

Pumping Plant Elimination and Canal Abandonment Project

NORTH SIDE PUMPING COMPANY



Applicant: North Side Pumping Company
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Jerome, ID 83338

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Executive Summary

Date: November 3, 2021
Applicant: North Side Pumping Company
UEI: XGKSZYU8M3K8
City: Jerome
County: Jerome
State: Idaho
Applicant Type: Category A

The North Side Pumping Company was founded in 1915 to serve a total of 12,000 acres of agricultural lands using five pumping plants and a network of open ditches. The intent of the Pumping Plant Elimination and Canal Abandonment Project is to decommission two 1920's era pumping plants and abandon 14.5 miles of unlined irrigation canals, resulting in an annual water savings of 6,286 acre-feet which will remain in storage in the Snake River system. The existing pumping plants will be replaced by a number of small-scale high efficiency pump stations optimized to individual landowner irrigation needs. The small-scale pump stations will be connected to existing on-farm irrigation infrastructure through a series of new pipelines, allowing for the abandonment of the canals.

Project Location

Project Area Description

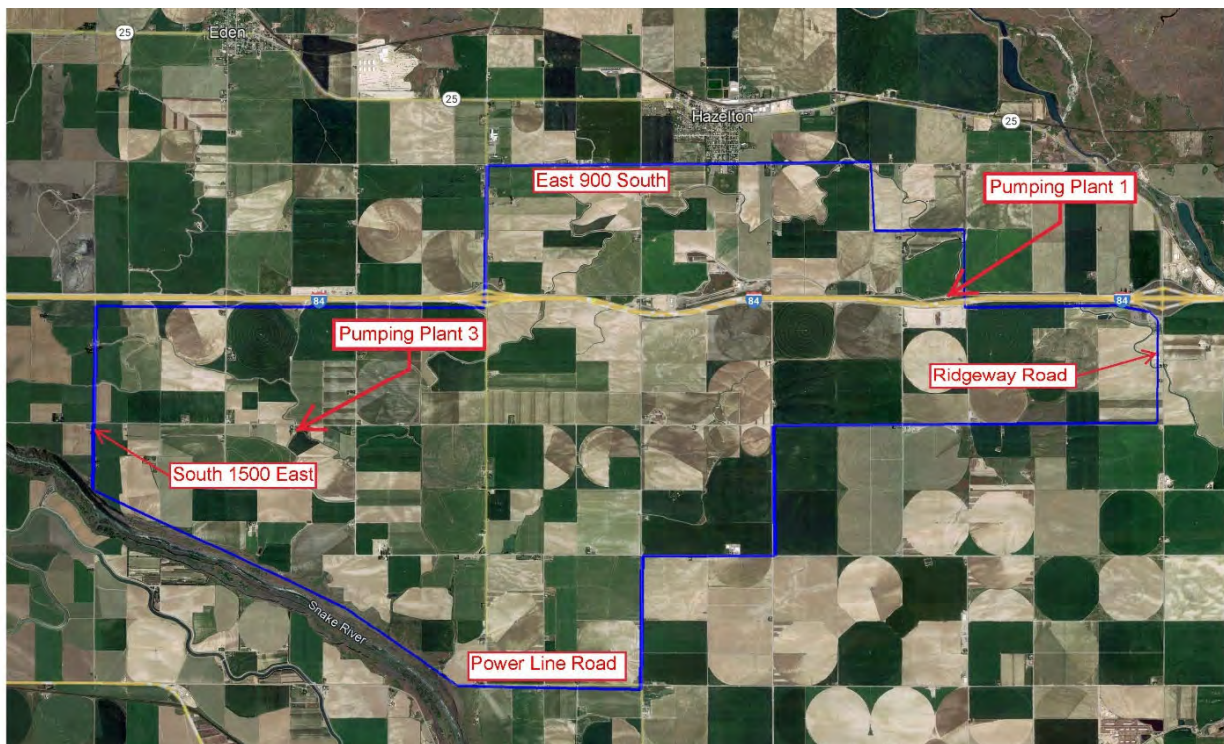
The proposed project is located south of Hazelton, Idaho and is generally bounded on the west by South 1500 East, the north by East 900 South, the east by Ridgeway Road, and the south by Power Line Road and the Snake River Canyon. The overall project footprint covers an area measuring approximately 4 miles by 8 miles.

The two existing pumping plants to be eliminated by the project are located at the following geographic coordinates.

Pumping Plant 1: 42°34'34.72"North Latitude, 114° 6'7.72"West Longitude

Pumping Plant 3: 42°33'39.13" North Latitude, 114°12'1.21"West Longitude

A project vicinity map is provided below.



Project Vicinity Map

Successful implementation of the Pumping Plant Elimination and Canal Abandonment Project will set the stage for a second phase of work, the PA Pump Station and Pipeline Project (PA Project) as described elsewhere in this application. The PA Project is located approximately 7 miles southeast of Eden Idaho and 2 miles east of the Pumping Plant Elimination and Canal Abandonment Project and is generally bounded on the west by South 2500 East, the north by East 950 South, the east by Crestview Road, and the south by the Snake River. The overall PA

Project footprint covers an area measuring approximately 2 miles by 4 miles. A vicinity map for the PA project is provided below.



PA Project Vicinity Map

Technical Project Description

North Side Pumping Company (NSPC) was founded in 1915 to serve a total of 12,000 acres of agricultural lands using five pumping plants and a network of open ditches. NSPC water rights total 142.32 cfs or 42,342 acre-feet of water annually. NSPC previously partnered with the Bureau of Reclamation to decommission of one of the five pumping plants and abandon 20.5 miles of open ditches to reduce water losses and improve water management within their system (WaterSMART Water and Energy Efficiency Grant FY 2015).

Of the remaining operational pumping plants, NSPC is focusing this application on two 1920's era facilities, referred to as Pumping Plant 1 and Pumping Plant 3. These two plants operate at a combined 800 horsepower and lift irrigation water into approximately 14.5 miles of open ditch irrigation laterals within the project area. Recent photographs of Pumping Plants 1 and 3 are provided as Figures 1 and 2, respectively.



Figure 1 – Interior of Pumping Plant 1



Figure 2 – Exterior of Pumping Plant 3

The 14.5 miles of irrigation laterals provide service to approximately 4,790 acres of agricultural lands owned by 30 individual landowners from natural flow and storage water rights from Bureau of Reclamation projects on the Snake River. Irrigation water is typically delivered for 198 days each season to various crops including alfalfa, corn, grains, sugar beets, and potatoes, among other products. An example image of a typical irrigation lateral is provided in Figure 3.



Figure 3 – Typical Irrigation Lateral at Road Crossing

NSPC documented infiltration losses in area laterals between April 2018 and September 2021 and determined that the losses were significant enough that a project was warranted to improve water use efficiency within the project area.

Therefore, the NSPC intends to implement the Pumping Plant Elimination and Canal Abandonment Project (the project) to install strategically located small-scale pump stations and pipelines throughout the distribution area to allow for the elimination of the 14.5 miles of irrigation laterals and decommissioning of Pumping Plants 1 and 3.

The project will require 25-30 small-scale pump stations, depending upon final design configuration, ranging in size from approximately 5 HP to 150 HP, and the installation of approximately 86,000 linear feet of PVC pipeline ranging in diameter from 2 inches to 15 inches. Pipeline alignments will in some instances require easements to cross adjacent project landowner properties, and NSPC will facilitate acquisition of these private easements.

The small-scale pump stations will be installed off of new water delivery headgates on the portions of the open channel irrigation laterals that will remain active in the project area. These laterals are owned and operated by the North Side Canal Company. Each new pump station will include a variable frequency drive to maximize efficiency and flow meters for water measurement. Power service to each of the individual pump stations will be supplied by Idaho Power Company, and new service drops will be included as a part of the project.

The installation of all electrical, mechanical, and physical equipment required to complete the project will be provided by certified, licensed irrigation companies selected through a competitive bidding process. New canal turnouts will be constructed by North Side Canal Company personnel. Decommissioning of Pumping Plants 1 and 3 will require skilled personnel with electrical and/or mechanical expertise to safely remove all controls, panels, wiring, mechanical components, etc. to ensure the abandoned facilities do not present a future safety hazard to the public.

