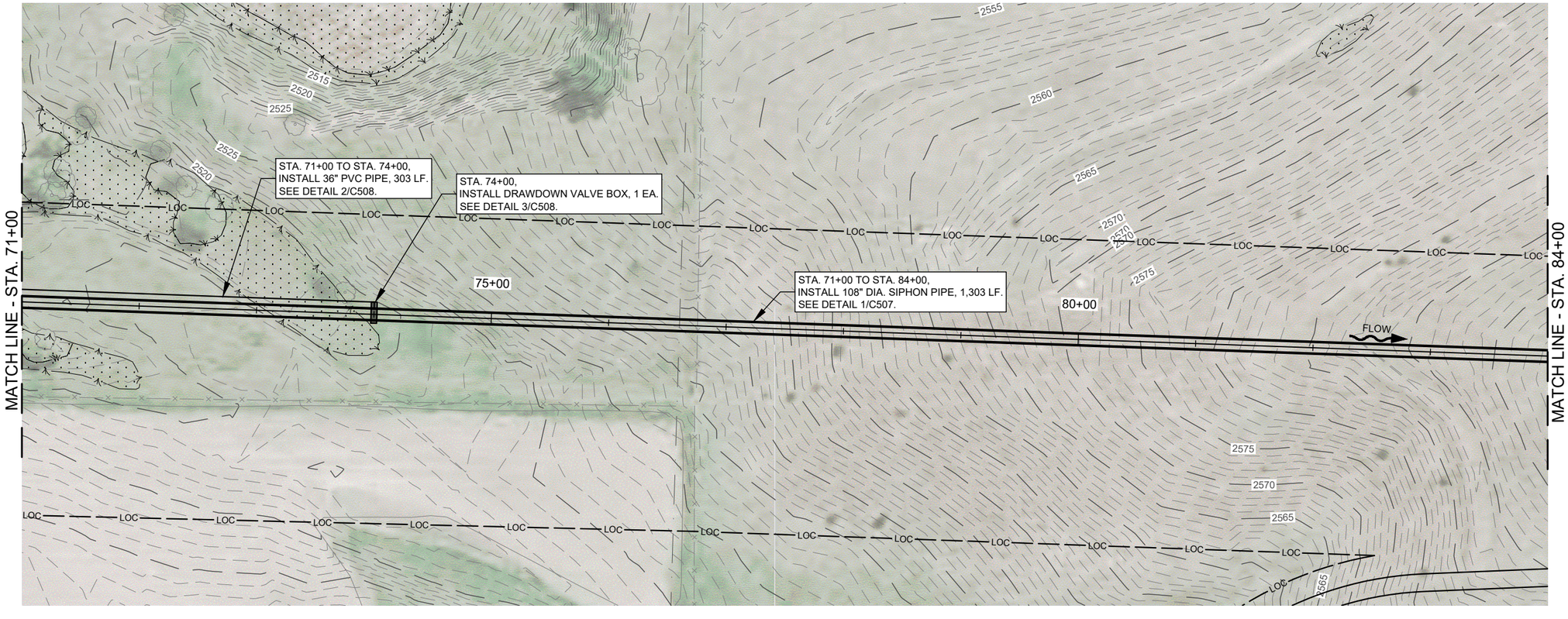
JEO Project No.:	210635.00
Drawn by:	GTL
QAQC:	KWK

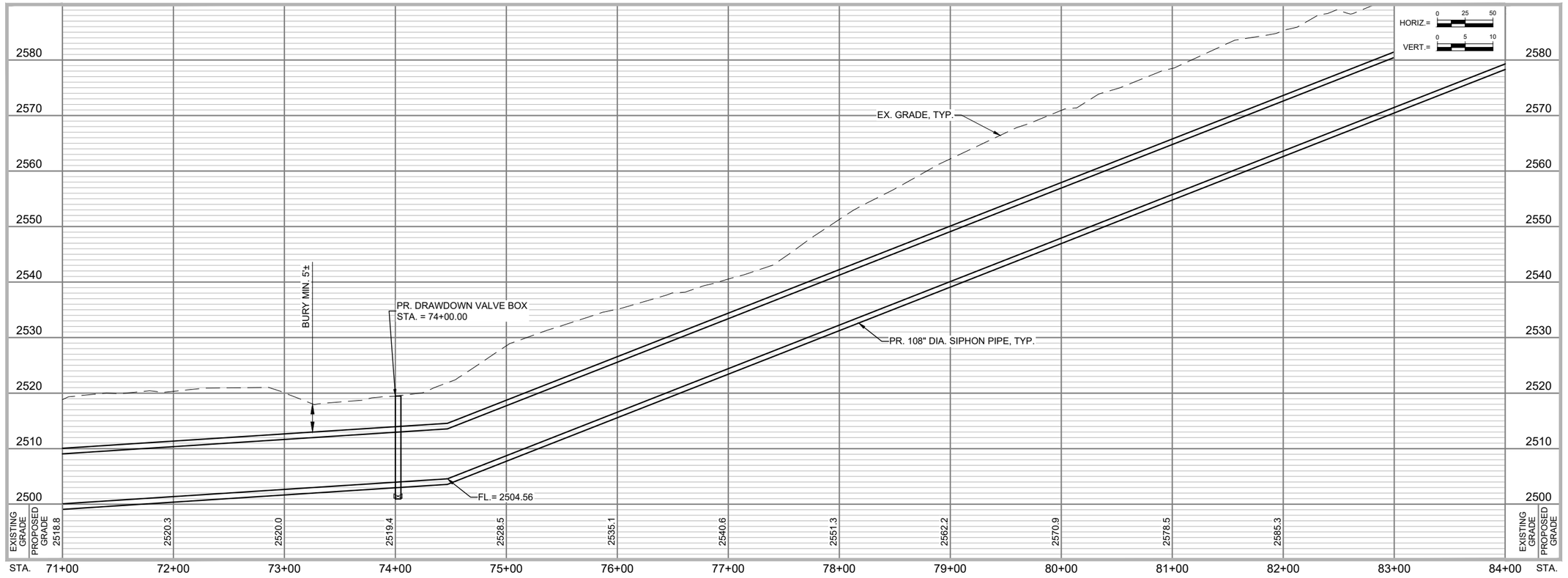
US SURVEY FEET (sFT)

PLAN & PROFILE

STA. 58+00 TO STA. 71+00

C205





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CENTRAL NEBRASKA PUBLIC POWER AND IRRIGATION DISTRICT
HOLDREGE, NEBRAKSA

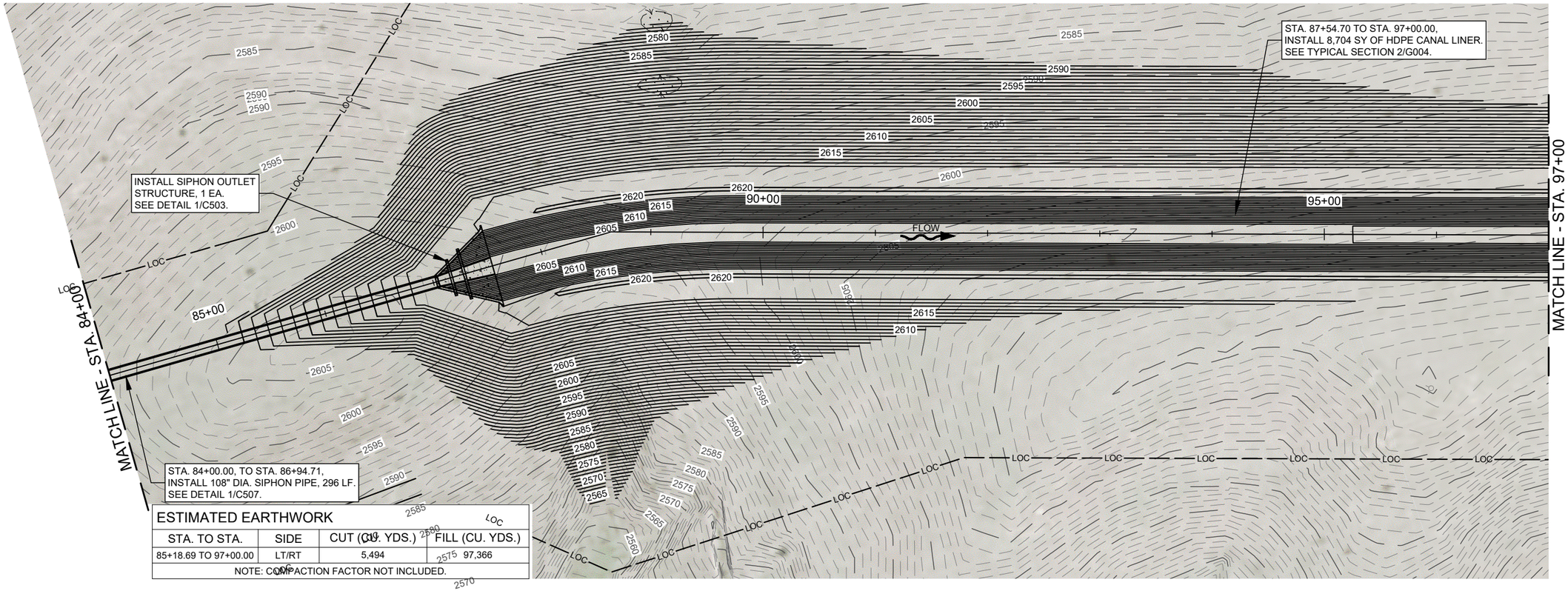
JEO Project No.:	210635.00
Drawn by:	GTL
QAQC:	KWK

US SURVEY FEET (sFT)

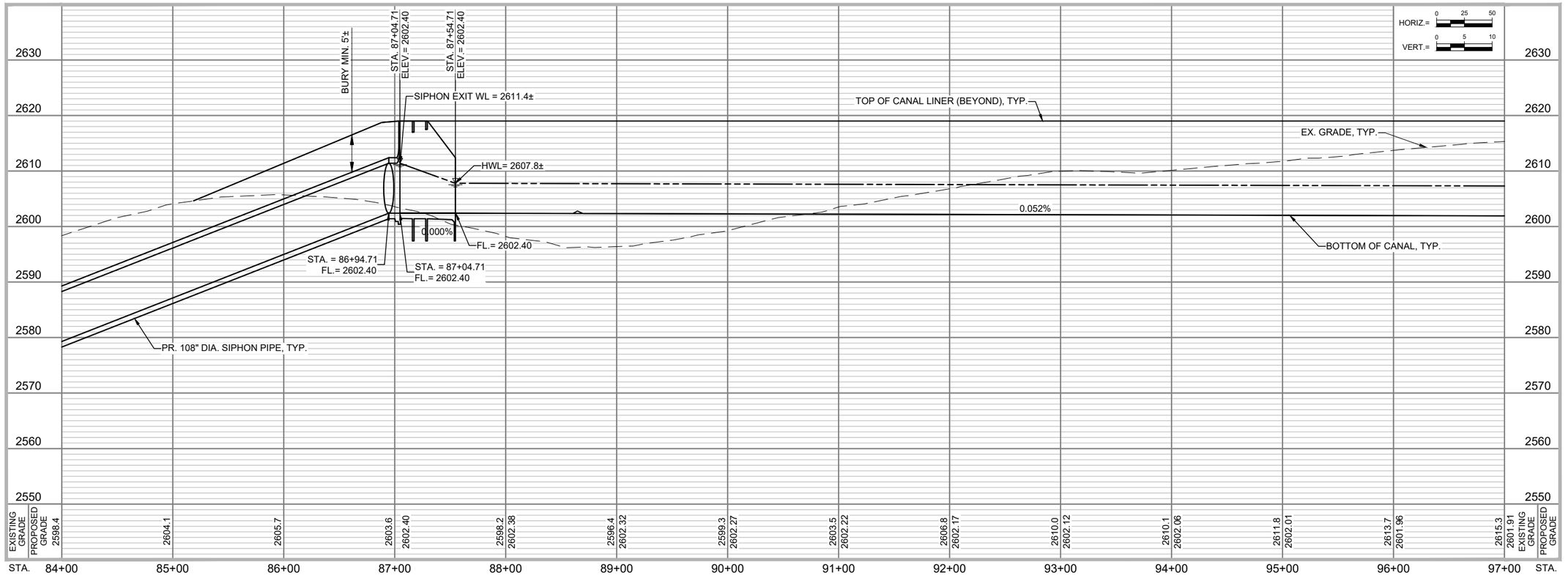
PLAN & PROFILE

STA. 71+00 TO STA. 84+00

C206



ESTIMATED EARTHWORK			
STA. TO STA.	SIDE	CUT (CU. YDS.)	FILL (CU. YDS.)
85+18.69 TO 97+00.00	LT/RT	5,494	97,366
NOTE: COMPACTION FACTOR NOT INCLUDED.			



