

April 13, 2021

Sierra Los Pinos Property Owners Association  
Board of Directors  
Attn: Paul Lisko, President  
950 Forest Road #10  
Jemez Springs, NM 87025

**SUBJECT: LETTER PROPOSAL FOR WATER SYSTEM AND DRAINAGE UPGRADES**

Dear Mr. Lisko

Thank you for meeting with NV5 at the Sierra Los Pinos Volunteer Fire Department on March 30, 2021 to discuss the various needs of the Sierra Los Pinos Property Owners Association (SLPPOA). Helping communities ensure adequate potable water supply, optimal water system design, and manage water resources in New Mexico has been a priority for our firm for over 75 years. Our proposed team is composed of highly qualified professionals dedicated to providing the best solutions to complex problems to preserve and enhance a vital resource – our water. Ensuring safe, adequate water supply and distribution, water pressure, and water monitoring for communities such as the Sierra Los Pinos are integral to our work and business philosophy.

**NV5 has assembled our most qualified team members to serve SLPPOA on this project.** The NV5 design professionals assigned to this project are experienced in developing Preliminary Engineering Reports (PERs) for water systems, obtaining funding, design and analysis, and production of clear, well thought out construction plans. Arvind Patel, NV5 Project Manager, has experience as an owner and operator and understands the challenges a rural community faces to improve a water system with limited resources. Our survey subconsultant, CSTi, is highly experienced in survey and subsurface utility engineering (SUE) services; we have worked with CSTi on numerous similar successful projects. We have included brief resumes of our core team members in Appendix A.

**We bring a proven and refined approach to this project that is a direct result of our team's successful delivery of similar projects.** The recent experience NV5 has with water systems design and construction for small communities includes the Pueblo of Ohkay Owingeh, Village of Questa, El Rito Regional Water and Wastewater Association, Cerro Regional Mutual Domestic Water Association, and Village of Bosque Farms. We have included a sampling of our past projects as Appendix B. These projects provide us with the foundational experience and technical skills necessary to develop solutions to meet the needs of the SLPPOA.

**Our team routinely works with agencies to obtain state and federal funding awards for a broad spectrum of projects.** Our infrastructure funding specialist, Gilbert Gallegos, served as the Department of Agriculture Water/Wastewater Program Director and is familiar with the federal and state grant/loan programs available to SLPPOA. Through our in-house grants management services, NV5 has secured \$30M for our clients since 2014. A table of recent grant awards secured by Mr. Gallegos is included as Appendix C.

**PROPOSED WORK SCOPE**

**TASK 1 - Water Rate Analysis and Recommendations**

NV5 understands SLPPOA currently charges an annual fee of \$384.48 for water maintenance and repair (M&R) which is bundled with the annual SLPPOA assessment sent to each resident. SLPPOA would like to evaluate the current water M&R charge and develop a water rate that is structured to promote water conservation, structured to provide equity amongst all water users regardless of their individual water usages and to ensure the financial viability of SLPPOA and the perpetual operation and maintenance of the SLPPOA Public Water System.

- NV5 will work with SLPPOA to gather financial and operational data such as debt service, annual budgets, prior years and current water system expenditures, administrative costs, operational costs, equipment leases, current sale of water, etc. to determine operating and coverage ratios needed for rate analysis. This includes the determination of fixed costs and variable costs for both the entire system and per customer calculations.
- NV5 will assist SLPPOA in the evaluation of short-term and long-term measures to promote positive trends to balance expenditures and revenues.

- NV5 will provide recommendations for the type of rate structure, such as an increasing block structure, that promotes conservation, equity and other SLPPOA intents. With the structure in place, analysis will be performed on past and current usage data, expenditure data and revenue data to develop a recommended rate structure that is as close as possible to the currently assessed fee or provide a rate structure increase phasing plan if the recommended water rate is above the current assessed annual M&R fee amount.
- NV5 will provide a final report that summarizes the rate analysis process and recommendations for SLPPOA's use.



Ohkay Owingeh Water Conveyance Project, Pueblo of Ohkay Owingeh, NM

## TASK 2 - Water System Improvements – Hydraulic Connection of System 1 & System 2

NV5 understands the scope to be the engineering/design and plan set development (NM APWA specification standards will be used if SLPPOA does not have an approved water construction specification standard) to hydraulically connect System 1 and System 2 for bi-direction flow of potable water. The system currently operates where System 1 is redundant to System 2, but System 2 does not provide redundancy to System 1.