Additional project layout details are provided in the conceptual design drawings provided in Exhibit A.

Successful implementation of the project will set the stage for a second later phase of work termed the PA Project. The PA Project is not a part of this application, but will involve the future abandonment of a similar era 750 HP pumping plant and an additional 18 miles of irrigation laterals.

Evaluation Criteria

This section demonstrates the level to which the proposed project meets the evaluation criteria as set forth in the Notice of Funding Opportunity for WaterSMART Water and Energy Efficiency Grants for Fiscal Year 2022. The various evaluation criteria are listed in Table 1.

Evaluation Criteria
A. Quantifiable Water Savings
B. Renewable Energy
C. Sustainability Benefits
D. Complementing On-Farm Irrigation Improvements
E. Planning and Implementation
F. Collaboration
G. Additional Non-Federal Funding
H. Nexus to Reclamation

Table 1 - Evaluation Criteria

Criteria A - Quantifiable Water Savings:

One of the major components of the project is to eliminate 14.5 miles of unlined, open-ditch irrigation laterals. Between April 2018 and September 2021, NSPC quantified water losses in a nearby 18-mile-long section of irrigation lateral where accurate flow measurement existed at both the upstream pumping plant and at each of the individual turnouts. Over that time, infiltration losses in the lateral averaged 19.87 cfs, with a cumulative irrigation season total of 7,803 acre-feet. The average infiltration loss is approximately 433.5 acre-feet per mile of lateral over the irrigation season. The infiltration loss data obtained as a part of the study is included in Exhibit B.

The laterals proposed for abandonment as a part of the project are located in the same area as the study lateral with similar soils and underlying geology. The soils across the project area are typically well drained silt loams with moderately high infiltration rates (NRCS Soil Survey for Jerome and Twin Falls Counties, Idaho) underlain by Snake River plain basalts. The soil uniformity across the area reasonably allows for extrapolation of the study data to the project laterals.

Based on this extrapolation, the 14.5 miles of project laterals have an annual infiltration loss of 6,286 acre-feet of water. The water lost to infiltration percolates into deep groundwater underlying the region and presumably some portion returns to the Snake River over an unknown time duration. No known direct benefits are accruing from the water lost to infiltration.

As the project will completely eliminate 14.5 miles of irrigation laterals and install a new high efficiency piped distribution system, the direct water savings to NSPC will be equal to the current infiltration losses, or approximately 6,286 acre-feet per year. As NSPC obtains most of their source water from Bureau of Reclamation storage projects on the Snake River, the project water savings equate directly to retained storage in the reservoir system that can be held over by NSPC for use during drought years.

In-pipe magnetic flow meters will be installed at each new small-scale pump station delivery turnout to allow for efficient water management and to provide a means to verify that estimated project water savings are being realized for the benefit of the resource. Typical accuracy for flow meters of this type is typically in the range of plus/minus one percent.

NSPC currently closely tracks irrigation deliveries to each water user to ensure a fair apportionment of water and to accurately determine cost assessments. NSPC will continue this practice post-project, readily allowing for verification of project water savings.

Criteria B – Renewable Energy (Increasing Energy Efficiency in Water Management):

The project will result in the permanent decommissioning of Pumping Plants 1 and 3. The pumping plants are 1920's technology and do not allow for efficient flow adjustment to accommodate changes in downstream water user demand. In addition, NSPC is currently using energy to pump the additional approximately 20 cfs above irrigation demand that is being lost to infiltration in the 14.5 miles of irrigation lateral supplied by the pumping plants. The total annual energy saving due to pumping plant decommissioning is 2,099,701 kWh per year based on 2021 energy use data.

The small-scale pump stations that will be installed to replace the need for the existing pumping plants will be controlled by variable frequency drives to adjust the pumped flow rate

to the actual needed irrigation demand, providing for a significantly more efficient use of energy.

Criteria C – Sustainability Benefits:

The project will result in a direct annual water saving of approximately 6,286 acre-feet. This water will remain in reservoir storage in the Bureau of Reclamation’s Snake River projects, making it available for use during drought years. The water savings will provide NSPC with improved resilience against drought and increasingly erratic water availability brought about by climate change.

An additional project benefit brought about by replacing the large-scale pumping plants with small-scale variable frequency drive pumps will be to give NSPC managers improved ability to manage the irrigation delivery system. The current pumping plant and lateral delivery system requires that NSPC managers maintain excess flow in the irrigation laterals to ensure that the most downstream water user always has sufficient water to meet current irrigation needs. Additionally, the NPSC managers have to deliver additional excess water through the pumping plants into the lateral system to account for the significant ditch infiltration losses as previously discussed. The variable frequency drive pumps combined with in-pipe flow meters for each landowner as proposed in the project will create an irrigation system that can quickly and accurately adjust water delivery rates based on actual irrigation demand.

Criteria D - Complementing On-Farm Irrigation Improvements:

The on-farm improvements that will be completed as a part of the project are being provided by the individual landowners as match to the NSPC project. For the project to be successful, all of the landowners currently receiving irrigation water from Pumping Plants 1 and 3 have to be a part of the project to allow for decommissioning of the pumping plants and abandonment of the irrigation laterals. Therefore, each landowner will be responsible for installing project components specific to their individual operations including pipeline extensions for their own needs, connection to any privately owned existing infrastructure, and closing and reclaiming of abandoned irrigation laterals.

Criteria E. Planning and Implementation:

The long-term goals of NSPC include increasing water management efficiency, reducing water losses to improve drought resiliency, improving energy efficiency, and reducing their reliance on outdated pumping infrastructure from the early 1900’s. NSPC already completed one significant project along the path toward meeting these goals when they retired Pumping Plant 4 and abandoned 20.5 miles of irrigation laterals as a part of a FY 2015 WaterSMART Water and Energy Efficiency Grant.

The proposed project is a continuation of NSPC’s efforts toward meeting these goals. NSPC has been working with the affected water users and local irrigation contractors since early 2021 to identify the infrastructure improvements that would be required to implement the project.

NSPC has also coordinated with Idaho Power staff to ensure that primary power facilities are currently available to service the new small-scale pump stations, and retained the services of Quadrant Consulting in July 2021 to assist with planning and funding logistics.

Major project tasks needing to be completed include the following:

1. Finalize agreements with affected landowners.
2. Acquire necessary easements for pipeline alignments from project landowners.
3. Initiate Idaho Power contracts to design individual power services to each small-scale pump station.
4. Design and install new turnouts from North Side Canal Company canals to provide water delivery to the new small-scale pump stations.
5. Finalize designs for small-scale pump stations, new pipelines, and connections to existing on-farm irrigation infrastructure.
6. Procure and install small-scale pump stations, new pipelines, and connect to existing on-farm irrigation infrastructure.
7. Decommission Pumping Plants 1 and 3.
8. Fill abandoned irrigation laterals and reclaim land for other uses.

As the project is agricultural in nature and occurring entirely on privately owned lands, the permitting requirements of the project are minimal. As jurisdictional waterways or wetlands will not be impacted, Corps of Engineers and State of Idaho Stream Channel Alteration permits will not be required. Electrical permits will be required by the State of Idaho to energize the new small-scale pump stations and these will be obtained on a case-by-case basis by the qualified electrician performing the work.

Project design work will be completed by local qualified irrigation designers/contractors well-versed in the implementation of the small-scale individual projects that will be required to allow for the decommissioning of Pumping Plants 1 and 3. The proposed project implementation schedule is provided in Table 2. Some tasks are currently underway and are reflected in the dates provided.

Task	Start Date	End Date
Conceptual Level Project Planning/Design	January 2021	December 2021
Landowner Agreements	July 2021	December 2021
Idaho Power Consultation	July 2021	December 2021
Idaho Power Contracts and Design	January 2022	June 2022
Preliminary Infrastructure Design	January 2022	April 2022
Final Infrastructure Design	May 2022	August 2022
Construction Bidding	September 2022	October 2022
Construction	October 2022	December 2023
Final Project Closeout		December 2023

Table 2 – Project Schedule

Criteria F - Collaboration:

NSPC has 100 percent verbal support of all of the landowners receiving irrigation water from Pumping Plants 1 and 3. They are in the process of formalizing written commitments with each landowner. Two example copies of signed commitments are provided in Exhibit C. Support and successful implementation of the project will also provide for continued support for implementing the future PA Project as discussed elsewhere in the application.