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HOLDREGE, NEBRAKSA

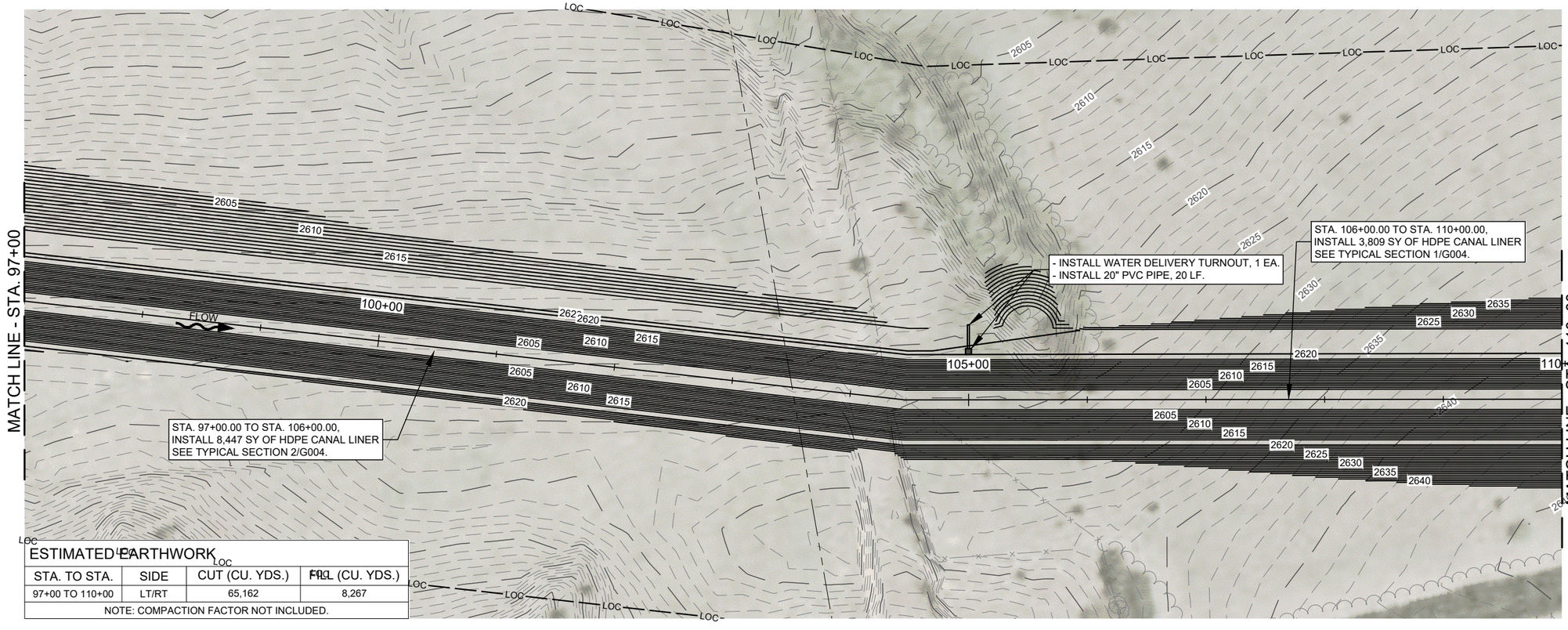
JEO Project No.:	210635.00
Drawn by:	GTL
QAQC:	KWK

US SURVEY FEET (sFT)

PLAN & PROFILE

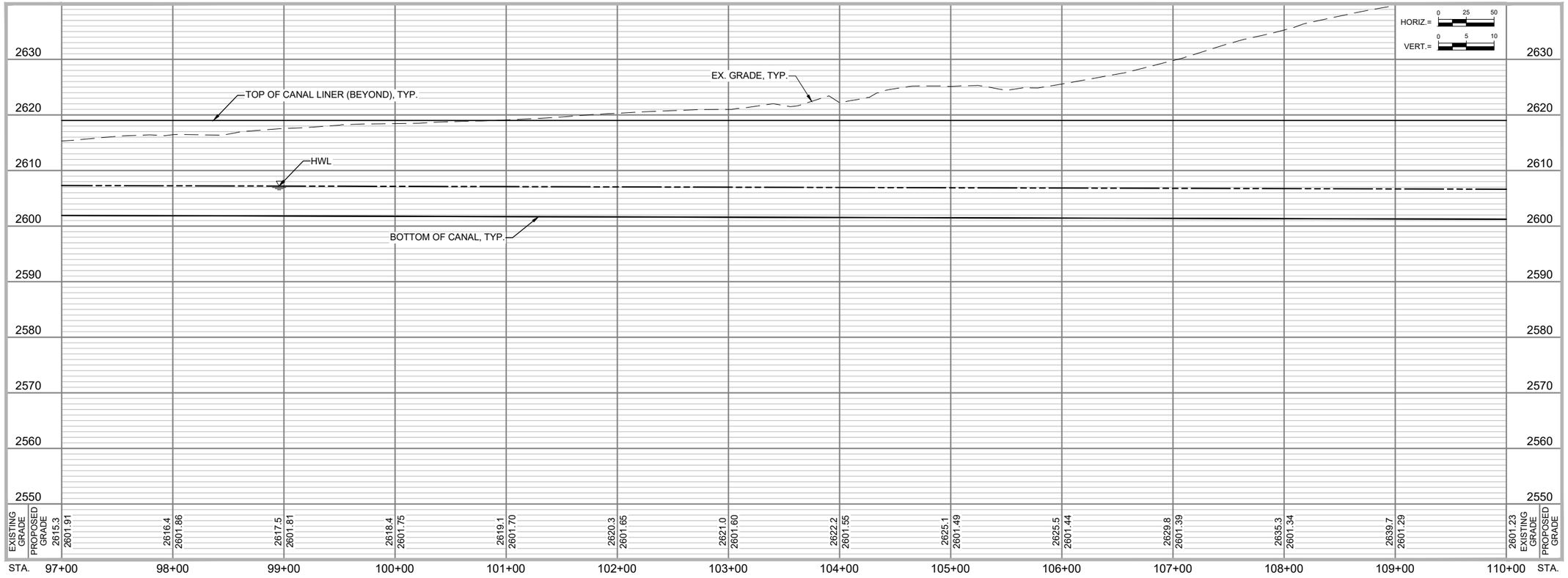
STA. 84+00 TO STA. 97+00

C207



ESTIMATED EARTHWORK

STA. TO STA.	SIDE	CUT (CU. YDS.)	FILL (CU. YDS.)
97+00 TO 110+00	LT/RT	65,162	8,267
NOTE: COMPACTION FACTOR NOT INCLUDED.			



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GOSPER COUNTY, NEBRASKA

CENTRAL NEBRASKA PUBLIC POWER AND IRRIGATION DISTRICT
HOLDREGE, NEBRAKSA

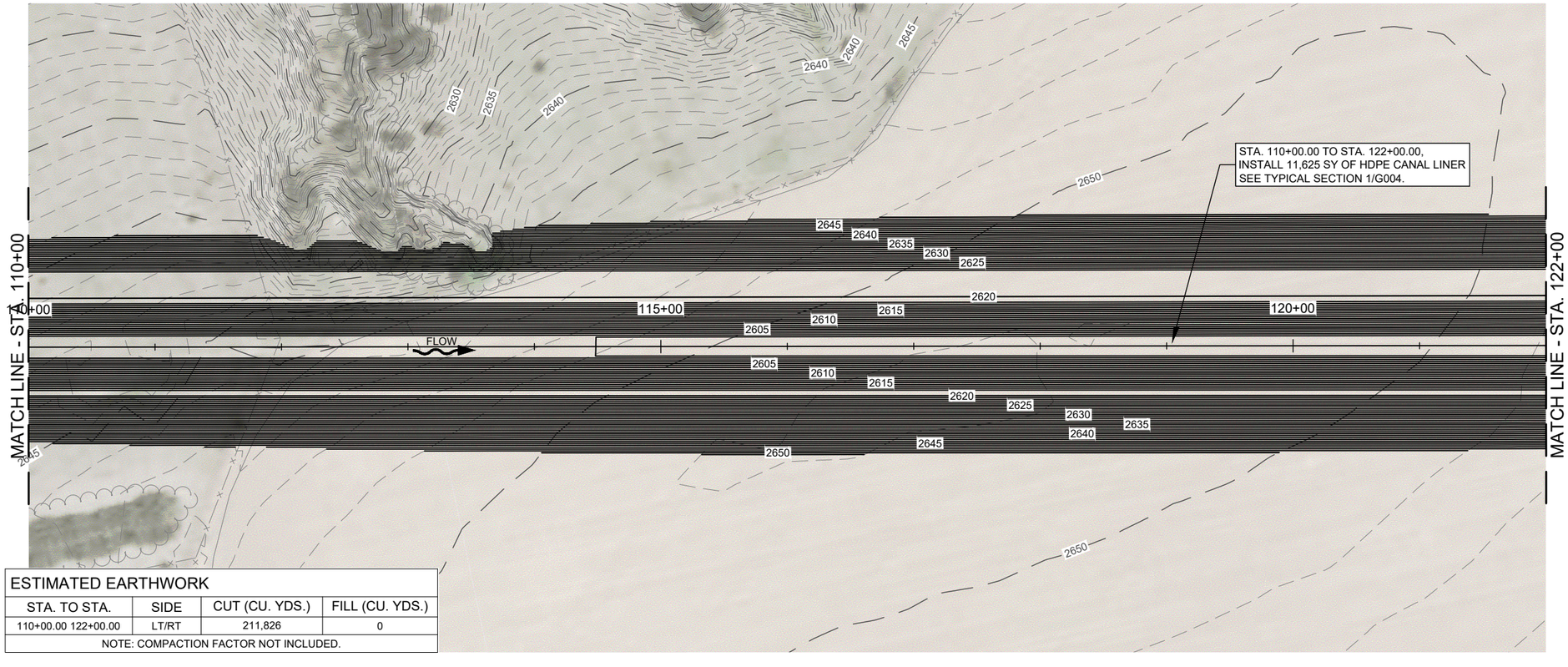
JEO Project No.:	210635.00
Drawn by:	GTL
QAQC:	KWK

US SURVEY FEET (sFT)