- Design level topographical survey – extent to include the area between System 1 and System 2 where the transmission line and any related system infrastructure will be considered for connecting the two systems and at various key points throughout the two system to verify elevations and pressure zone(s) determinations of the combined system.
- Design and Analysis Report (DAR) – NV5 will produce using the information obtained through the topographical survey, water production, storage capacities, water demand, evaluations of current distribution system capacity as well as planned capacities and other key decision-making criteria. The above calculations, studies and analysis will be compiled to produce the DAR for the recommended water facility(s) needed for the bi-directional hydraulic connection between System 1 and System 2.
- NV5 will provide title sheet, general notes, site plan, survey control, utility plans and construction details for the project. NV5 will provide 30% and 90% plans submissions and all meetings will be virtual to save on travel costs. Engineer's estimates and specifications will be provided at the 90% and 100% intervals.
- NV5 will prepare the construction procurement documents using SLPPOA boiler plate front end documents and if SLPPOA front ends not available we would propose to use EJCDC documents for the procurement.
- NV5 will provide construction procurement support to answer RFI's, addendums (if needed) during bidding, attend Pre-Bid and Bid-Opening meetings, and provide bid tabulation and Engineer's Recommendation of Award.

## TASK 3 - Drainage Analysis and Recommendations

At the visit with the SLPPOA on March 30, 2021, NV5 was asked to determine erosion control measures for 20 to 24 lots that are experiencing erosion or scour problems impacting downstream roadways or other properties. Up to 12% slopes exist in some areas contributing to the erosive situation. SLPPOA noted that they want solutions such as water bars, grading, culverts to fit with the rural setting. They want to provide each homeowner with a plan to fix the individual situation on their lot. Our proposed scope is as follows:

### Gather data

- Obtain contour, soils data (available on web sources) and mapping that shows the lot layout – It is assumed the SLPPOA will provide the subdivision lot mapping
- Identify the 24 lots in question
- Review the overall terrain and drainage patterns.
- Conduct a site visit to look at each problem site (up to 24). Fulcrum software will be used to capture photos and a description to document each erosive condition.

Develop a resolution and details

- Develop a resolution for each site (up to 24). Resolutions will be described in the Fulcrum software and a Fulcrum generated report will be prepared for each site. The report will describe the planned “fix”, possibly include a sketch or illustration on a photo, and details will be provided as needed. Detailed construction plans and specifications are not included with this task.

Erosion protection solutions are expected to be localized solutions in response to localized runoff and solutions are planned to range from regrading, riprap, or installation of a culvert as appropriate for the rural area.



Field verification for AMP, Quemado, NM



City of Albuquerque BioPark Utility Expansion, Albuquerque, NM

**TASK 4 (Reserved Task) – Annual Water System Replacement Program**

During our meeting, it was mentioned there is a strong interest to begin waterline replacement throughout the SLPPOA jurisdiction in efforts to upgrade water distribution lines that are old, outdated, undersized and have generally run the course of their useful life. NV5 understands that rural communities may not have the funding in place or can wait the years it takes to go through a traditional design, bid, then build delivery method for waterline replacement. NV5 is proposing to streamline this process for SLPPOA to include the annual development of a waterline replacement construction plans that SLPPOA can use to obtain funding and build annual waterline replacement.

- NV5 will provide plan set for the new water line mains that follows the same alignment as the existing waterline mains. This will provide cost savings since survey and control, aerial overlays, etc can be avoided when following the same general alignment. The intent of the program is to develop construction plans with the intent of upgrading the watermain line size and material type, rather than the layout.
- The Annual Water System Replacement Program will be coordinated and fashioned annually based on the allowable funds anticipated for water line replacement in the upcoming year. It is important that annual replacement programming is realistic based on achievable funding amounts and within the parameters of the major funding sources for water utilities here in New Mexico. This will ensure that each annual phase is a standalone project that does not interrupt system functionality.
- The plan set will include title sheet, general notes, overall site plan, construction details, materials listing, specifications, and engineer’s estimate. Hydraulic modeling or engineering calculations are not included and will not be necessary for this program.
- NV5 will provide procurement support annually to include attending pre-bid meetings, bid-openings responding to bidder questions and issuing addendums.
- Construction Administration and Inspection are not included and can be added for additional fees to ensure design intent and code adherence.
- NV5 will provide grantsmanship service to SLPPOA to identify and assist with applying for local, state and federal funds to support annual replacement programming.

### FEE

NV5 proposes a Lump Sum Fee of \$41,782 excluding taxes, for Tasks 1-3 indicated above. Applicable NMGRT will be added at the time of invoicing.