Criteria G – Additional Non-Federal Funding:

NSPC is proposing to fund 50.1% of the project cost through in-kind services, landowner contributions, or with cash, and is requesting funding under this grant application in the amount of \$2,000,000, or 49.9% of the project cost. The proposed funding breakdown is presented in the Project Budget section.

$$\begin{aligned} \text{Non-Federal Funding} &= \$2,010,488 &= & 50.1\% \\ \text{Total Project Cost} &= \$4,010,488 \end{aligned}$$

Criteria H - Nexus to Reclamation:

The primary source of NSPC irrigation water is delivered by the Bureau of Reclamation from its Snake River storage projects. The water saved by the proposed project will have a direct benefit to Reclamation as the saved water will remain in storage. When combined with both past and proposed future water efficiency projects on the Snake River, these projects improve drought resiliency for the overall irrigation storage system in Southern and Eastern Idaho. The population in Idaho continues to grow, leading to more demand on water resources. Water supplies are also showing evidence of becoming less reliable over time, making this type of project critical for the long term continued success of agriculture in Southern Idaho and the associated economic benefits.

Performance Measures

Each new small-scale pump station will be installed with an in-pipe water measurement device, providing NSPC with a detailed and accurate measurement of actual landowner water use. Following the end of the first irrigation season after the project is implemented, NSPC will compare post-project water use to the accumulated water use records for the same acreage prior to project implementation.

The difference between the pre-project and post-project water use data will provide a direct quantification of project benefits.

Project Budget

Funding Plan

The total estimated project cost is \$4,010,488. NSPC is proposing to fund \$2,010,488 or 50.1 percent of the project costs using local dollars or in-kind cost services. The remaining \$2,000,000 or 49.9 percent would be funded using Federal money as a part of this WaterSMART grant application.

Monetary costs not directly covered by NSPC or North Side Canal Company will be funded by the 30 distinct landowners that will benefit from the project. Landowner funding will in part be derived from expected energy cost savings brought about by installing the higher efficiency pumping systems and through expected energy efficiency credits from Idaho Power based on the overall energy savings. The total energy efficiency credits available from Idaho Power is currently undetermined, but the process of establishing the value of the credits has been initiated.

A competitive bidding process will be undertaken on behalf of each landowner to install the site-specific infrastructure required for each new small-scale pump station and the associated piping and power infrastructure.

The proposed project funding breakdown is presented in Table 3.

SOURCE	AMOUNT
NSPC Costs (In-Kind Services)	\$79,338
North Side Canal Company (In-Kind Services)	\$112,500
Project Landowners (In-Kind Services and Cash)	\$1,818,650
Water and Energy Efficiency Grant (Federal Funding)	\$2,000,000
Other third-party contributions	\$0
TOTAL PROJECT COST	\$4,010,488

Table 3 – Project Budget and Funding Breakdown

The project is not anticipated to incur costs related to environmental or regulatory compliance as all of the construction work will be completed on private property and is covered under Idaho Statutes related to agricultural work and irrigation delivery entities.

Budget Proposal

Detailed project costs are provided on the following pages and are further explained in the Budget Narrative.



**North Side Pumping Company
Pumping Plant 1 and 3 In-Kind Work
October 31, 2021**

Item	Quantity	Unit	Unit Cost	Extended Cost
NORTH SIDE PUMP COMPANY IN-KIND WORK				
Personnel				
Project Manager	300	MRHS	\$ 65.00	\$ 19,500.00
Assistant Project Manager	400	MHRS	\$ 45.00	\$ 18,000.00
Funding Compliance Reporting	200	MHRS	\$ 36.00	\$ 7,200.00
			Subtotal	\$ 44,700.00
Fringe Benefits				
Full Time Employees	3	EMPLOYEE	\$ 8,212.50	\$ 24,637.50
			Subtotal	\$ 24,637.50
Pumping Plant Decommissioning				
Pumping Plant 1	1	LS	\$ 5,000.00	\$ 5,000.00
Pumping Plant 3	1	LS	\$ 5,000.00	\$ 5,000.00
			Subtotal	\$ 10,000.00
NORTH SIDE PUMP COMPANY IN-KIND WORK TOTAL				\$ 79,337.50
NORTH SIDE CANAL COMPANY IN-KIND WORK				
Construction				
New Canal Turnout	25	EA	\$ 4,500.00	\$ 112,500.00
			Subtotal	\$ 112,500.00
NORTH SIDE CANAL COMPANY IN-KIND WORK TOTAL				\$ 112,500.00
LANDOWNER IN-KIND WORK				
Canal Reclamation				
Pumping Plant 1 Laterals	11	MILES	\$ 1,500.00	\$ 16,500.00
Pumping Plant 3 Laterals	3.5	MILES	\$ 1,500.00	\$ 5,250.00
			Subtotal	\$ 21,750.00
LANDOWNER IN-KIND WORK TOTAL				\$ 21,750.00

In-Kind Work Estimate \$ 213,588



North Side Pumping Company
Pumping Plant 1 Replacement Projects Direct Construction Costs
October 31, 2021

Item	Quantity	Unit	Preliminary Bid Cost	Bid Escalation	Extended Cost
Plant 1 Replacement Projects					
R&R LAND - WAITE PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 93,031.20	50%	\$ 139,546.80
Electrical Service Estimate	1	LS	\$ 25,000.00		\$ 25,000.00
ZELLER PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 2,440.93	50%	\$ 3,661.40
Electrical Service Estimate	1	LS	\$ 10,000.00		\$ 10,000.00
BRUNE PROJECTS					
Pump & Pipeline Procurement and Installation	1	LS	\$ 25,436.80	50%	\$ 38,155.20
Electrical Service Estimate	1	LS	\$ 25,000.00		\$ 25,000.00
MARKS PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 19,714.96	50%	\$ 29,572.44
Electrical Service Estimate	1	LS	\$ 25,000.00		\$ 25,000.00
SHEPARD - WOLTERS PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 34,411.80	50%	\$ 51,617.70
Electrical Service Estimate	1	LS	\$ 25,000.00		\$ 25,000.00
R&R LAND PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 18,379.80	50%	\$ 27,569.70
Electrical Service Estimate	1	LS	\$ 25,000.00		\$ 25,000.00
HOLLAND PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 20,595.80	50%	\$ 30,893.70
Electrical Service Estimate	1	LS	\$ 25,000.00		\$ 25,000.00
BLN FARMS PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 3,997.60	50%	\$ 5,996.40
Electrical Service Estimate	1	LS	\$ 10,000.00		\$ 10,000.00
STEVENSON PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 34,628.96	50%	\$ 51,943.44
Electrical Service Estimate	1	LS	\$ 25,000.00		\$ 25,000.00
R&R LAND - MURPHY PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 57,659.94	50%	\$ 86,489.91
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
BUSCHORN - PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 81,823.60	50%	\$ 122,735.40
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
STANDLEE - PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 45,661.40	50%	\$ 68,492.10
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
ST. MARIE - PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 19,306.16	50%	\$ 28,959.24
Electrical Service Estimate	1	LS	\$ 25,000.00		\$ 25,000.00
MCCLAIN - PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 21,362.96	50%	\$ 32,044.44
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
STUBBS - PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 44,790.96	50%	\$ 67,186.44
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
STANDLEE (LONG LINE) - PROJECT					
Pipe and Installation	1	LS	\$ 447,749.00	50%	\$ 671,623.50
Electrical Service Estimate	1	LS	\$ 25,000.00		\$ 25,000.00
HOLLAND (SOUTH) - PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 96,166.64	50%	\$ 144,249.96
Electrical Service Estimate	1	LS	\$ 25,000.00		\$ 25,000.00
Subtotal					\$ 1,995,737.77
Construction Subtotal					\$ 1,995,738
+20% Contingency					\$ 399,100
Total Construction Cost Estimate					\$ 2,394,800