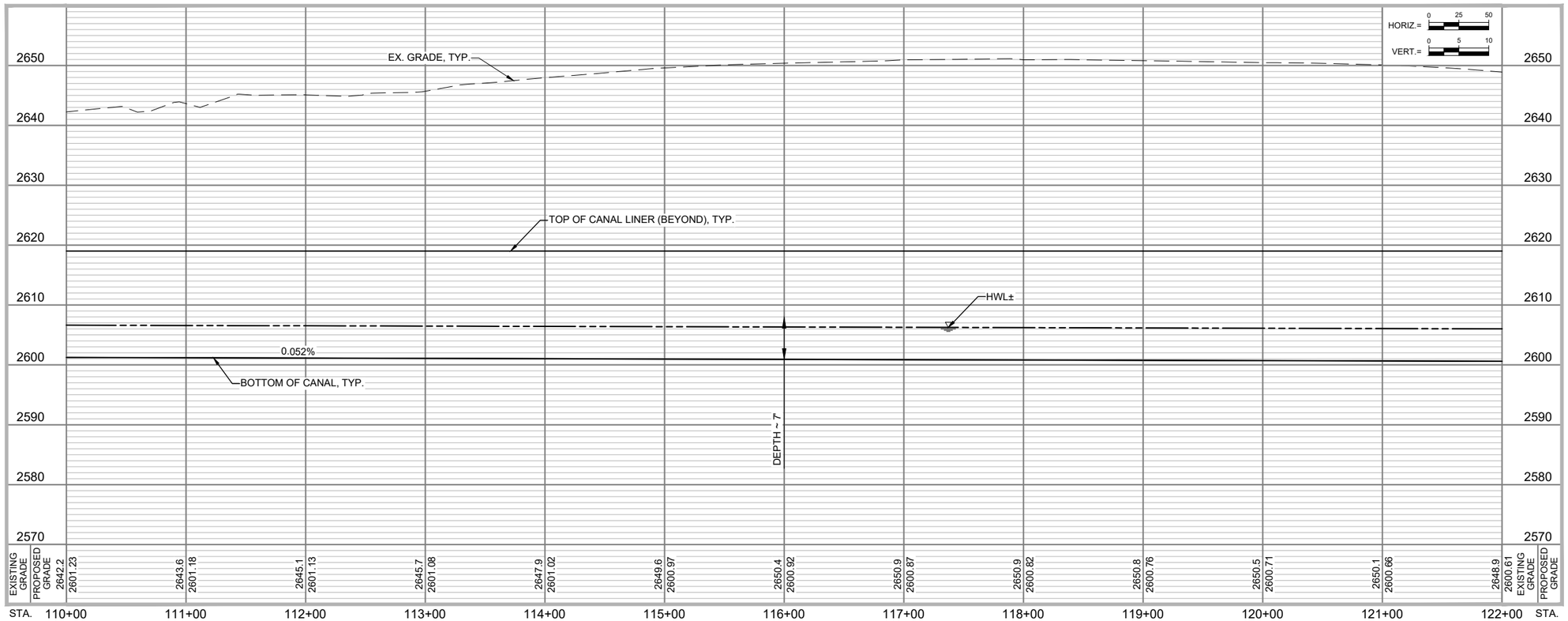
PLAN & PROFILE

STA. 97+00 TO STA. 110+00

C208



ESTIMATED EARTHWORK			
STA. TO STA.	SIDE	CUT (CU. YDS.)	FILL (CU. YDS.)
110+00.00 122+00.00	LT/RT	211,826	0
NOTE: COMPACTION FACTOR NOT INCLUDED.			



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ISSUE

MARK	DATE	DESCRIPTION
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GOSPER COUNTY, NEBRASKA

CENTRAL NEBRASKA PUBLIC POWER AND IRRIGATION DISTRICT
HOLDREGE, NEBRAKSA

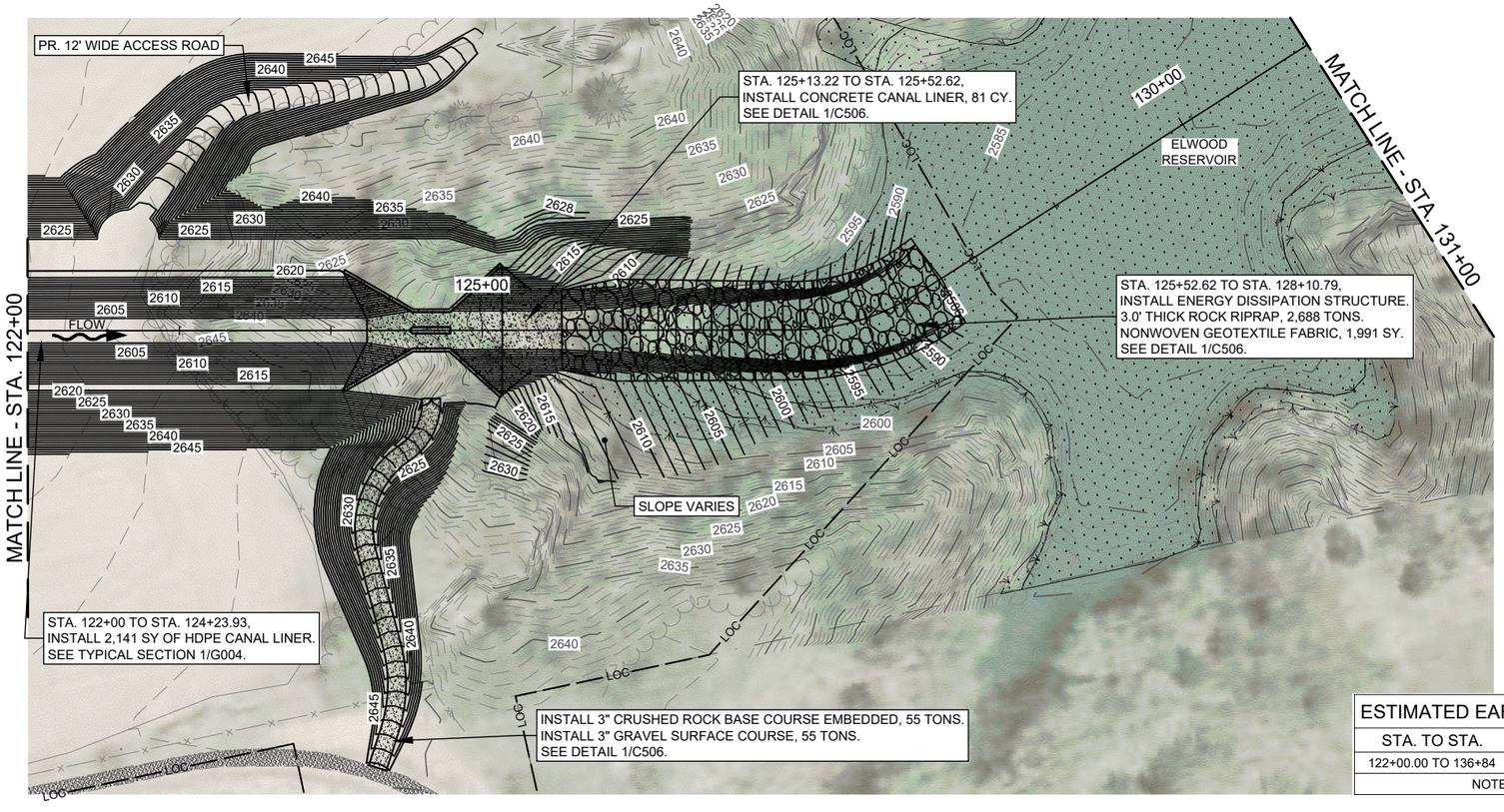
JEO Project No.:	210635.00
Drawn by:	GTL
QAQC:	KWK

US SURVEY FEET (sFT)

PLAN & PROFILE

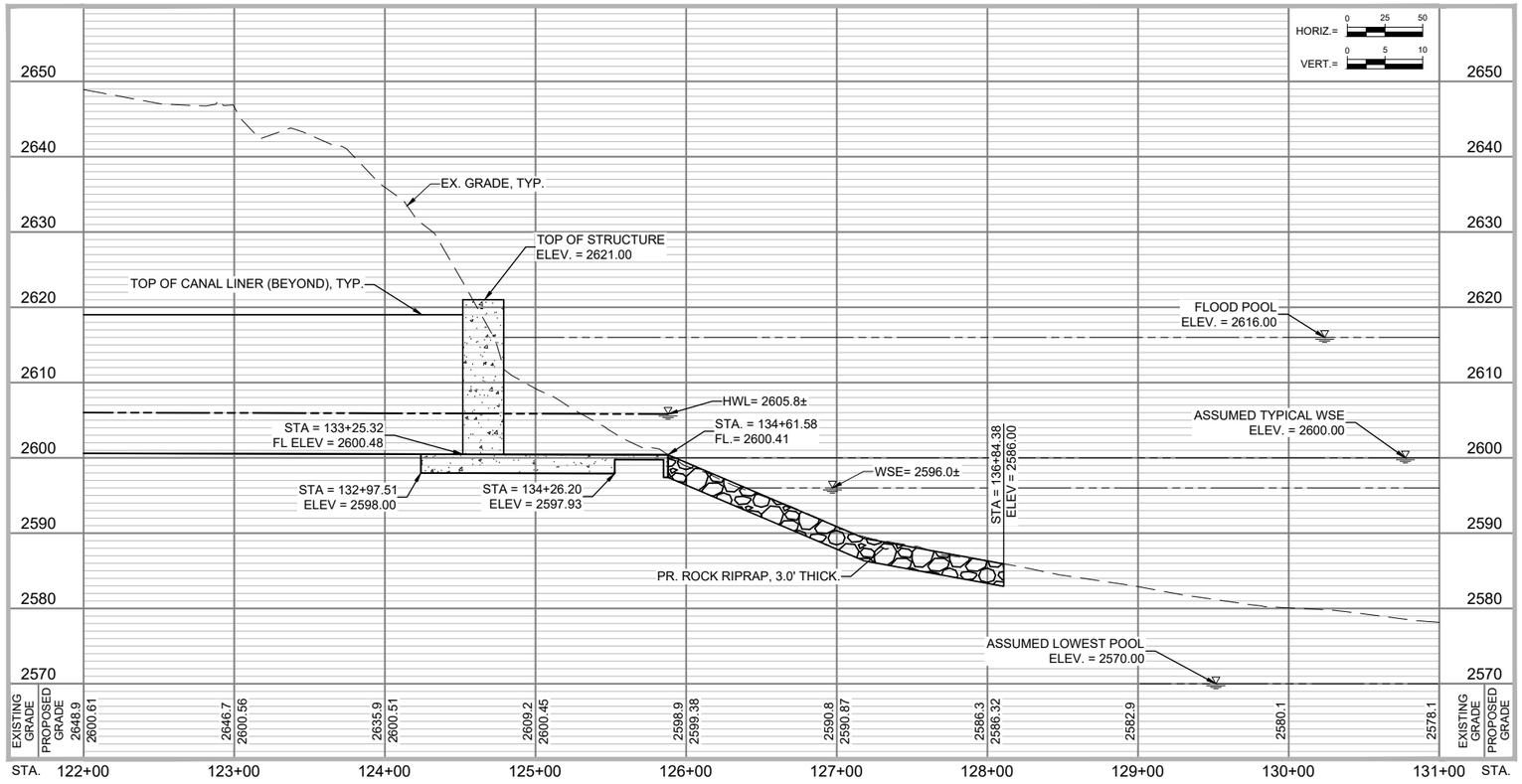
STA. 110+00 TO STA. 122+00

C209



N

ESTIMATED EARTHWORK			
STA. TO STA.	SIDE	CUT (CU. YDS.)	FILL (CU. YDS.)
122+00.00 TO 136+84	LT/RT	46,819	4,055
NOTE: COMPACTION FACTOR NOT INCLUDED.			



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CENTRAL NEBRASKA PUBLIC POWER AND IRRIGATION DISTRICT
HOLDREGE, NEBRAKSA

JEO Project No.:	210635.00
Drawn by:	GTL
QAQC:	KWK

US SURVEY FEET (sFT)

PLAN & PROFILE

STA. 122+00 TO STA. 131+00

C210

ATTACHMENT B – ADDITIONAL FIGURES

Climate Analysis Additional Information

According to the USBR, Nebraska will see increases of 50-100% in drought duration. Figure B-3 below shows the mean drought duration for (a) historical (1473 to 2005), (b and d) climate model simulations (2006 to 2099), (c and e) projected changes

Figure B-3 - West-wide Drought Analysis

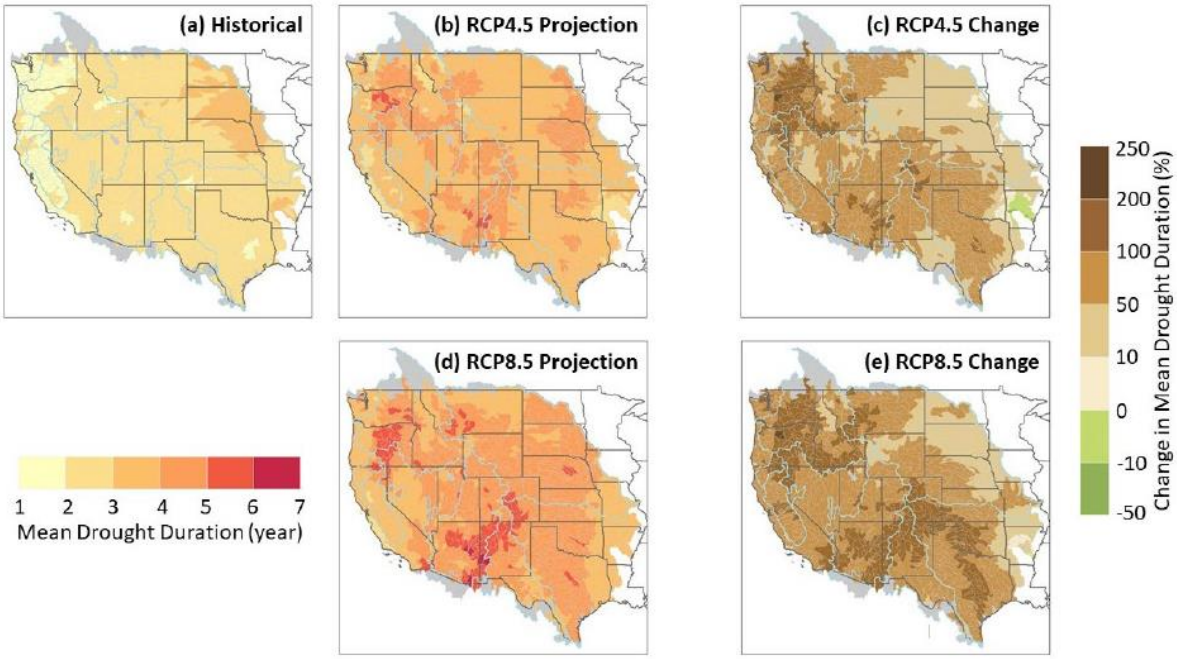


Figure B-4 shows the change in drought severity, with Nebraska seeing increases of 50-120% drought severity under climate impacted conditions. This figure displays mean drought severity for (a) historical (1473 to 2005), (b and d) climate model simulations (2006 to 2099), and (c and e) projected changes.