Task 1: Water Rate Analysis and Development	\$ 9,890
Task 2: Hydraulic Connection Design of System 1 & System 2	\$ 22,892
Task 3: Drainage Analysis and Recommendations	\$ 9,000

Reserved Task (additional services for SLPPOA consideration):

Task 4: Annual Waterline Replacement Design Services	\$9,946
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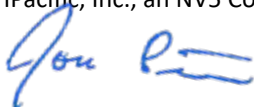
NV5 has proposed a Lump Sum contracting method for these tasks, however NV5 is open to time and materials (with NTE's) contracting method if SLPPOA desires.

### EXCLUSIONS

1. SLPPOA will provide all necessary data and system information in a timely manner to NV5 for the required analysis.
2. Foundation design, if needed, will be performed by contractor submitting bids or can be performed by NV5 if the SLPPOA elects to self-perform the infrastructure upgrades.
3. No boundary/property surveys or replats are included. Survey will be obtained for the area of the transmission line and related facilities needed to hydraulically connect System 1 and System 2.
4. No environmental clearances or cultural services are included, however, NV5 can provide these services with in-house staff under a future task order or request.
5. No geotechnical investigations are included, however, NV5 can provide these services with in-house staff under a future task order or request if needed as determined by the design process.
6. Construction phase services, however, NV5 can provide these services with in-house staff under a future task order or request.
7. No utility billing policies and procedures development are included, however NV5 can provide these services with in-house staff under a future task order or request.
8. All project related meetings will be conducted virtual to save on project expenses. NV5 will be making an on-site visit during the initial kick-off meeting/information gathering phase as well as for attendance at both the pre-bid meeting and bid-opening meeting to support SLPPOA procurement of a construction contractor.
9. Any taxes, fees and/or permitting necessary for the project.

Thank you for this opportunity. We look forward to partnering with Sierra Los Pinos Property Owners Association and in planning and designing sustainable infrastructure for many years to come.

Sincerely,  
WHPacific, Inc., an NV5 Company



Jon Peña, PE  
Operations Manager, Albuquerque  
Direct 505.830.8753 Fax 505.242.4845  
Jonathan.Pena@nv5.com



**ARVIND PATEL | PROJECT MANAGER**

14 years of infrastructure development and grant writing experience. In Arvind’s former capacity, he was the executive director of the Pueblo of Acoma Utility Authority. He brings significant insight from an owner/operator perspective, led Acoma’s Utility Rate Formation Project, and is a certified level 4 water systems operator. He understands the water and wastewater needs and challenges that rural communities experience during utility operations.



**SHEILA JOHNSON, PE, CFM | QA/QC MANAGER**

Professional Engineer: NM #19758; Certified Flood Plain Manager: NM #13-00325

25 years of experience providing hydrology, hydraulics, and utility design for water distribution and wastewater collection systems, storm drain systems, storm water storage facilities, urban and rural roadway drainage, and floodplain mapping.



**CRAIG TOM, PE | LEAD ENGINEER**

Professional Engineer: NM #26352

4 years of experience in water system and wastewater utility planning and design including hydrology and hydraulic analysis for highway drainage structures and bridges. Software experience includes EPANet water modeling, AutoCAD, ArcGIS, HEC-HMS, and HEC-RAS SRH-2D.



**GILBERT GALLEGOS | GRANTS MANAGER**

39 years of funding experience as a former program director and state engineer for U.S. Department of Agriculture, Rural Development (USDA-RD) where he administered approximately \$25M in loan and grant funding for rural communities and \$50M for designated Colonias communities.



**AUSTIN SCHMIDT, EIT | ASSISTANT ENGINEER**

Experience in water system, wastewater system planning and design including hydrology and hydraulic analysis for facility rehabilitations, erosion control, and highway drainage.



**JANET RUPLEY | GIS DESIGNER/ENGINEERING SUPPORT**

35 years of experience as a CAD/GIS designer for watershed studies, drainage master plans, storm sewer systems, storm water storage facilities, urban/rural roadway drainage, and water and sanitary sewer projects. Experience in production of detailed construction drawings, bidding, close out, implementation of various CAD standards, creation of report exhibits.



**DAVID ACOSTA, PS | SURVEY/SUE**

Professional Surveyor: NM #21082

17 years of experience with Land Surveying and Geomatics including Boundary, ALTA/NSPS Surveys, Construction Staking, and UAV Mapping. David has worked with the NV5 team on numerous transportation and transit projects. His passion, experience and leadership enrich the teams and projects he is involved with.