North Side Pumping Company
Pumping Plant 3 Replacement Projects Direct Construction Costs
October 31, 2021

Item	Quantity	Unit	Preliminary Bid Cost	Bid Escalation	Extended Cost
Plant 3 Replacement Projects					
KOHTS PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 25,225.36	50%	\$ 37,838.04
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
ZELLER PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 13,725.30	50%	\$ 20,587.95
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
BRUNS PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 31,342.80	50%	\$ 47,014.20
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
SCHUTE PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 24,759.76	50%	\$ 37,139.64
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
TRINITY LUTHERAN					
Pump & Pipeline Procurement and Installation	1	LS	\$ 6,678.27	50%	\$ 10,017.41
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
SCHWARTZ PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 51,360.00	50%	\$ 77,040.00
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
BRUNS (WEST) PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 22,646.96	50%	\$ 33,970.44
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
MEYERHOFF PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 98,416.34	50%	\$ 147,624.51
Electrical Upgrades	1	LS	\$ 10,000.00		\$ 10,000.00
MEYER'S ESTATE PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 28,555.76	50%	\$ 42,833.64
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
ROB GRANT PROJECT					
Pipe and Installation	1	LS	\$ 56,632.80	50%	\$ 84,949.20
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
RANDY GRANT PROJECT					
Pipe and Installation	1	LS	\$ 157,912.33	50%	\$ 236,868.50
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
JERRY GRANT PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 16,763.94	50%	\$ 25,145.91
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
GORDONS PROJECT					
Pump & Pipeline Procurement and Installation	1	LS	\$ 38,222.30	50%	\$ 57,333.45
Electrical Upgrades	1	LS	\$ 25,000.00		\$ 25,000.00
Subtotal					\$ 1,168,362.88
Construction Subtotal					\$ 1,168,363
+20% Contingency					\$ 233,700
Total Construction Cost Estimate					\$ 1,402,100

Budget Narrative

The project budget shown in Table 3 is divided into four types of costs, Contractual or Direct Construction Costs, NSPC In-Kind Services, North Side Canal Company In-Kind Services, and Landowner In-Kind services which are described as follows:

Contractual or Direct Construction Costs: NSPC intends to procure the services of a third-party contractor or contractors through a succession of legal bid processes meeting the grant requirements to construct the small-scale pump stations and appurtenant infrastructure. The cost estimate to complete the construction work is based on the construction quantities reflected in the concept drawings provided in Exhibit A and a preliminary contractor bid for the work dated March 29, 2021, included as Exhibit D. Due to significant pipe and pump procurement cost increases realized in 2021, the preliminary bid costs have been escalated by 50 percent based on the bidder's recommendation.

In-Kind Services: NSPC has estimated the value of in-kind services to include the man hours for management and administrative personnel to oversee the project, coordinate with third party contractors, and for grant administration. The hourly labor rates provided for each personnel classification are actual NSPC labor rates with Fringe Benefits calculated as a percentage of personnel labor rates. North Side Canal Company intends to provide in-kind services related to constructing new irrigation turnouts for each of the new small-scale pump station. The cost provided reflects the typical materials and man hour costs required to construct an irrigation turnout with in-house labor. Commitment resolutions from both the NSPC and North Side Canal Company Boards of Directors are included in Exhibit E. Landowner in-kind services include reclaiming the 14.5 miles of irrigation laterals that will be abandoned as a part of the project.

The total project cost includes a 20% contingency to account for unanticipated and/or unknown conditions that could be encountered as the project design is advanced and to cover the potential for additional significant inflation in construction costs.

Environmental and Cultural Resources Compliance

NSPC will work with the Bureau of Reclamation (BOR) as necessary to ensure compliance with all required and applicable state, Federal, and local environmental, cultural, and paleontological resource protection laws with the understanding that the BOR will be the lead Federal agency for this process. This compliance will include as necessary the Clean Water Act, the Endangered Species Act, the National Historic Preservation Act, and consultation with potentially affected tribes and the State Historic Preservation Office.

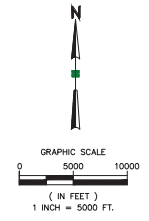
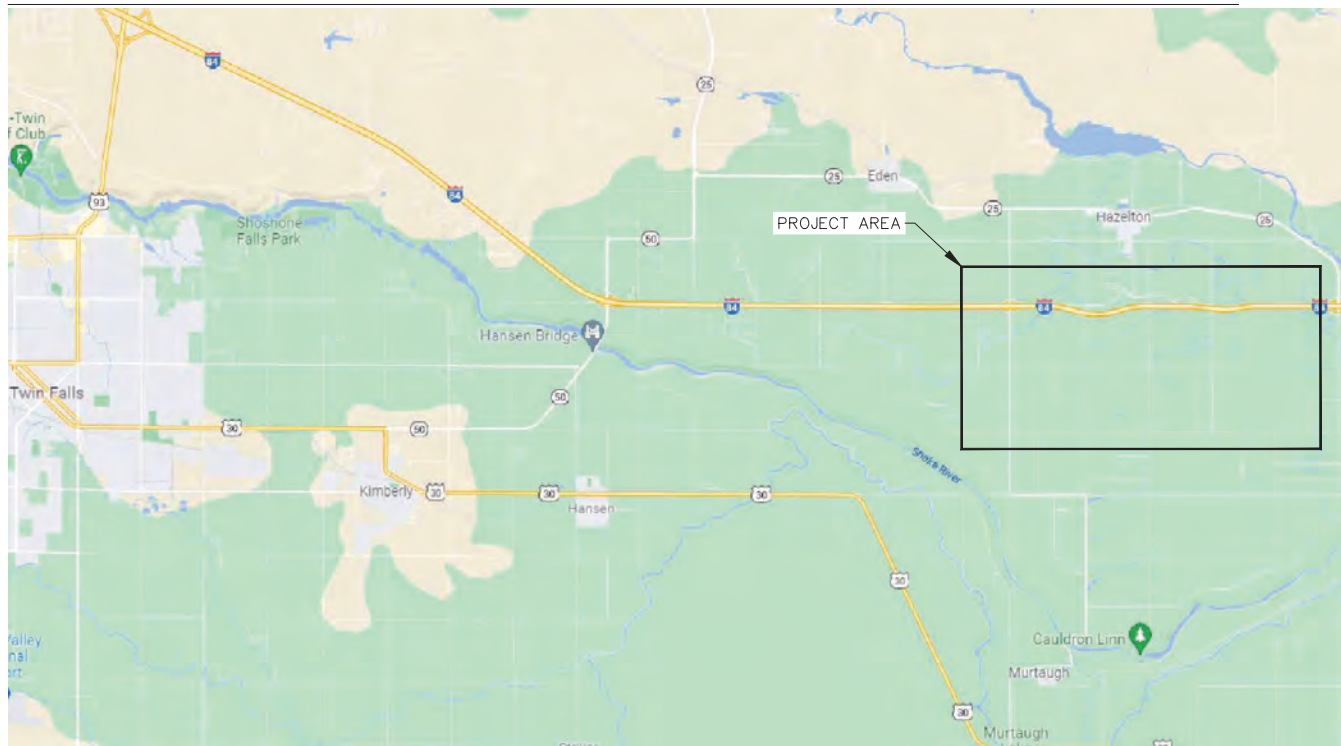
Required Permit or Approvals

As the proposed project is agricultural in nature, is being completed by an irrigation entity, and occurring entirely on privately owned lands, the permitting requirements of the project are minimal. There will be no impacts to jurisdictional waterways or wetlands, therefore, Corps of Engineers, State of Idaho Stream Channel Alteration, or Idaho Department of Environmental Quality permits will not be required. Electrical permits will be required by the State of Idaho to energize the new small-scale pump stations, and these will be obtained on a case-by-case basis by the qualified electrician performing the work.