Figure B-4 – Mean Drought Severity

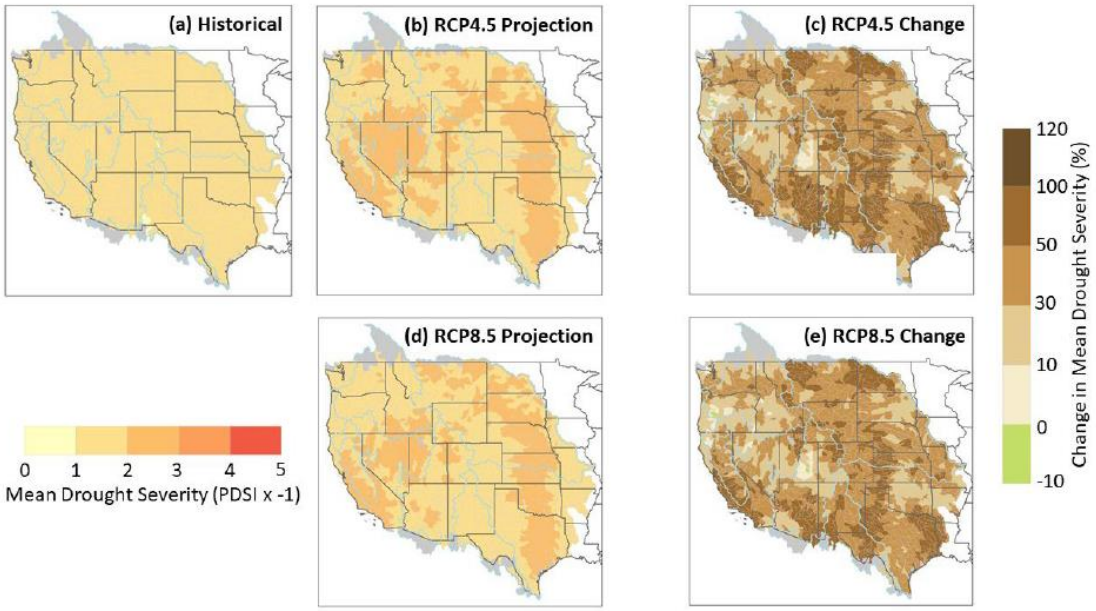
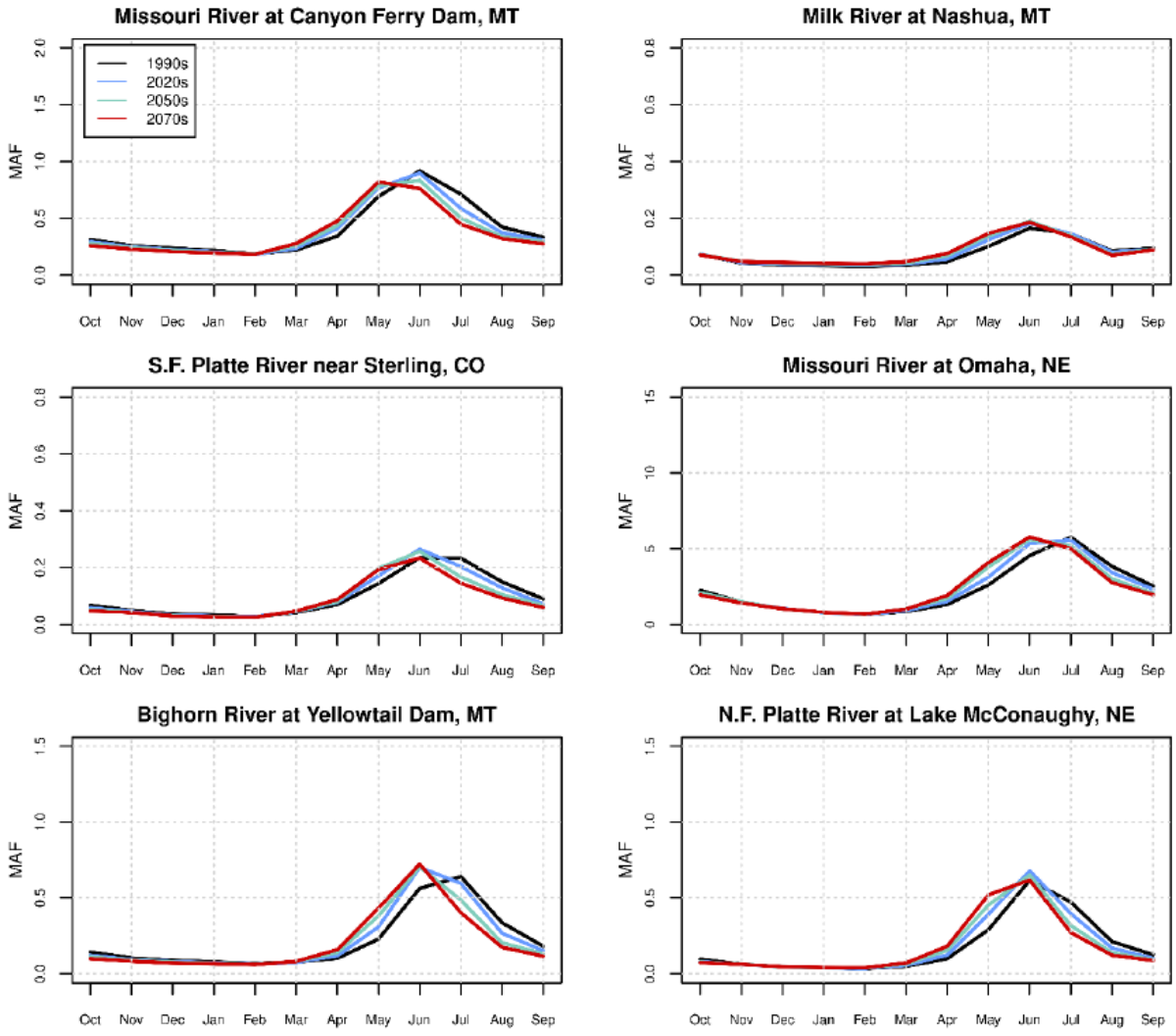


Figure B-5 shows changes in streamflow at key locations in the Missouri River basin (earlier shift in runoff). For geologic reference, the North Platte River at Lake McConaughy, NE is approximately 135 miles upstream of Elwood Reservoir.

Figure B-5 – Missouri River Basin – Simulated Mean Monthly Streamflow



Figures B-3 through B-5 were was based upon USBR's report: "Technical Memorandum No. ENV-2021-001, West-Wide Climate and Hydrology Assessment" https://www.usbr.gov/climate/secure/docs/2021secure/westwidesecurereport.pdf

Figure B-6 shows percent (%) change in annual potential evapotranspiration (10-30% increase in water consumption depending on scenario and time period).

Figure B-6 – Jan-Dec (Annual) Potential ET Percent Difference From Average

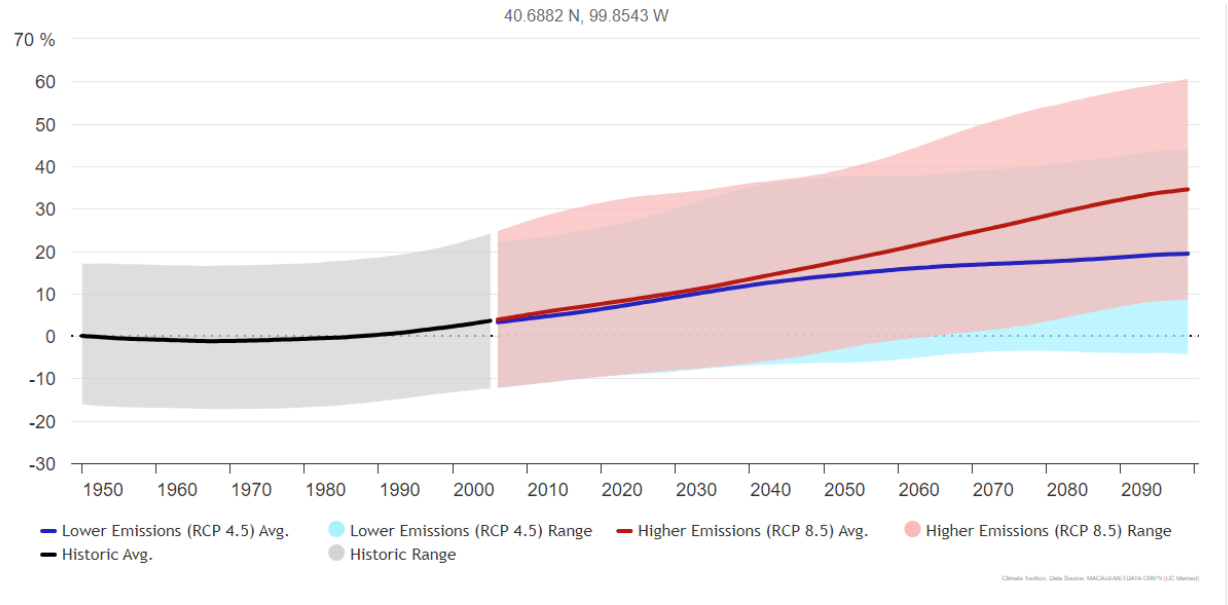
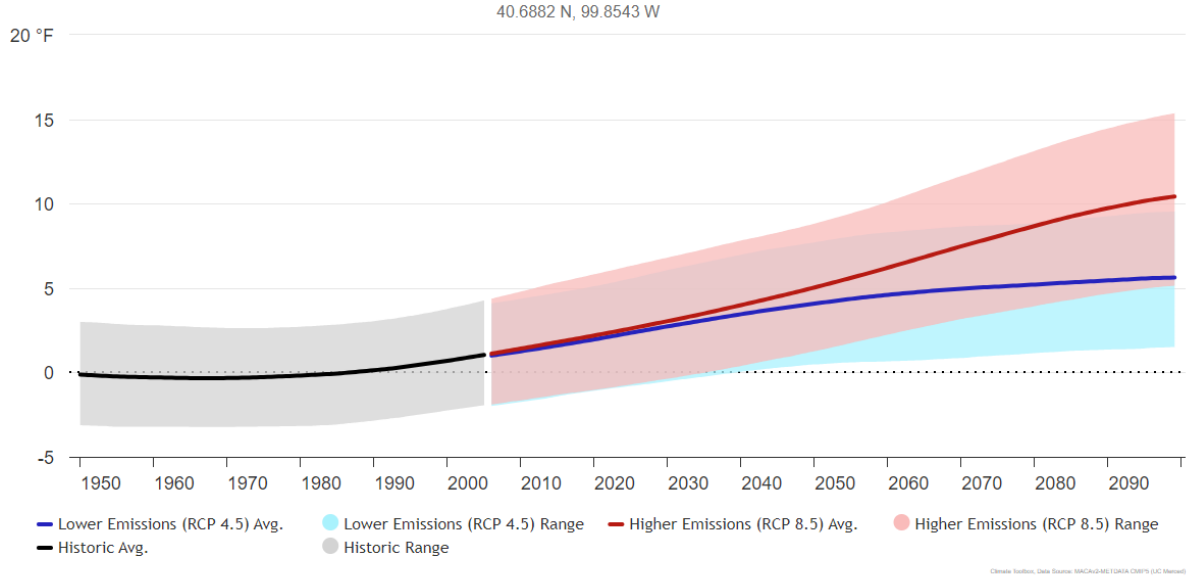
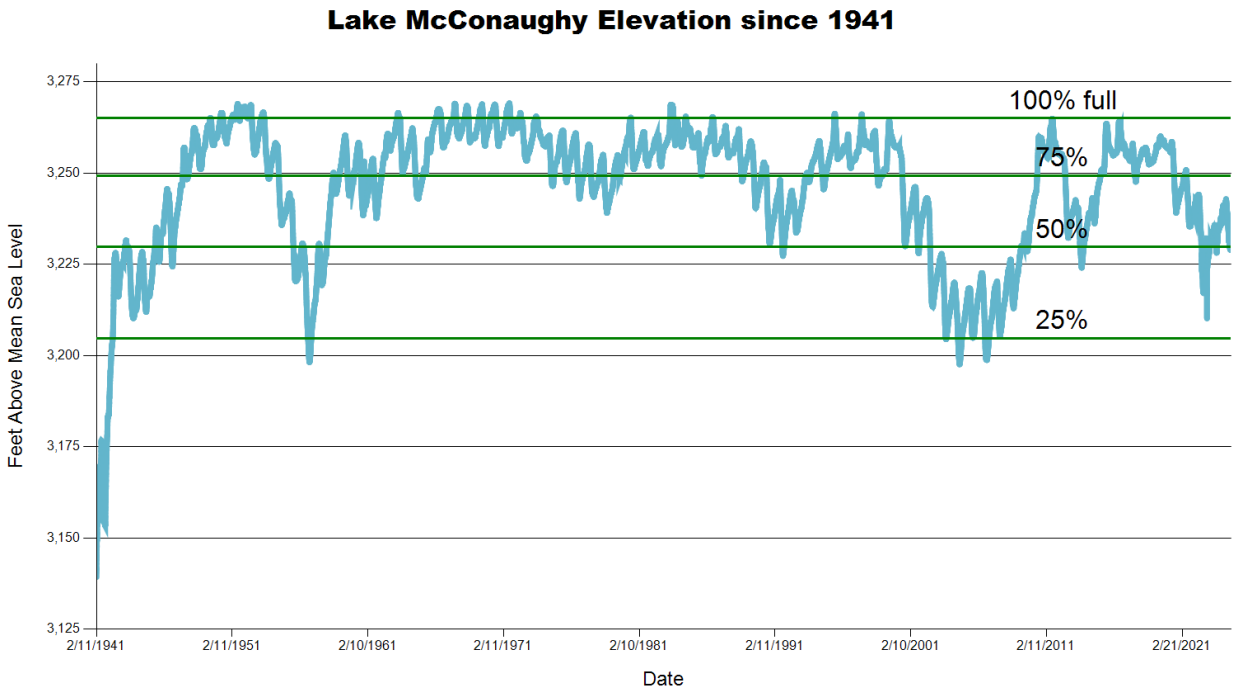