**ERIC JOHNSON, AICP, CHMM | ENVIRONMENTAL PROJECT MGR.**

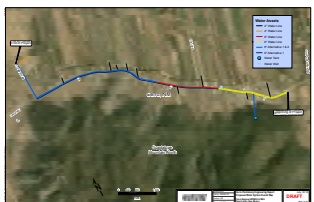
American Institute of Certified Planners: #42448; Certified Hazardous Materials Manager: #11632

25 years experience in National Environmental Policy Act (NEPA), public involvement, and hazardous materials. He has prepared numerous categorical exclusions (CatEx), environmental assessments (EA), and environmental impact statements (EIS) for linear infrastructure, transportation, utilities, and infrastructure projects.



**OHKAY OWINGEH WATER CONVEYANCE PHASE III** OHKAY OWINGEH PUEBLO, NM

NV5 began design for the Phase III waterline conveyance project following the construction of a new water storage tank for the Pueblo of Ohkay Owingeh. NV5 completed the design of approximately 34,000 linear feet of 6-inch and 8-inch water conveyance to replace smaller pipe or provide new pipe for areas not currently served, additional fire hydrants, water meters and service lines. The construction plans and specifications were completed and approved by USDA and Tribal Infrastructure Funding (TIF) (funding agencies) and construction is nearing completion with NV5 performing the Construction Administration. **Client Reference:** Christy van Buren, Planning Department Manager; 505.852.4400



**CERRO PRELIMINARY ENGINEERING REPORT - WATER IMPROVEMENTS** CERRO, NM

This PER described the existing system and needed water system improvements consisting of a new 60,000-gallon ground storage tank adjacent to the existing 30,000-gallon storage tank to increase storage capacity and meet emergency criteria. Approximately 1,080 feet of 6-inch PVC transmission water line will be extended from the well house to the water tanks. A new gravel road to the tank site will be provided, replacing the existing dirt road. NV5, specifically Mr. Gallegos, the NV5 Grants Manager proposed for this project, assisted the Association in acquiring funding for design of the recommended alternative as a result of the completed PER. The contract process is being finalized with the funding agency and design of Cerro’s upgraded water facilities beginning in the coming weeks. NV5 will be contracted to provide construction plans and documents, and construction administration.



**CABRESTO ROAD WATERLINE** VILLAGE OF QUESTA, NM

The Village of Questa’s water system includes asbestos cement (transite) water pipes and bedding material constructed of molybdenum mine tailings. The Village is in the process of replacing both of these conditions. This project replaces approximately 4,450 linear feet of existing pipe of varying sizes and material, with new 6-inch PVC waterline within the northernmost length of Cabresto Road. NV5 has provided final construction plans, specifications, and bidding services.

We are providing construction administration services with period inspection insuring design intent and code compliance. Funding for this project was obtained through a Community Development Block Grant (CDBG). Coordination with the funding agency has been ongoing and will continue through construction. **Client Reference:** Honorable Mark Gallegos, Village Mayor; 575.586.0694



**PRELIMINARY ENGINEERING REPORT - WATER SYSTEM IMPROVEMENTS** EL RITO, NM

Currently, the water system depends on a single shallow well for their water with no redundancy. They want to add a new well, water storage tank for increased fire protection, and extend some of the water system distribution lines to create redundancy within the distribution system and address undersized lines. This PER evaluated implementing these improvements.

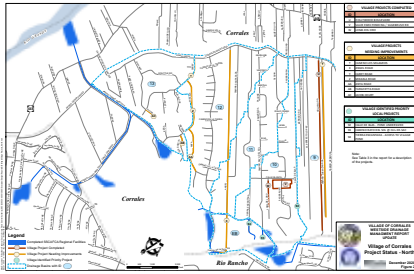
All of these improvements are recommended and NV5 has secured \$100,000 in funding for the future project. The PER has been submitted to the funding agency, and upon approval, design of the proposed elements will proceed. **Client Reference:** Juan Garcia, Association President; 575.581.4488



**WELL NO 1 AND WELL NO 2 IMPROVEMENTS** VILLAGE OF BOSQUE FARMS, NM

NV5 provided civil engineering, electrical engineering, and construction phase services to improve supporting systems at the two wells. We reviewed their SCADA system and the existing hydraulic system, obtained the pump curves, and determined the appropriate upgrades to provide fire protection. The Village suggested options that included replacing the existing 50hp pumps with 75hp or 100hp pumps. A new SCADA system was installed and tied into the existing RTU at Well/Pump Station #1, which is compliant with the 1,500gpm flow requirement.

Station #2 was also brought into compliance with the 1,500gpm flow requirement. We have provided design and specifications documents for a complete design including pumps, motors, VFDs, a new generator, controls, SCADA, and the electrical upgrades. NV5 provided construction support for thus project.