Exhibit A – Pumping Plant 1 and Plant 3 Elimination Project Drawings

NORTH SIDE PUMPING COMPANY PUMPING PLANT 1 AND PLANT 3 ELIMINATION PROJECT

VICINITY MAP



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
C1	TITLE SHEET
C2	PROJECT OVERVIEW
C3	PUMPING PLANT 1 NORTH PIPELINE PLAN
C4	PUMPING PLANT 1 SOUTH PIPELINE PLAN
C5	PUMPING PLANT 3 PIPELINE PLAN

DIRECTIONS TO SITE

FROM I-84 EXIT 173 / TWIN FALLS - SUN VALLEY - US93
 HEAD EAST ON I-84 FOR 8.8 MILES. TAKE EXIT 182 / ID-50.
 TURN RIGHT (SOUTH) ONTO ID-50. CONTINUE ON ID-50 S. FOR
 300 FT. THEN TAKE THE FIRST LEFT FOR FRONTAGE ROAD E.
 1010 S. CONTINUE ON E. 1010 S. FOR 3.4 MILES. THEN TURN
 RIGHT ONTO S. 1500 E. CONTINUE ON S. 1500 E. FOR 1 MILE.
 YOU WILL ARRIVE AT THE INTERSECTION OF S. 1500 E. AND
 LUTHERAN ROAD. THIS IS THE MOST EASTERLY EDGE OF THE
 PROJECT.

DIRECTIONS TO SITE

LATITUDE: 42° 33' 43.35" N LONGITUDE: 114° 13' 48.76" W

Quadrant Consulting Inc.
 1904 E. Overlook Rd.
 Twin Falls, Idaho 83402
 (208) 342-0099 PHONE (208) 342-0099 FAX
 CIVIL ENGINEERING-SURVEYING

PRELIMINARY
 NOT FOR CONSTRUCTION

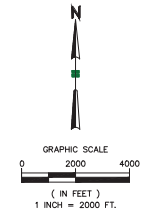
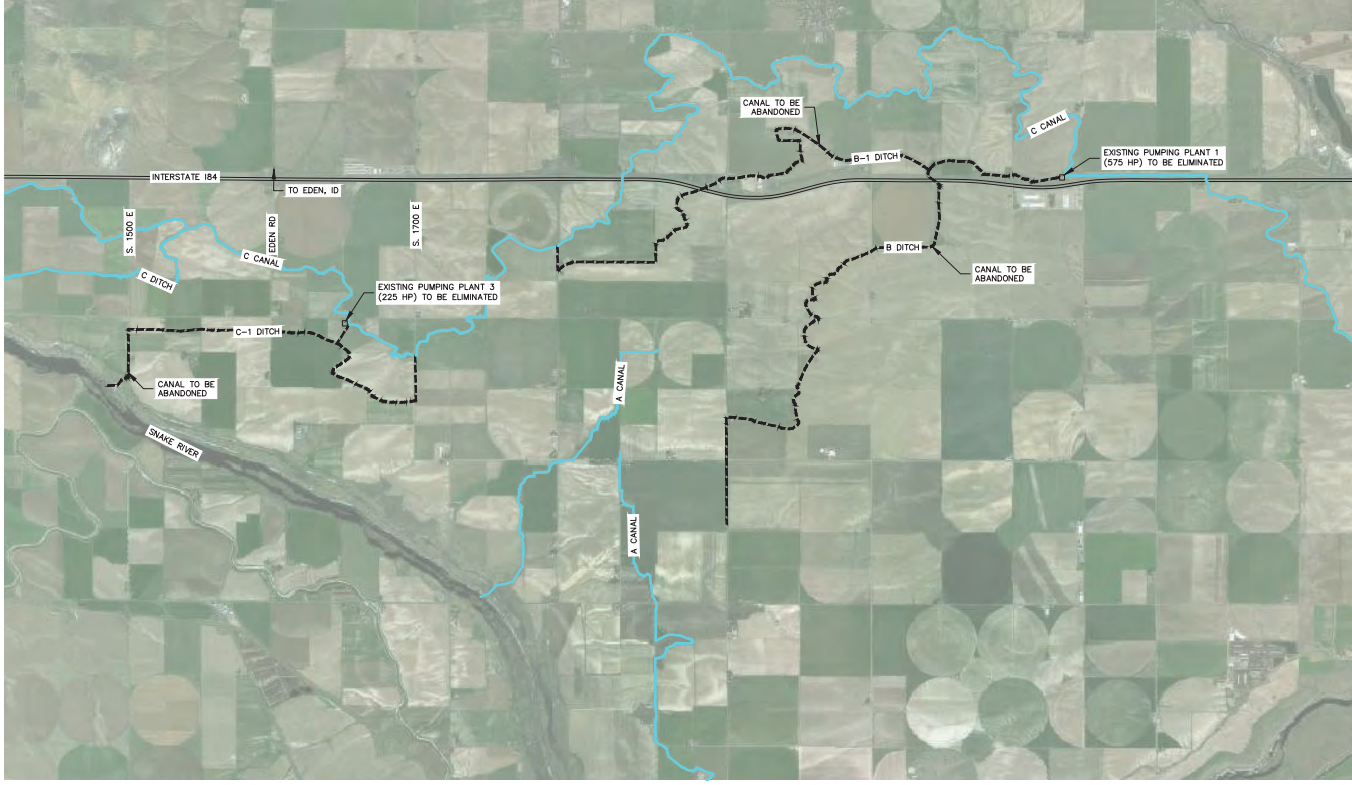
ID/NO: _____
 PROJECT NO.: 788-02
 SCALE: 1"=5000'
 MLNER