Figure B-7 shows the increase in average annual temperature, which varies 5-10 degrees F depending on scenario and timeframe at the project area location.

Figure B-7 – Jan-Dec (Annual) Mean Temperature Difference From Average



Figures B-6 and B-7 were obtained from the Climate Toolbox, showing time series data for different variables (location selected at Johnson Lake). https://climatetoolbox.org/tool/Future-Time-Series.



B-8 – Lake Elevations - Prolonged Drought Conditions are depicted by low water elevations

ATTACHMENT C – LETTERS OF SUPORT

NEBRASKA

Good Life. Great Water.

DEPT. OF NATURAL RESOURCES

Jim Pillen, Governor

October 1, 2024

Bureau of Reclamation
Sheri Looper
2800 Cottage Way, MP-400
Sacramento, CA 95758

Re: Letter of Support for BOR Drought Resiliency WaterSMART Application by CNPPID

On behalf of the Nebraska Department of Natural Resources (NeDNR), we express our support for the Central Nebraska Public Power and Irrigation District's (Central) application to the Bureau of Reclamation, WaterSMART Drought Resiliency Project to support construction of the new E-65 Canal and Siphon to Elwood Reservoir.

NeDNR recognizes that the E65 Canal system and Elwood Reservoir are critical infrastructure components for Central. Without a functioning E65 siphon, Central would not be able to deliver water to 42,000 acres or deliver water into Elwood Reservoir, both of which are important components of Nebraska's water portfolio. In addition to irrigation deliveries, the E-65 Canal and Elwood Reservoir results in groundwater recharge that helps to support water management actions detailed in plans between the NeDNR and local Natural Resource Districts (NRD). The NeDNR and Central have completed a long-term recharge agreement to divert Platte River excess flows into Elwood Reservoir and the E65 Canal delivering water into Waterfowl Production Areas (WPA's) managed by the Fish and Wildlife Service (USFWS). Working with Central and having the capability to use the E-65 Canal system for recharge allows the retiming of water back to the river which in turn support drought resiliency.

Currently, the NeDNR is facilitating the development of the Upper Platte River Drought Contingency Plan, of which Central is an active stakeholder. The NeDNR and NRDs located in the Upper Platte Basin are establishing this plan to refine and understand drought vulnerabilities and impacts. The plan provides robust monitoring and forecasting tools paired with timely triggers, new mitigation strategies, and responsive actions to improve critical water supply needs. Central's facilities play an important role to the Upper Platte Drought Contingency Plan firming up water availability and using existing infrastructure that can help offset the impact of drought.

Jesse Bradley, P.G., Interim Director

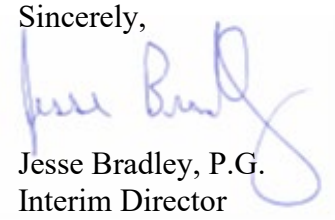
Department of Natural Resources

245 Fallbrook Blvd., Suite 201 OFFICE 402-471-2363
Lincoln, Nebraska 68521 FAX 402-471-2900

dnr.nebraska.gov

The new E65 siphon project is expected to help sustain and enhance long-term benefits in Nebraska for water management that can help mitigate future drought conditions. The NeDNR fully supports Central's application for assistance from WaterSMART for the new E65 siphon project.

Sincerely,



Jesse Bradley, P.G.
Interim Director

NEBRASKA WATER
RESOURCES ASSOCIATION 8700 Executive Woods Dr, Ste 400 • Lincoln, NE 68512-9612 • (402) 476-1528 • www.newra.net

October 3, 2024

Nebraska Natural Resources Commission
301 Centennial Mall South, 4th Floor
Lincoln, NE 68509-4676

Re: Letter of Support for Drought Resiliency WaterSMART Application by CNPPID for new E65 Siphon

On behalf of the Nebraska Water Resources Association (NWRA), I am submitting this letter of support for an application by The Central Nebraska Public Power and Irrigation District (Central) to replace an important part of the infrastructure associated with Central's E-65 Irrigation Canal System.

The E-65 siphons are critical to the operation of Central's E-65 Canal system and Elwood Reservoir. The siphons facilitate the delivery of irrigation water to more than 42,000 acres and deliver water to Elwood Reservoir. After more than 80 years of service, the siphons have passed their lifespan and the construction of a new and more efficient alignment is critical.

Installation of a new siphon will ensure the uninterrupted and long-term delivery of water to Elwood Reservoir and the farm ground served by the E-65 Canal. Siphon failure would interrupt delivery to crops north of Bertrand and Loomis and cause a detrimental economic impact to the local and state economy. The E-65 system has allowed irrigation to continue during times of drought, as the large groundwater mound in south-central Nebraska supports irrigation wells and public water supplies, even when water may not be available for delivery from the canal. Additional benefits would be lost or interrupted, including water-based recreation at Elwood Reservoir, and important groundwater recharge in both the Platte and Republican basins which contributes to base flows in both rivers.

The NWRA provides leadership in Nebraska water issues by advocating state and federal policies, legislation, and regulations promoting protection, management, development, sustainability, and beneficial use of water resources by providing education and forums that promote consensus. The association strives to improve organizational structure and process among water-related organizations in the state; enhance relationships with existing members and recruit new members; provide information on Issues; provide a forum for consensus building; and advocate for members' interests.

On the basis of those objectives, the NWRA fully supports Central's application for assistance from WaterSMART for the siphon replacement project to ensure the benefits that stem from the E-65 Canal system and Elwood Reservoir.

Sincerely,

Scott Merritt

Scott Merritt
Executive Director, NWRA

Office of the Executive Director
4111 4th Avenue, Suite 6
Kearney, NE 68847
Phone: (308) 237-5728
Fax: (308) 237-465 1

October 3, 2024

Bureau of Reclamation
Sheri Looper
2800 Cottage Way, MP-400
Sacramento, CA 95758

Re: Letter of Support for Drought Resiliency WaterSMART Application by CNPPID for a new E-65 siphon to Elwood Reservoir

On behalf of the Platte River Recovery Implementation Program (PRRIP), I am submitting this letter of support for an application to the Bureau of Reclamation's WaterSMART Drought Resiliency Program by the Central Nebraska Public Power and Irrigation District (CNPPID) to address aging critical infrastructure associated with CNPPID's E-65 Irrigation Canal System. Failure of the E-65 Canal siphons would not only have a detrimental effect on irrigated acres, but it would also significantly impede the water operations necessary to achieve PRRIP Milestones. Since 2006, over 225,000 acre-feet of water have been delivered to Elwood Reservoir for the purpose of groundwater recharge. This retiming of streamflow to the Platte River using groundwater recharge through the E-65 siphon's is an important tool for the Nebraska New Depletion Plan and for meeting the PRRIP Milestones that ensure Endangered Species Act compliance.

PRRIP supports CNPPID's application to address this critical aging infrastructure associated with the E-65 Canal and Elwood Reservoir. Please feel free to contact me if you would like to further discuss the importance of this project and Elwood Reservoir to the Platte River Recovery Implementation Program.

Kind Regards,

Jason Farnsworth, BCES
Executive Director
Platte River Recovery Implementation Program
farnsworthj@headwaterscorp.com

NEBRASKA STATE IRRIGATION ASSOCIATION

1233 Lincoln Mall • Suite 201 • Lincoln, NE 68508 • Phone 402-476-0162 • Fax 402--476--2469

October 3, 2024

Bureau of Reclamation
Sheri Looper
2800 Cottage Way, MP-400
Sacramento, CA 95758

Re: Letter of Support for BOR Drought Resiliency WaterSMART Application by CNPPID

On behalf of the Nebraska State Irrigation Association (NSIA} and its board of directors, I am submitting this letter of support for an application by the Central Nebraska Public Power and Irrigation District (Central) to replace critical infrastructure associated with Central's E-65 Irrigation Canal System.

The E-65 siphons are critical infrastructure for Central's irrigation works and provides a critical water source for agricultural producers to weather worsening drought conditions. The siphons are necessary for the delivery of irrigation water to more than 42,000 acres and for filling Elwood Reservoir. After 80 years of service, the siphons are becoming more dilapidated and a new siphon is required to address the aging infrastructure.

Installation of a new siphon will secure the uninterrupted and long-term delivery of water to Elwood Reservoir and the acres served by the E-65 Canal. Failure of the existing siphons would result in loss of irrigation deliveries and a subsequent economic impact to the local and state economy. In addition, multiple secondary benefits would be lost, including water-based recreation at Elwood Reservoir, and important groundwater recharge to both the Platte and Republican basins which contributes to base flows in both rivers.