**CORRALES DRAINAGE MANAGEMENT UPDATE** CORRALES, NM

This project for Southern Sandoval County Arroyo Flood Control Authority involved updating a previous drainage management plan prepared for the north west part of the Village of Corrales. The update included evaluation of local problem areas and constraints to determining a solution. Using a HEC-RAS 2D model, done by others, and SSCAFCA/Village of Corrales input, NV5 identified and documented local problem areas, including local flooding, erosion, and capacity exceedance of existing drainage infrastructure. Drainage Basins contributing to each problem area were delineated. The report summarized the flooding and erosion issues.

**FOUR HILLS EROSION CONTROL PROJECT** ALBUQUERQUE, NM

The Albuquerque Bernalillo County Water Utility Authority (ABCWUA) requested NV5 (then WHPacific) to address erosion and scour that was occurring in a drainage and sanitary sewer easement. The sanitary sewer line was exposed due to erosion and had very little cover, also due to erosion, in other areas. The easement was unpaved and had a very steep slope. NV5 developed the hydrology to the easement and construction plans were prepared for a riprap channel and gabion basket berm to mitigate the issue. NV5 performed construction assistance during the construction.

**PUEBLO OF ACOMA UTILITY AUTHORITY – UTILITY RATE FORMATION AND METERING PROJECT** PUEBLO OF ACOMA, NM

Arvind, in his former capacity as the Pueblo of Acoma Utilities Director, was directed by the Tribal Government to develop a rate structure and utility billing system to charge fees for providing water, wastewater, and solid waste services within the community. The project was the first of its kind in this jurisdiction as all utility costs were 100% subsidized by the local government. After the analysis, a rate structure and a rate transition plan was developed for the local government. A utility billing policies and procedures manual was also developed that defined utility and customer responsibilities, payment process, discontinuation process, grievance process. The policies and procedures manual was formulated into customer handbooks for all utility customers. The last step in this process was to develop a set of internal controls to manage the collection of cash and payments for utility billing that has been through several successful audits with no findings. After the flat-rate establishment, a system-wide metering project was developed. Arvind led the financing and the deployment of new water meters, meter pits, and all appurtenances for all customer classes, using our local force account crew. Finally, after a year of collecting data on customer usage through seasonal fluctuations, a metered rate was developed and approved, thus transitioning from a flat rate fee to an increased block rate fee that promotes conservation and equity amongst utility customers.



UNM Infrastructure Master Plan Update Project Team

**A Commitment to our Clients**

NV5 has produced analysis, reports, planning and design documents and provided bidding and construction services for a wide variety of projects including water, wastewater, drainage, transportation, land development and facilities across New Mexico. NV5 has assisted many of our small community clients in planning, obtain funding, developing construction plans, and construction assistance. Our portfolio of returning clients is a testament to our commitment to our clients and the ability of our work to stand as the foundation for future projects.

PROJECT	RUS/GRANT	RUS/LOAN	CDBG	EPA	NMFA	GTRF	BECC	WTB	MAP	FLAP
City of Grants Water Well					●	●				
Acoma Water System Improvement	●	●								
Acoma Sewer System Improvement	●	●								
Quemado Asset Management Plan (AMP)					●					
Quemado Water System Improvement	●				●					
Quemado Sewer System Improvement	●	●								
Tularosa AMP					●					
Tularosa Water System Improvement	●		●							
Tularosa Sewer System Improvement	●	●	●							
Winterhaven Water System Improvement	●									
Winterhaven Sewer System Improvement	●									
Mesquite Water System Improvement	●						●			
Mesquite Sewer System Improvement	●						●			
Cerro Preliminary Engineering Report					●					
City of Albuquerque Polk Sewer System Improvement				●						
La Luz Water System Improvement	●	●	●	●	●					
El Rito AMP					●					
El Rito Water System Improvement					●	●		●		
Canones Water System Improvement					●					
Pecan Park Water System Improvement	●				●					
Capitan Sewer System Improvement					●					
Ohkay Owingeh Water System Improvements	●				●					
Questa AMP					●					
Questa Water System Improvement	●	●	●		●					
Questa Sewer System Improvement					●					
Chama Wastewater System Improvement					●					
Wagon Mound AMP					●					
Wagon Mound Water System Improvement			●							
Willard AMP					●					
Maxwell AMP					●					
Maxwell Water System Improvement			●		●	●				
Village of Tularosa Granado Street									●	
Taos County Bridges										●
Total (\$K)	\$18,502	\$2,185	\$2,290	\$9	\$3,445	\$950	\$120	\$825	\$490	\$2,469