CHECKED BY: _____
 DRAWN BY: JD
 DATE: _____

TITLE SHEET
 PUMPING PLANT 1 AND PLANT 3 ELIMINATION
 PROJECT NO.: 788-02
 SCALE: 1"=5000'
 MLNER

SHEET
C1

DATE PLOTTED: 11/15/2017 10:58:52 AM PLOT DATE: 11/15/2017 10:58:52 AM



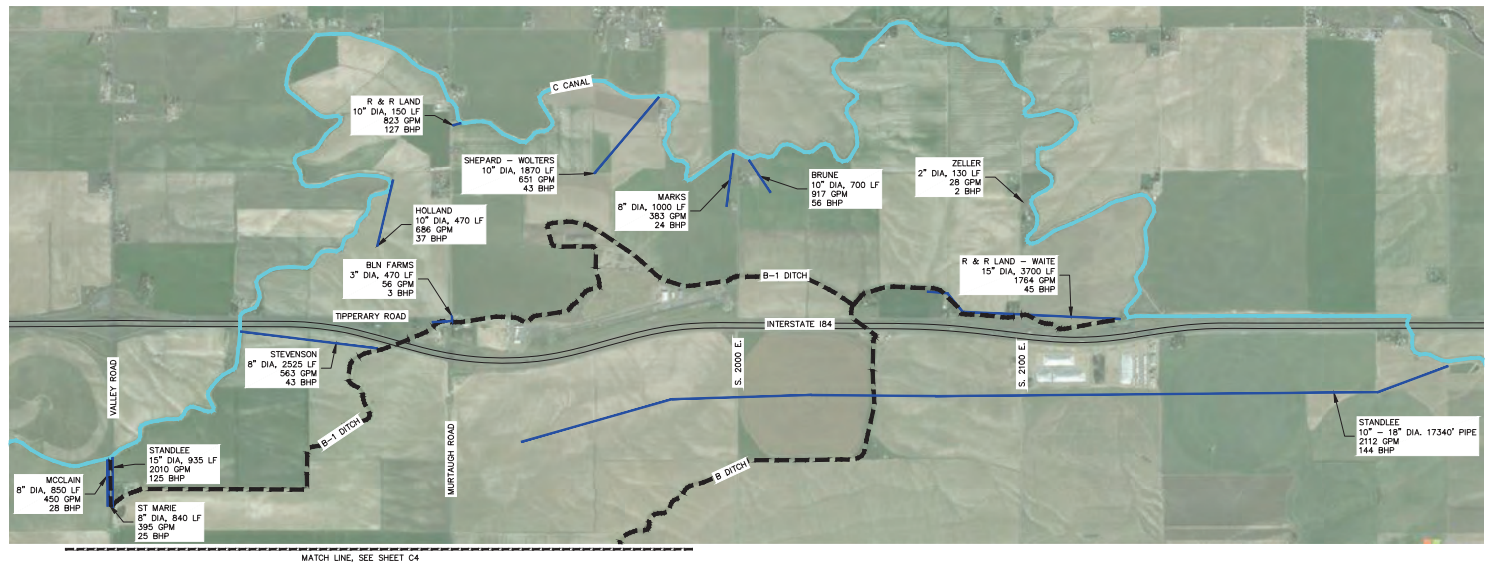
LEGEND

	EXISTING CANAL, RETAINED
	EXISTING CANAL, ABANDONED

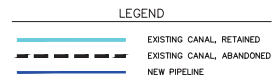
DESIGNED BY/ISS: _____ DRAWN BY: JD _____ DATE: 08/25/2010	CHECKED BY/NAME: _____ PLOT DATE: 11/22/10	PROJECT NO.: 788-02 SCALE: 1"=2000' MLNER	ID/NO: _____ PROJECT OVERVIEW PUMPING PLANT 1 AND PLANT 3 ELIMINATION	<p>Quadrant Consulting Inc. 1904 E. Campbell Rd. Edena, UT 84304 (201) 342-0091 PHONE (201) 342-0062 FAX CIVIL ENGINEERING-SURVEYING</p>
PRELIMINARY NOT FOR CONSTRUCTION				
SHEET C2				

11/22/10 10:58:33 AM C:\Users\jazzel\Documents\788-02\Drawings\788-02-01.dwg 1:1 11/22/10 10:58:33 AM

C:\Users\jazzel\OneDrive\Documents\Projects\2023\23-0001\23-0001.dwg

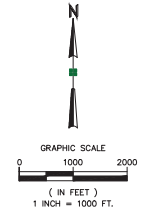


MATCH LINE, SEE SHEET C4



ABBREVIATIONS

- BHP BRAKE HORSEPOWER
- GPM GALLONS PER MINUTE
- DIA DIAMETER
- LF LINEAR FEET



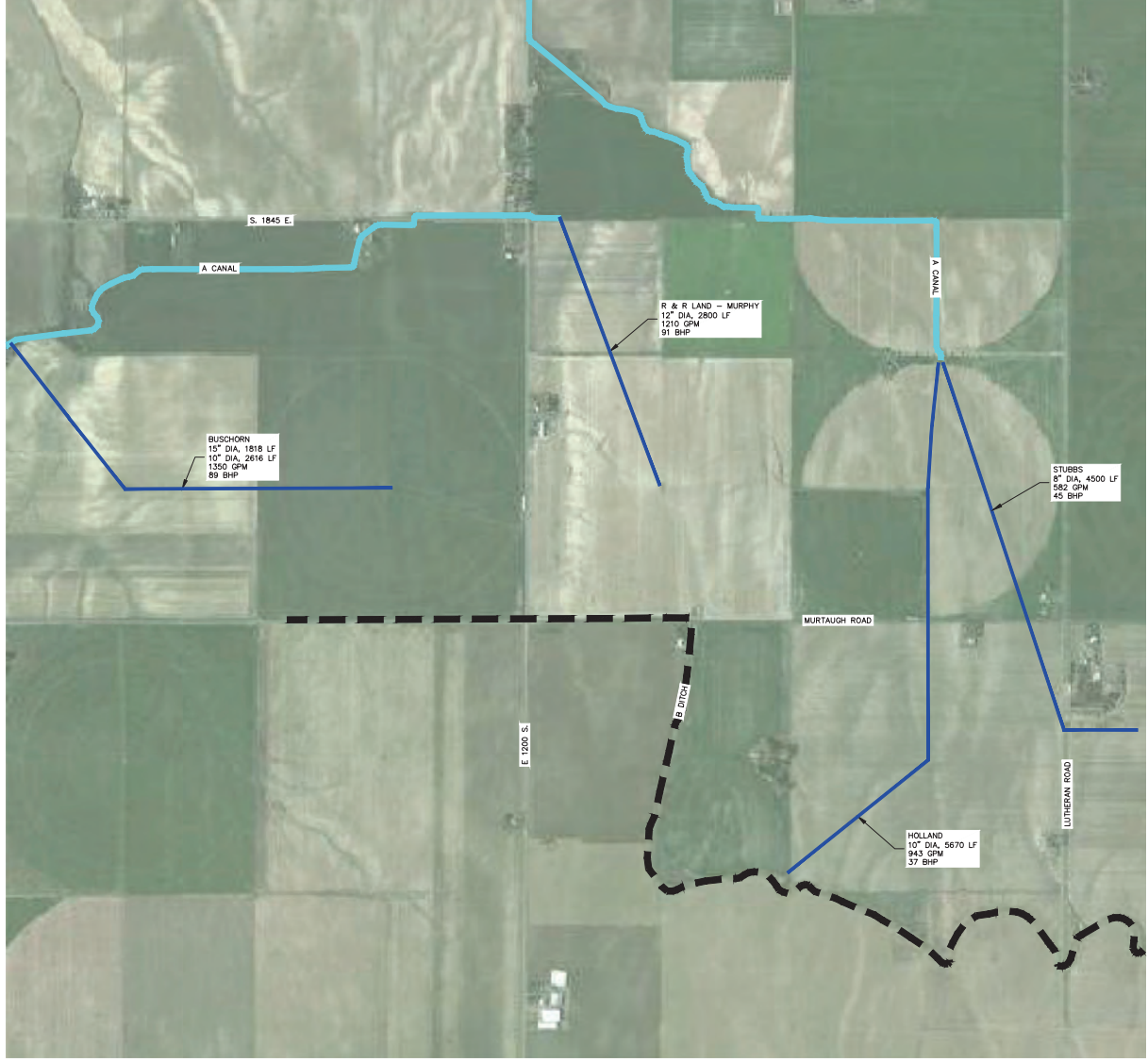
Quadrant Consulting Inc.
 1904 E. Campbell Rd.
 Suite 100
 (208) 342-0091 PHONE (208) 342-0092 FAX
 CIVIL ENGINEERING-SURVEYING

PRELIMINARY
 NOT FOR CONSTRUCTION

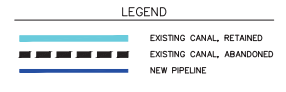
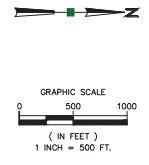
PUMPING PLANT 1 AND PLANT 3 ELIMINATION
 PUMPING PLANT 1 NORTH PIPELINE PLAN
 PROJECT NO. 7888-02
 SCALE: 1"=1000'
 MNLNER

DESIGNED BY/ISS: _____	CHECKED BY/CHK: _____	DATE: _____	PLOT DATE: 11/22/23
DESCRIPTION: _____			
SHEET			
C3			

10/15/2014 10:58:33 AM C:\Users\jsteele\OneDrive\Documents\Projects\7885-02\Drawings\7885-02-01.dwg



MATCH LINE, SEE SHEET C3



ABBREVIATIONS

BHP	BRAKE HORSEPOWER
GPM	GALLONS PER MINUTE
DIA	DIAMETER
LF	LINEAR FEET



PRELIMINARY
NOT FOR CONSTRUCTION

PUMPING PLANT 1 AND PLANT 3 ELIMINATION
PUMPING PLANT 1 SOUTH PIPELINE PLAN

PROJECT NO. 7885-02

SCALE: 1"=500'