The collapse of the tunnel and pipeline on the Gering-Ft. Laramie Canal in 2019 is a lesson about the serious and costly problems that can result from failure of irrigation infrastructure and the impact on agricultural economies, irrigation, recreation and groundwater recharge provided by the canal system.

The NSIA has represented irrigation districts and their water user constituents in frequent contacts with governmental leaders at state and national levels for more than 100 years. Since irrigation leaders formed the association in 1893 (just 11 years after the state's first water diversion project was built), the association has monitored and contributed to countless irrigation developments for the benefit of all Nebraska. The association represents about 75 percent of the surface water project irrigated acreage in the state.

From that standpoint, the NSIA fully supports Central's application for assistance from WaterSMART for the siphon replacement project and the sponsor's approach to ensuring the continued viability of Elwood Reservoir and the associated canal system. This system is considered critical infrastructure for drought mitigation for a major portion of South Central Nebraska and downstream users of the Platte and Republican River systems.

Sincerely,

Lee Center

Executive Director

October 4, 2024

Bureau of Reclamation
Sheri Looper
2800 Cottage Way, MP-400
Sacramento, CA 95758

Re: Letter of Support for BOR Drought Resiliency WaterSMART Application by CNPPID

On behalf of the Central District Water Users Association (Water Users), I am submitting this letter of support for an application by The Central Nebraska Public Power and Irrigation District (CNPPID) to install a new siphon on the Central's E-65 Irrigation Canal System.

The E-65 siphons are critical infrastructure to the canal system which delivers water to 42,000 acres. Installation of a new siphon will secure a reliable uninterrupted long-term delivery of water to Elwood Reservoir and the acres served by the E-65 Canal. Failure of the existing siphons would result in a loss of irrigation deliveries to farm ground owned by Water Users and have a significant economic impact to the local and state economy. Multiple secondary benefits would also be impacted, including water-based recreation at Elwood Reservoir along with groundwater recharge.

The Gering-Ft. Laramie Canal tunnel collapse that happened a couple of years ago is a lesson about the serious and costly problems that can result from failure of irrigation infrastructure. We strongly support CNPPID's proactive approach to address this critical aging infrastructure on the E65 canal Funding to support this project will have significant long-term positive impacts on agricultural economies, irrigation, recreation and groundwater recharge provided by the E-65canal system. Investing to keep our irrigation canal system is creating resiliency to drought, and offsetting drought conditions was key foundation for why they were constructed.

The Central District Water Users are an association of irrigation customers who rely on the delivery of water through CNPPID's irrigation and canal system. The Water Users have been organized since the early 1940's, known previously as the Tri-County Water Users Association and have nearly 200 members. The Water Users are excited about Central's application for assistance from WaterSmart to install a new E-65 siphon that can provide long-term reliable irrigation water deliveries to our farmers and to our future generations.

Sincerely,

Tom Schwarz
President
Central District Water Users

ATTACHMENT D – DROUGHT CONTINGENCY WORK PLAN

DRAFT WORK PLAN – UPPER PLATTE RIVER DROUGHT CONTINGENCY PLAN

A. INTRODUCTION

A.1 Scope and Purpose of Drought Contingency Plan

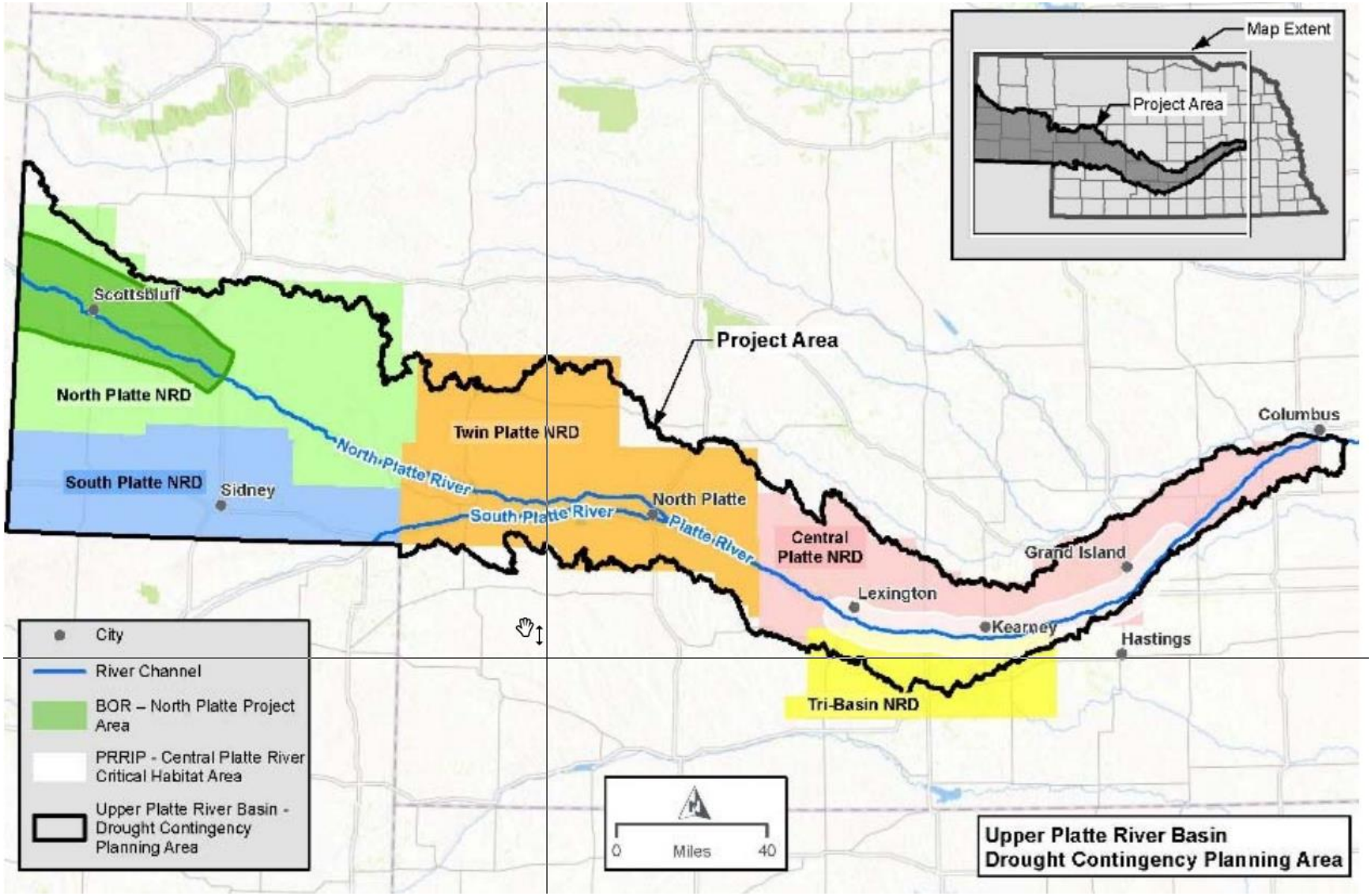
The Upper Platte River Drought Contingency Plan (UPRDCP) is a collaborative project among six water management agencies that work together through an Interlocal Cooperative Agreement (ILCA) to form the Platte Basin Coalition (Coalition). The Coalition will work throughout this project in conjunction with the Bureau of Reclamation (Reclamation). The six water management entities in the Coalition include the Central Platte Natural Resources District (CPNRD), North Platte Natural Resources District (NPNRD), South Platte Natural Resources District (SPNRD), Tri-Basin Natural Resources District (TBNRD), Twin Platte Natural Resources District (TPNRD), and the Nebraska Department of Natural Resources (NeDNR).

The Coalition will work together to develop regional solutions to improve the water supply reliability and drought resiliency of the Upper Platte River Basin within Nebraska. The primary focus of the UPRDCP will be to further refine the Coalition's, water users', important stakeholders', and the general public's collective understanding of drought vulnerabilities, while developing more robust monitoring and forecasting tools coupled with timely triggers, new mitigation strategies and responsive actions to create a sound operational framework and improve critical water supply needs of the area through drought periods.

A.2 Planning Area

The planning area (Figure 1) includes the Upper Platte River Basin from the western borders of Nebraska to the confluence of the Loup and Platte Rivers near Columbus, Nebraska. The area covered by the Upper Platte River Basin is home to nearly 250,000 Nebraskans, over eight-million irrigated acres, and its water supply used for many other beneficial purposes, including domestic, livestock, industrial, cooling, hydropower, irrigation, and instream (habitat and recreation) uses.

Figure 1. Map of Upper Platte River Drought Contingency Planning Area



A.3 Background

The Coalition members have local jurisdiction and have individually developed multiple plans aimed at supporting sustainable water use (Table 1).

TABLE 1. PREVIOUS WATER PLANNING AND DROUGHT PLANNING EFFORTS OF COALITION MEMBERS.

Name of Plan	Most Recent Update	Frequency of Reviews
State of Nebraska Drought Mitigation and Response Plan	2000	Annually
Upper Platte River Basin-Wide Integrated Mitigation Plan (IMP)	2019	Annually
Central Platte NRD IMP	2019	Annually
Twin Platte NRD IMP	2019	Annually
Tri-Basin NRD IMP	2019	Annually
North Platte NRD IMP	2019	Annually
South Platte NRD IMP	2019	Annually
North Platte NRD Drought Contingency Plan	2017	Annually

These plans have several goals and objectives that are related to the UPRDCP benefits. Examples of these goals include the following:

- Actions related to offsetting depletive effects of water uses.
- Encourage water users to minimize water use while optimizing benefits.
- Ensure a sustainable water supply is available in the amounts and location of the demands through management actions to meet the short- and long-term needs.
- Develop and implement water use policies and practices that contribute to the protection of existing surface and groundwater uses while allowing for future water development.

The UPRDCP will support, contribute to, and utilize these goals when developing drought mitigation planning procedures to improve the reliability and sustainability of water supplies in the Upper Platte River.

The Coalition members have completed an extensive amount of work to achieve the goals of the plans listed in Table 1, including the mitigation of depletive effects of current water uses, development and implementation of rules and regulations related to groundwater quality and quantity, extensive monitoring of the status of groundwater quality and quantity, and wide-ranging implementation of information and educational programs, development of data and models, and water supply alternatives. The UPRDCP will build on these previous efforts by enhancing data collection, developing forecasting and monitoring tools, and establishing a framework required to properly manage the surface water and hydrologically connected groundwater in support of drought preparedness. The UPRDCP will significantly expand the mitigation and response actions available to the Coalition and focus specifically on drought conditions in the in the context of the broader regional framework of the Upper Platte River basin.

Additionally, the UPRDCP will work to implement solutions that have the added benefits of reducing water regulations (junior water administration), enhancing recreational and environmental related flows, and improving water quality.

B. PLANNING APPROACH

B.1 Detailed Budget and Schedule

The detailed scope, budget and schedule for developing the UPRDCP is presented in Exhibit A.

B.2 Narrative Description of Plan to Complete Six Required Elements

This section contains the scope of work to complete each of the six required elements of the UPRDCP.

Task 1.1 – Establish Drought Planning Task Force

Purpose:

The Coalition members will make up the Primary Stakeholder Group. The Coalition members are key stakeholders representing the jurisdictional authorities responsible for managing surface and groundwater supplies in the Upper Platte River Basin. The Natural Resources Districts (NRDs) members are political sub-divisions within the state of Nebraska with broad jurisdictional authorities in flood control, soil erosion, irrigation run-off, groundwater quantity and quality regulation, and integrated management planning. Each NRD is comprised of local officials from business, industry, agriculture, planning/zoning, academia, and environmental backgrounds elected to the board. NRDs serve as key focal points for local input on a variety of water related issues.

The Nebraska Department of Natural Resources (NeDNR) is responsible for granting, administering, and regulating surface water uses within the state of Nebraska. In addition, NeDNR works closely with NRDs in the development, implementation, and monitoring of integrated management plans aimed at achieving the balance of supplies and uses within the basin. Coalition members have working closely together over the last 18 years in the development and implementation of mitigation actions with the designated fully and over-appropriated areas of the Upper Platte River Basin.

Additionally, the Bureau of Reclamation will be engaged as a key interest related to its interest in the upper Platte River, which includes storage and irrigation projects in the North Platte basin, as well as the Platte River Recovery Implementation Program (PRRIP) in the central Platte River.

Description:

- Develop kick-off meeting facilitation plan, agenda, and other materials.
- Schedule and conduct kick-off meeting with Primary Stakeholder Group.
- Participate in bi-monthly coordination meetings with the Coalition (8 meetings)

Deliverables:

- Kick-off meeting materials – 7 hard copies
- Kick-off meeting summary – electronic copy

Task 1.2 – Develop Detailed Work Plan

Purpose:

This task will develop a detailed work plan prior to commencing substantive work on the UPRDCP. This work plan will include the tasks, roles and responsibilities, schedule, and budget required to complete the UPRDCP. The work plan will include a Communication and Outreach Plan that will provide the framework for the identification and formation of the DPTF, as well as describe planning timelines, communication strategies, meeting protocols, and logistical responsibilities.

Description:

Develop a detailed Work Plan per BOR requirements consisting of the following 4 elements:

- Introduction
  - Scope and purpose of the Drought Contingency Plan.
  - Planning area.
  - Background, including brief description of this effort in relation to previous or other ongoing efforts or plans.
- Planning Approach
  - Detailed budget and schedule for developing the plan.
  - Narrative description of plan for completing each of the required 6 elements of the DCP.
  - Planning oversight structure.
  - Decision making process.
  - Roles and responsibilities.
  - Coordination amongst stakeholders.
- Documentation and Reporting:
  - Deliverable and documentation
  - Reporting requirements and responsible parties
  - Review process
- Communications and Outreach Plan:
  - Explanation of stakeholder and public involvement.
  - Schedule describing communication activities
  - Provide draft work plan to Reclamation for review.
  - Address Reclamation comments and develop revised work plan.

Deliverables:

- Draft work plan – electronic copy
- Revised work plan – electronic copy

Task 2.1 – Drought Monitoring

Purpose:

This task will create a framework for anticipating and confirming drought conditions in the Upper Platte River Basin within Nebraska by establishing stakeholder-driven data metrics which will be used to indicate drought conditions in the Upper Platte River basin temporally and spatially. The Coalition will develop drought monitoring, data-gathering, and information sharing protocol. This will allow for the construction of tools that will utilize information disseminated by various sources, which include the National Drought Mitigation Center. The indices included for monitoring will likely include the Palmer Drought Severity Index (PDSI) and the Standard Precipitation Index (SPI). In addition, drought forecasting, drought monitoring, and water supply forecasting information available from publicly available sources such as NOAA, USGS, NRCS, and USBR will be used. Finally, current observations of river flows, reservoir storage, and groundwater levels from a variety of agencies/owners within the basin will be used.

Quantification methods and historical data of surface water and groundwater resources within areas relevant to the project area will be reviewed to develop a thorough understanding of the key hydrologic factors that determine when drought onset may be occurring, and the severity of ongoing drought conditions. The temporal scales of basin water supplies, such as mountain snowpack (short-term),

streamflow (short-term), reservoir storage (short-term and long-term carryover storage), and groundwater (long-term) will be considered and incorporated into the monitoring protocols.

The drought indices and forecasting tools will be evaluated using historic observations from throughout the basin to identify, validate, and prioritize the appropriate tool or tools for drought monitoring in the Upper Platte River Basin. In addition to the annual variations in hydrological conditions, seasonal variations also exist and may result in a combination of indices and data being used. It is anticipated that the NeDNR will develop and host a basin-specific ESRI-based "Drought Dashboard" that will become a publicly available monitoring tool used during UPRBDCP implementation. The dashboard is anticipated to be similar in structure and function to the dashboard created for use in implementing the Lower Platte River Drought Contingency Plan: (https://gis.ne.gov/portal/apps/experiencebuilder/experience/?id=c0b751c512a24b83a6ad1c3214941ea8)

Description

Review and Evaluate Existing Water Management Plans –

- Existing water management plans within the basin
- Existing drought operations/mitigation strategies utilized by stakeholders and water users/suppliers in the project area and adjacent areas that impact water supply and use in the Upper Platte River.

Existing Data Sources –

- Groundwater and surface water data collected in support of water management efforts.
- Existing numerical models which encompass the basin and provide an understanding of the underlying hydrogeology and its connection to the surface water.
- Constructed facilities (reservoirs, canals, etc.) their operations, and their impact on the water resources in the basin.

Evaluate Forecast and Monitoring Tools –

- Review and evaluate existing forecast and drought monitoring tools and products for applicability to the Upper Platte River Basin.
- Evaluate tools' performance in predicting historic drought conditions. Identify deficiencies and potential secondary tools/indicators that may address deficiencies.
- Prioritize tools based on reliability of predictions, with secondary emphasis and lead time provided by tools.
- Include predictive capabilities for future droughts.
- Provide triggers or indicators for confirming the beginning and end of existing droughts.

Develop Drought Dashboard –

- Provide a one-stop database of current monitoring information.

Deliverables:

- Draft Drought Monitoring TM – electronic copy
- Final Drought Monitoring TM – electronic copy
- Drought Dashboard

Task 2.2 – Vulnerability Assessment

Purpose:

This task will evaluate the risks and impact of current and future droughts in the Upper Platte River basin. A vulnerability assessment will be performed through the development of the UPRDCP. An assessment of the risks to critical water resources for the region and the factors contributing to those risks will be evaluated. Many of the Coalitions' participants have previously developed water supply and demand projections for the future under a range of conditions. These projections will also be reviewed with newly available climate change information to further expand the range of vulnerabilities that may exist under future drought conditions. The Plan will assess the water supply reliability needs and vulnerabilities under these various hydrologic conditions and water shortage scenarios as well as key interactions between the Upper Platte River and significant upstream tributary areas. Clearly identifying sectors vulnerable to drought and the risk posed under current, future, and uncertainty in hydrological conditions in this task will guide the mitigation and response actions development.

Description:

Vulnerability Review/Key Triggers –

- Identify and prioritize sectors impacted by drought (irrigation, hydropower, municipal, environmental, etc.)
- Identify vulnerabilities to drought conditions, severity of impacts, and risks
- Identify critical thresholds for Platte River flows and the associated impacts to assess vulnerability and prioritize thresholds.
- Identify other key indicators and risks in the Upper Platte River

Deliverables:

- Draft Vulnerability Assessment TM – electronic copy
- Final Vulnerability Assessment TM – electronic copy

Task 2.3 – Mitigation Actions

Purpose:

The UPRDCP will identify, evaluate, and prioritize mitigation actions and activities that work to build long-term resiliency to vulnerable sectors and mitigate the risks posed by current and future droughts. Mitigation actions are focused on lessening impacts and Basin vulnerability to droughts prior to their occurrence. These actions may be on a basin-wide scale, sub-basin (NRD) scale, or individual project scale. The aim of mitigation actions will be to decrease future vulnerabilities and reduce the need for critical response actions during drought. Each mitigation strategy will be assessed for likely benefits as well as evaluating the associated legal constraints, inclusive of likely permitting requirements, environmental constraints, third party impacts, and cost of implementation. Additionally, the Plan will include the specific roles and responsibilities of each member of the Coalition in dissemination of public information prior to and during drought conditions to raise awareness of the need for effective mitigation strategies.

Description:

This task will identify, evaluate, and prioritize mitigation actions and activities to improve the region's resiliency in the face of drought conditions. In particular, the vulnerabilities identified in Subtask 2.2 will be used to develop mitigation actions. Mitigation measures that are expected to be reviewed through the planning process include:

- Development of new supplies through repurposed reservoir storage, new reservoir storage, and groundwater augmentation
- Forecast-informed reservoir operations
- Assessment of conjunctive use opportunities through coordination and agreements between surface and groundwater users
- Development of markets, exchanges, and water sharing agreements
- Water conservation and water use reduction
- Communication and educational efforts

Mitigation actions will be assessed for any constraints that may exist due to the reliability and temporal variability in available water supplies, physical limitations on infrastructure capacity, maximum delivery rates, as well as the likely range of benefits that would be derived through each management action under a range of streamflow conditions. For each mitigation action, an assessment of effects will be determined based on existing tools and models of the Upper Platte River system. This approach will allow for scenario testing to develop a matrix of predicted benefits in relation to critical thresholds. Once a full assessment has been completed to determine the likely benefits associated with action, the Coalition will focus on evaluating the associated legal constraints, inclusive of likely permitting requirements, environmental constraints, third party impacts, and cost of implementation.

Deliverables:

- Draft Mitigation Actions TM – electronic copy
- Final Mitigation Actions TM – electronic copy

Task 2.4 – Response Actions

Purpose:

The Coalition will identify, evaluate, and prioritize response actions and activities that can be implemented quickly during a drought to lessen a drought's impact on identified vulnerable sectors. The actions may be on a basin-wide scale, sub-basin (NRD) scale, or individual project scale. These response actions will be evaluated for their effectiveness during specific stages of a drought to manage limited supplies and decrease the severity of drought impacts. The assessment of response actions will include timeframes required to implement the action and the potential benefits that may result from actions.

The Coalition will assess these response actions for any constraints that may exist due to the reliability and temporal variability in available water supplies, physical limitations on infrastructure capacity, maximum delivery rates, as well as the potential range of benefits that would be derived through each management action under a range of streamflow conditions. For each responsive action, an assessment will be made based on existing tools and models of the Upper Platte Basin. This approach will allow for scenario testing to develop a matrix of predicted streamflow rates and aquifer storage productivity that will serve to set operational objectives aimed at achieving the necessary targets to avoid critical trigger levels. Once a full assessment has been completed to determine the potential streamflow benefits associated with action, the Coalition will focus on evaluating the associated legal constraints, inclusive of potential permitting requirements, environmental constraints, third party impacts, and cost of implementation.

As a part of UPRDCP development, the Coalition will conduct a drought simulation workshop based on historic drought occurrences. The workshop will assist in assessing prioritizing the potential response actions.

Description:

This task will identify, evaluate, and prioritize response actions and activities to improve the region's resiliency in the face of drought conditions. In particular, the vulnerabilities identified in Subtask 2.2 will be used to develop response actions. The potential response actions that will be evaluated include:

- Release of surplus water supplies held in storage
- Reduced alluvial groundwater pumping
- Groundwater augmentation pumping
- Switching from surface to groundwater sources during droughts
- Water use restrictions

Complete evaluation prioritization matrix for each action (quantitative where appropriate, qualitative elsewhere) for use in evaluation workshop with Coalition.

Deliverables:

- Draft Response Actions TM – electronic copy
- Final Response Actions TM – electronic copy

Task 2.5 – Operational and Administrative Framework

Purpose:

This task will develop and describe the roles, responsibilities, and procedures for conducting drought monitoring, initiating mitigation and response actions, and updating the UPRDCP. It is anticipated that these activities will be coincident with ongoing Coalition meetings and be part of the standing agenda. Drought occurrences or triggers would necessitate coordination and actions for which protocols will be developed as part of this plan development.

Description:

- Develop framework for meeting facilitation plan, agenda, and other materials. Develop member roles, responsibilities, procedures, and activity frequencies.
- Develop protocols for coordination and activities during drought occurrence
- Develop draft Operational and Administrative Framework (based on input from Coalition).

Deliverables:

- Draft Operational and Administrative Framework TM – electronic copy
- Final Operational and Administrative Framework TM – electronic copy

Task 2.6 – Plan Development and Update Process

Purpose:

This task will develop and compile the overall plan document that describes the planning process, activities, and outcomes, including the process and schedule for monitoring, evaluating, and updating the UPRDCP. Following completion of the draft UPRDCP, a review copy will be submitted to Reclamation to ensure the plan meets program requirements. Additionally, a draft of the UPRDCP will be provided to the

DPTF participants and other interested stakeholders for a 30-day review period. Finally, comments will be incorporated and final UPRDCP made public.

Description:

- Develop draft UPRDCP Review Update process and protocols.
- Prepare draft plan. Anticipated contents include:
    - Project Purpose
    - Project Setting and Background
    - Existing water and drought plan summary
    - Data Summary and Data Collection Recommendations
    - Vulnerability assessment, key triggers, and flow thresholds
    - Forecasting/Monitoring protocols
    - Existing and proposed mitigation actions development and prioritization
    - Response action development and prioritization
    - Roles and Responsibilities
    - Plan Update and Review Process
- Provide draft UPRDCP to Reclamation, DPTF participants, and other interested stakeholders.
- Produce final UPRDCP.