MUNNER

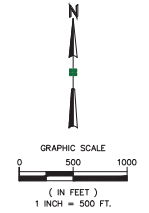
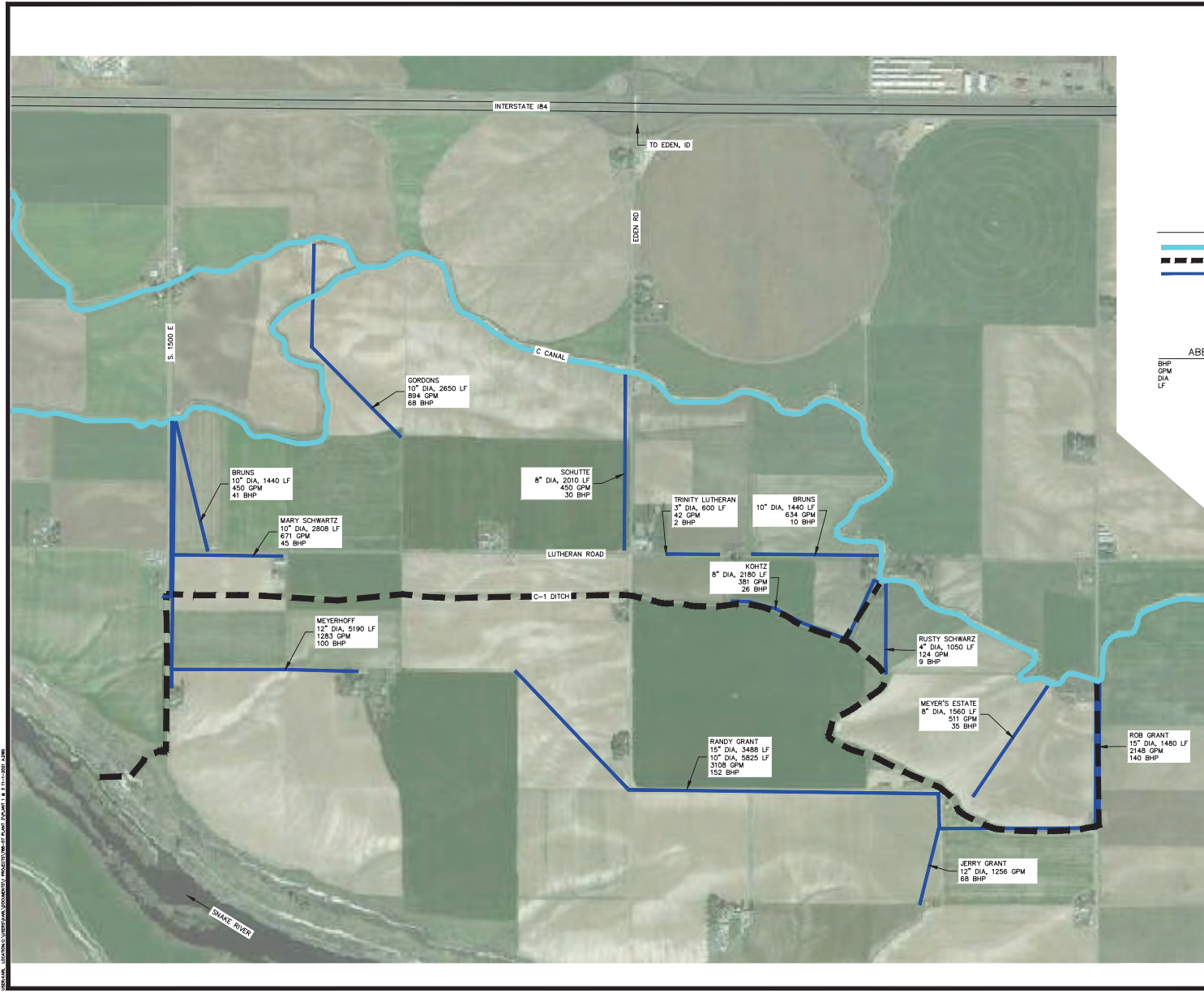
DATE: 11/22/14

DESIGNER: JSTEELE

CHECKED BY: JSTEELE

PLOT DATE: 11/22/14

SHEET C4



LEGEND

————— EXISTING CANAL, RETAINED
 - - - - - EXISTING CANAL, ABANDONED
 ——— NEW PIPELINE

ABBREVIATIONS

BHP BRAKE HORSEPOWER
 GPM GALLONS PER MINUTE
 DIA DIAMETER
 LF LINEAR FEET

Quadrant Consulting Inc.
 1904 E. Campbell Rd.
 Edinboro, PA 16741
 (201) 342-0091 PHONE (201) 342-0092 FAX
 CIVIL ENGINEERING-SURVEYING

PRELIMINARY
 NOT FOR CONSTRUCTION

PUMPING PLANT 1 AND PLANT 3 ELIMINATION
PUMPING PLANT 3 PIPELINE PLAN

CHECKED BY: _____
 DRAWN BY: _____
 DATE: _____

PROJECT NO. 7898-02
 SCALE: 1"=500'
 MNLNR

ID: _____

SHEET
C5

10/15/2014 10:58:30 AM C:\Users\jazzel\Documents\Projects\7898-02\7898-02.dwg

Exhibit B – Ditch Infiltration Loss Data

Exhibit C – Landowner Commitment Letters

NORTH SIDE PUMPING COMPANY
921 North Lincoln
Jerome, Idaho 83338
(208) 324-2319

Letter of Endorsement

Between North Side Pumping Company and Shareholder

North Side Pumping Company Modernization Project

North Side Pumping Company operated 5 lift pump stations serving 12,145 shs and has successfully eliminated 2 stations involving 4,747 shs in the Jerome area. The North Side Pumping Company Project is currently serving 7,398 shs and is looking to modernize the delivery of water by changing the delivery point of the shareholders on Plants 1 and 3 to their private station on the gravity laterals. The Plant 2 deliveries will be made through a new pressurized station with new delivery points along the 2600 East road, Hazelton.

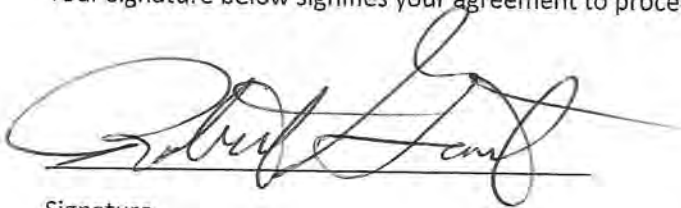
Benefits of the Project are:

- 30.5 miles of canal will return back to the shareholders.
- 15,382 Acre feet of water savings annually.
- Power savings by shareholders controlling their water delivery needs.
- Earlier start and later shutoff of irrigation season.
- Only Plant 1 & 3 shareholders pay North Side Canal Company assessment.
- Plant 2 Shareholders pay a pressurization fee into their system; no individual pump stations to maintain or power to pay.

North Side Pumping Company is currently in the engineering and cost estimating stage of the project and is looking for funding sources and options.

North Side Pumping Company is requesting your endorsement (as an involved shareholder) to proceed with the project.

Your signature below signifies your agreement to proceed with the Project.



Signature

9-27-21

Date

NORTH SIDE PUMPING COMPANY
921 North Lincoln
Jerome, Idaho 83338
(208) 324-2319

Letter of Endorsement

Between North Side Pumping Company and Shareholder

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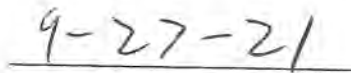
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North Side Pumping Company is requesting your endorsement (as an involved shareholder) to proceed with the project.

Your signature below signifies your agreement to proceed with the Project.



Signature



Date

Exhibit D – Preliminary Contractor Bid



Butte Irrigation Inc.

P.O. BOX 790
PAUL, ID 83347
PH. 208-438-8103

SALES ESTIMATE

Customer: NORTHSIDE CANAL CO.
Address:

Date: 3/29/2021
Cust PO:
Phone:

OVERALL PROJECT SUMMARY

NUMBER	DESCRIPTION	PRICE	TOTAL
1	PLANT 1 ROUGH ESTIMATE	1,067,158.51	\$1,067,158.51
1	PLANT 3 ROUGH ESTIMATE	572,241.92	\$572,241.92
1	PA PIPELINE INDIVIDUAL LINES ROUGH ESTIMATE	454,597.02	\$454,597.02
1	PA PIPELINE MAINLINE ROUGH ESTIMATE	2,334,113.48	\$2,334,113.48
TOTAL			\$4,428,110.93

~Customer has the responsibility of contacting their power and/or canal company for any requests, changes or issues.

Special Instructions : THIS ESTIMATE DOES NOT INCLUDE THE FOLLOWING:
POWER UPGRADES, DIVERSION STRUCTURES, TURBINE PUMPS FOR INDIVIDUALS OR FITTINGS AND INSTALL FOR PA MAINLINE

Payment Terms : Payment in full is due the 10th of the month following delivery of goods or completion of job.
Buyer shall be responsible for any costs associated with collection of delinquent accounts.
A 3% SURCHARGE WILL BE ADDED TO ANY CREDIT CARD TRANSACTIONS \$500 OR HIGHER.

BUYERS SIGNATURE

DUSTIN OSTERHOUT

ACCEPTED FOR BUTTE IRRIGATION INC, BY

DATE

NO EXPRESS OR IMPLIED WARRANTIES BY BUTTE IRRIGATION INC: GOODS ARE SOLD BY BUTTE IRRIGATION AS IS. MANUFACTURER'S WARRANTIES MUST BE ENFORCED AGAINST THE MANUFACTURER.



Butte Irrigation Inc.

P.O. BOX 790

PAUL, ID 83347

PH. 208-438-8103

SALES ESTIMATE

Customer: NORTHSIDE CANAL CO.
Address:

Date: 3/22/2021
Cust PO:
Phone:

PA PIPELINE MAINLINE BUDGET NUMBERS

NUMBER	DESCRIPTION	PRICE	TOTAL
5,715	18" 100 LB PIP PVC	26.51	\$151,504.65
4,350	21" 125 LB PIP PVC	36.15	\$157,252.50
2,225	27" 125 LB PIP PVC	72.29	\$160,845.25
2,485	30" 125 LB C900 PVC	102.41	\$254,488.85
2,633	36" 125 LB C900 PVC	138.56	\$364,828.48
3,460	42" 125 LB C900 PVC	204.82	\$708,677.20
1	BOOSTER STATION LABOR / FITTINGS	95,224.81	\$95,224.81
4	CORNELL 6YB 50HP BOOSTER PUMP	9,117.34	\$36,469.36
1	RIVER STATION TIE-IN INCL. WELDING & VFD	179,887.07	\$179,887.07
2	NEW 500 HP SHORT-COUPLED TURBINE	70,265.89	\$140,531.78
1	NEW 350 HP SHORT-COUPLED TURBINE	48,403.53	\$48,403.53
5	ROTATING RIVER DRUM SCREEN BLACK R-M w/MOTOR	7,200.00	\$36,000.00
		TOTAL	\$2,334,113.48

~Customer has the responsibility of contacting their power and/or canal company for any requests, changes or issues.

Special Instructions : **POWER SERVICE / UPGRADES ARE NOT INCLUDED IN THIS PRICE.**
THIS PRICE DOES NOT INCLUDE A CONCRETE STRUCTURE OR LABOR TO BUILD RIVER DIVERSION.

Payment Terms : Payment in full is due the 10th of the month following delivery of goods or completion of job.
Buyer shall be responsible for any costs associated with collection of delinquent accounts.
A 3% SURCHARGE WILL BE ADDED TO ANY CREDIT CARD TRANSACTIONS \$500 OR HIGHER.

BUYERS SIGNATURE

DUSTIN OSTERHOUT

ACCEPTED FOR BUTTE IRRIGATION INC, BY

DATE



Butte Irrigation Inc.

P.O. BOX 790
PAUL, ID 83347
PH. 208-438-8103

SALES ESTIMATE

Customer: NORTHSIDE CANAL CO.
Address:

Date: 3/17/2021
Cust PO:
Phone:

PLANT #1 ROUGH ESTIMATE

NUMBER	DESCRIPTION	PRICE	TOTAL
1	R&R LAND, GNESEA, WAITE	93,031.20	\$93,031.20
1	ZELLER	2,440.93	\$2,440.93
1	BRUNE	25,436.80	\$25,436.80
1	ROMA MARKS	19,714.96	\$19,714.96
1	HILLS SHEPARD, JIM WOLTERS	34,411.80	\$34,411.80
1	R&R LAND	18,379.80	\$18,379.80
1	HOLLAND	20,595.80	\$20,595.80
1	BLN FARMS	3,997.60	\$3,997.60
1	STEVENSON	34,628.96	\$34,628.96
1	R&R LAND, MURPHY	57,659.94	\$57,659.94
1	BUSCHORN	81,823.60	\$81,823.60
1	STANDLEE	45,661.40	\$45,661.40
1	ST. MARIE	19,306.16	\$19,306.16
1	MCCLAIN	21,362.96	\$21,362.96
1	STUBBS	44,790.96	\$44,790.96
1	STANDLEE (LONG LINE)	447,749.00	\$447,749.00
1	HOLLAND (SOUTH)	96,166.64	\$96,166.64

TOTAL \$1,067,158.51

~Customer has the responsibility of contacting their power and/or canal company for any requests, changes or issues.

Special Instructions :

Payment Terms : Payment in full is due the 10th of the month following delivery of goods or completion of job.
Buyer shall be responsible for any costs associated with collection of delinquent accounts.
A 3% SURCHARGE WILL BE ADDED TO ANY CREDIT CARD TRANSACTIONS \$500 OR HIGHER.

BUYERS SIGNATURE

DUSTIN OSTERHOUT

ACCEPTED FOR BUTTE IRRIGATION INC, BY

DATE



Butte Irrigation Inc.

P.O. BOX 790
PAUL, ID 83347
PH. 208-438-8103

SALES ESTIMATE

Customer: NORTHSIDE CANAL CO.
Address:

Date: 3/17/2021
Cust PO:
Phone:

PLANT #3 ROUGH ESTIMATE

NUMBER	DESCRIPTION	PRICE	TOTAL
1	KOHTZ	25,225.36	\$25,225.36
1	RUSTY SCHWARTZ	13,725.30	\$13,725.30
1	BRUNS	31,342.80	\$31,342.80
1	SCHUTTE	24,759.76	\$24,759.76
1	TRINITY LUTHERAN	6,678.27	\$6,678.27
1	MARY SCHWARTZ	51,360.00	\$51,360.00
1	BRUNS (WEST)	22,646.96	\$22,646.96
1	MEYERHOFF	98,416.34	\$98,416.34
1	MEYER'S ESTATE	28,555.76	\$28,555.76
1	ROB GRANT	56,632.80	\$56,632.80
1	RANDY GRANT	157,912.33	\$157,912.33
1	JERRY GRANT	16,763.94	\$16,763.94
1	GORDONS	38,222.30	\$38,222.30
TOTAL			\$572,241.92

~Customer has the responsibility of contacting their power and/or canal company for any requests, changes or issues.

Special Instructions :

Payment Terms : Payment in full is due the 10th of the month following delivery of goods or completion of job.
Buyer shall be responsible for any costs associated with collection of delinquent accounts.
A 3% SURCHARGE WILL BE ADDED TO ANY CREDIT CARD TRANSACTIONS \$500 OR HIGHER.

BUYERS SIGNATURE

DUSTIN OSTERHOUT

ACCEPTED FOR BUTTE IRRIGATION INC, BY

DATE

Exhibit E – Board Resolutions


Resolution

The Board of Directors of the North Side Canal Company, Ltd. (NSCC) reviewed this resolution by text message and voted via text message on Monday, November 1, 2021. Directors that responded included: Rocky Hagan, Dean Bingham, Jim Fiala, DeWitt Marshall, Bart Patterson, Mike Elliott, Albert Lockwood, and Greg Hirai.

Alan Hansten, Secretary/Treasurer of the board informed the directors that a formal resolution was necessary to support the North Side Pumping Company's United States Bureau of Reclamation (USBR) WaterSmart grant application for the *Pumping Plant Elimination and Canal Abandonment Project*. By text message voting, the following resolution was adopted:

BE IT RESOLVED, North Side Canal Company (NSCC) secretary/treasurer, Alan W. Hansten, has reviewed the WaterSmart grant application to be submitted by the North Side Pumping Company for the Pumping Plant Elimination and Canal Abandonment Project. NSCC has the financial capability and resources to meet its obligations under the funding plan. NSCC will work with the USBR and the North Side Pumping Company to complete the project.

ATTEST:


Secretary – Alan W. Hansten


Chairman – Mike Elliott