Deliverables:

- Draft UPRDCP Update Process TM – electronic copy
- Draft UPRDCP – electronic copy
- Final UPRDCP – electronic copy; 7 hard copies

B.3 Planning Oversight Structure

As detailed in Table 3 (Section B.5) and described in Section D, the Coalition will be the primary drivers of the UPRDCP plan development. The Coalition will address comments, make decisions related to the UPRDCP, provide direction to the Contractor, act on any next steps/recommendations, and ultimately be responsible for the implementation and maintenance of the UPRDCP.

B.4 Decision Making Process

As detailed in Table 3 (Section B.5) and described in Section D, the Coalition will make decisions related to the UPRDCP in consultation with the Reclamation.

B.5 Roles and Responsibilities of the Coalition

See Table 3 for the roles and responsibilities of the Grant Recipient (NeDNR) and Coalition members.

TABLE 2. ROLES AND RESPONSIBILITIES OF COALITION.

COALITION MEMBER	RESPONSIBILITY
Nebraska Department of Natural Resources	• Review UPRDCP progress (technical, schedule, budget, etc.) • Submit deliverables to and fulfill reporting requirements of Reclamation • Provide input (review comments, UPRDCP direction) • BOR Agreement Management and Reporting on behalf of Coalition • Activities identical to the NRDs identified below
Central Platte Natural Resources District	• Prepare for upcoming meetings • Conduct kick-off meeting • Review UPRDCP progress • Provide input (review comments, UPRDCP direction, policy issues, etc.) • Provide information required for UPRDCP task completion • Address review comments • Make decisions related to UPRDCP and resolve issues • Provide direction to Contractor • Act on next steps/recommendations (as appropriate)
North Platte Natural Resources District	
South Platte Natural Resources District	
Tri-Basin Natural Resources District	
Twin Platte Natural Resources District	
Reclamation	• Monitor UPRDCP progress • Provide input (review comments, etc.) • Receive and review deliverables and other reporting requirements • Plan approval
UPRDCP Support – Contractor	• Conduct UPRDCP scope of work based on direction provided by Coalition • Develop meeting materials and facilitate meetings • Present issues to be resolved by Coalition and other items requiring input/direction to Coalition • Adhere to schedule and budget • Support NeDNR grant reporting to BOR

B.6 Coordination between Grant Recipient, Task Force, and Interested Stakeholders

As described in Section B.2 and Section D, implementation of the C&O plan is intended to ensure active stakeholder and public engagement in preparation of the UPRDCP. the Coalition will work with Reclamation to identify additional stakeholders that should be involved in the process. The C&O plan will identify how to reach out to stakeholders and keep them engaged or informed of the UPRDCP development process.

C. DELIVERABLES, DOCUMENTATION, AND REPORTING

C.1 Deliverables and Documentation Requirements

Table 3 contains the anticipated dates of deliverables.

TABLE 3. SCHEDULE OF DELIVERABLES	
Description	Anticipated Completion Date
Task 1.1 – Establish Drought Planning Task Force	
• Identify Task Force Members	January 2022
• Secure Member Commitment	February 2022
Task 1.2 – Develop Detailed Work Plan	
• Draft Work Plan	May 2022
• Final Work Plan	June 2022
Task 2.1 – Drought Monitoring	
• Monitoring tools and indicators	September 2022
• Triggers for action	November 2023
• Monitoring protocols	November 2023
Task 2.2 – Vulnerability Assessment	
• Drought Task Force/Public Meeting	July 2022
• Vulnerable Sectors	September 2022
• Drought Risks and Impacts	October 2022
Task 2.3 – Mitigation Actions	
• Identification of potential actions	January 2023
• Analysis and prioritization of actions	April 2023
Task 2.4 – Response Actions	
• Identification of potential actions	January 2023
• Drought Task Force/Public Meeting	February 2023
• Drought Simulation Workshop	March 2023
• Analysis and prioritization of actions	April 2023
Task 2.5 – Operational and Administrative Framework	
• Operational Framework	April 2023
• Define roles/responsibilities	April 2023
Task 2.6 – Plan Development and Update Process	
• Draft Plan Document with Update Process	May 2023
• Drought Task Force/Public Meeting	May 2023
• Draft Plan submittal to BOR	June 2023
• Final Plan submittal to BOR	August 2023

C.2 Reporting Requirements and Individuals Responsible for Reporting

NDNR Project Managers, Jennifer Schellpeper and Ryan Kelly, will be responsible for submitting all deliverables listed in Section C.1 (including semi-annual reports, the final project report, and monthly reimbursement requests). Table 4 contains the anticipated dates of reporting.

TABLE 4. REPORTING SCHEDULE	
Description	Anticipated Completion Date
Reimbursement Requests	Monthly
• Assumed 17 Monthly Reimbursement Requests	April 2022-August 2023
BOR Contract Execution	January 2022
Semi-Annual Reports	
• Semi-Annual Report 1	August 2022
• Semi-Annual Report 2	February 2023
• Semi-Annual Report 3	August 2023
Draft Project Report	June 2023
Final Project Report	August 2023

C.3 Review Process

As described in Section B.2 (Subtask 2.6), the draft UPRDCP will be submitted to Reclamation to ensure the plan meets program requirements. Additionally, a draft of the UPRDCP will be provided to the Coalition participants and other interested stakeholders for a 30-day review period.

D. COMMUNICATION AND OUTREACH PLAN

D.1 Stakeholder and Public Involvement

As described in section A.1, collaborative planning activities will involve the 6 water management agencies of the Coalition and Reclamation. The primary venue for collaborative planning will be the regularly scheduled meetings of the Coalition. All meetings of the Coalition are to be open for stakeholder and public involvement, including time reserved for public comments.

Stakeholder participation will occur at multiple levels during plan development.

1. The Primary Stakeholder Group consists of members from each of the Coalition members that will be the primary point of contact for the consultant and guide the plan development. This group will also include the designated representative from USBR. These stakeholders represent a wide range of constituencies, including municipal/domestic waters, irrigation, environmental, recreational, business and industries. The primary stakeholder group members have the appropriate expertise and authority to provide guidance and oversight in plan development, background information, review and the staff to support analyses developed as part of the Plan. This group also has the authority and ultimate responsibility for plan content and approval (through their boards/directors). Table 3 lists the entities that will comprise the Primary Stakeholder Group and their respective roles.

2. The Technical Work Group will consist of members representing entities with ground and surface water management responsibilities in the Upper Platte River basin. This group has extensive experience and understanding of the ground and surface water resources of the basin, their interaction – particularly during drought conditions, and the infrastructure and framework in which the ground and surface water resources are managed within the basin. The Technical Working Groups Role is to provide technical guidance during plan development based on their working knowledge of the systems, in addition to assisting in the development and evaluation of potential mitigation and response actions.

3. A Drought Task Force will be formed to provide focused input to the plan development team, representing a specific area of interest and experience. Assembly of the Drought Task Force will build upon the recently completed Basin-Wide planning effort. This effort engaged members from a diverse group of water-related interests, including those from agriculture, environment/wildlife, financial, groundwater irrigators, groundwater users, irrigation districts, municipalities, public power districts, surface water users, and recreation users. The Drought Task Force will assist in identifying vulnerabilities and impacts of drought in the basin, as well as input on potential mitigation and response actions.

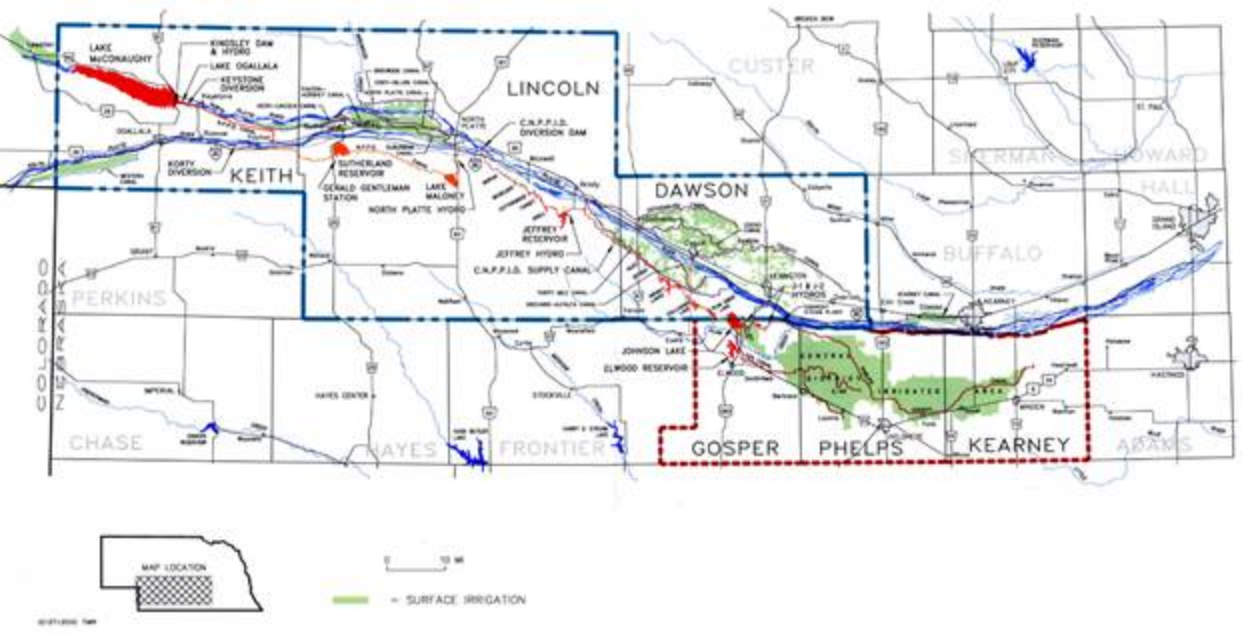
4. The fourth group to be engaged during the plan development is the general public. This will be facilitated through opportunities to participate at each of the Drought Task Force meetings. In addition, each of the Drought Task Force meetings will be complemented with an online meeting that contains meeting content and an opportunity for public comment. Each of the Natural Resources Districts have monthly board meetings open to the public. Primary stakeholder members are responsible for keeping their board and constituents of the NRD updated on the planning process through regular updates in this public forum. A website will also be developed and maintained throughout the planning process to provide information on the Plan and provide a forum for the public to comment online.

D.2 Stakeholder and Public Involvement Schedule

Stakeholders and members of the public will be encouraged to provide input at 3 milestones in the development of the UPRDCP. These include during the identification of vulnerable sectors and risks of droughts (DTF Meeting #1); during the development of potential mitigation and action items (DTF Meeting #2); and during the drafting of the final plan document (DTF Meeting #3), prior to finalizing the plan. Key milestones for engagement are provided in Table 5 below.

TABLE 5. STAKEHOLDER AND PUBLIC INVOLVEMENT SCHEDULE

Description	Anticipated Date
Drought Task Force #1	July 21, 2022
Plan purpose and introduction, vulnerability assessment	
Drought Task Force #2	February 2023
Mitigation and response actions	
Drought Tabletop Workshop	March 2023
Evaluation of monitoring protocols, mitigation and response actions	
Drought Task Force #3	May 2023
Present draft of final UPRDCP plan document	


LAKE McCONAUGHY
KINGSLEY DAM & HYDRO
LAKE OGALLALA
KEYSTONE DIVERSION
KORTY DIVERSION
KEITH
LINCOLN
SUTHERLAND RESERVOIR
GERALD GENTLEMAN STATION
LAKE MALONEY
NORTH PLATTE HYDRO
C.N.P.P.I.D. DIVERSION DAM
JEFFREY RESERVOIR
JEFFREY HYDRO
C.N.P.P.I.D. SUPPLY CANAL
DAWSON
JOHNSON LAKE
ELWOOD RESERVOIR
GOSPER
PHELPS
KEARNEY
BUFFALO
CUSTER
SHERMAN
HOWARD
HALL
PERKINS
CHASE
HAYES
FRONTIER
ADAMS
COLORADO
NEBRASKA
MAP LOCATION
= SURFACE IRRIGATION