

SCOPE OF ENGINEERING SERVICES
for
NORTHWEST SEWAGE DUMP STATION
LAKE COUNTY SPECIAL DISTRICTS (CLIENT)
prepared by
BRELJE & RACE CONSULTING ENGINEERS (CONSULTANT)
November 17, 2024

PROJECT UNDERSTANDING

The objective of this project is to prepare improvement plans for a new sewage dumping facility at the Northwest wastewater treatment facility. The dump station would be designed for dumping sewage waste including from tanker deliveries (septage) and possibly for vacuum truck deliveries (raw sewage). It is also understood that Lake County Special Districts (LCSD) has purchased equipment for a similar facility planned at the Southeast wastewater treatment facility and the equipment selected for the NE plant should be the same as much as possible. For instance, a septage receiving system with grinder and compactor has been purchased from JWC Environmental, Inc., and another matching unit and other equipment will need to be specified for use at the NE facility.

The exact location for this facility has not been provided; however, it is assumed a roughly $\frac{1}{4}$ acre site along the entrance road to the plant will be needed and will be paved for ease of cleaning and will include a drive through type of layout. A few preliminary schematics for the site layout would be prepared and presented for LCSD consideration and comments. Once the basic layout and location has been determined, then final equipment selections and detailed design would be initiated.

Note that Brelje & Race will be utilizing the services of RGH for Geotechnical site investigations to ensure the underlying soils are suitable, and to ensure driveways and slabs will have adequate support. They will conduct a site investigation and prepare a letter report to help guide site design. For equipment power and control needs, our electrical engineering partner, A.T.E.E.M will be providing electrical design services. (We are assuming a Notice of Exemption is all that may be required for this project under the California Environmental Quality Act (CEQA). Any higher level for CEQA compliance (e.g. Initial Study/MND) is not currently included but could be added for an additional fee should it become necessary.)

Below is an outline description of the proposed Scope of Services.

SCOPE OF SERVICES

Task 1 – Site Surveys, Base Mapping & Preliminary Layout Plan

1.01 Kickoff Meeting & Initial Site Visit

Conduct meeting with LCSD staff to review design criteria, site constraints, equipment list and other factors to govern the overall design and site layout. A site visit will be planned and conducted along with the kickoff meeting.

1.02 Topographical Survey

Brelje & Race's two-man survey crew will conduct a topographical survey of the site and surrounding area adequate for design purposes.

1.03 Base Map Preparation

The data collected from the topographical site survey will be used to prepare the base drawings. The base drawings will be the basis for developing all site improvement plans within the contract documents.

1.04 Equipment Research and Selection

The sewage and septage handling equipment needed is anticipated to include a grinder, washer and compactor unit. There may also be metering or scales for determining fees for outside agency dumping. The exact needs are to be determined through research and discussions with LCSD staff. Equipment that has already been purchased for the SE treatment facility, would be matched at the NW treatment facility.

1.05 Preliminary Site Layouts

Based on the equipment selections and site topography, several preliminary layouts would be prepared for LCSD staff consideration. The layouts would be presented in exhibit form, not actual design drawings.

1.06 Review Meetings

A series of review meetings (2 to 3) would be scheduled for reviewing the site layout options, and updates to the layouts that are likely to occur after the initial meeting. The final layout selection will guide the site design for Task 2.

Task 2 – Construction Documents Preparation

2.01 40% Design Development

Based on the final selected layout for the facility as determined under Task 1, design-level drawings would be prepared including an overall site layout plan, site grading plan, surfacing plan, utility plans, and other notes and details as required. An approximately 40% level of completion set would be submitted for LCSD staff review before completing these plans with a high level of detailing.

2.02 75% Design (PS&E)

After conducting a review meeting with LCSD staff to review comments and other needed changes, the plan preparation would continue to the roughly 75% completion level. At this stage, any equipment specifications would be prepared, and initial estimates of construction costs would be prepared. The costs will depend on the planned method of installation, and whether LCSD would be purchasing the equipment or using a contractor for purchasing and installation.

2.03 95% Design (PS&E)

After conducting another review meeting, any final comments or requested changes would be incorporated into the construction documents, and final details added to bring the PS&E to a state of near completion (~95% complete). Cost estimates would be updated, and specifications finalized with bid schedules or equipment lists for equipment purchasing.

2.04 Final Bid-Ready PS&E

Any final comments would be incorporated, with plans and specifications signed and ready for either bidding (or partial bidding) or using for self-constructing and using local contractors for portions of the work.

2.05 Design Review Meetings & Communications

Throughout the design development process, regular communications between our Project Manager and LCSD's project manager and other staff and/or equipment vendors will be happening to ensure LCSD is fully involved in the decisions and design direction. And after each submittal stage, it is anticipated there will be at least one review meeting to go over comments and the state of design at those stages. Other meetings, regular phone communications, and site visits are also anticipated and are accounted for within this task.

Task 3 – Equipment Procurement & Installation Assistance

- 3.01 Purchase Order Preparation Assistance – Septage and Sewage Collection Equipment
- 3.02 Purchase Order Preparation Assistance – Miscellaneous Equipment, Manholes & Controls
- 3.03 Purchase Order Preparation Assistance – Installation Contract (Or could be for bidding)
- 3.04 Purchase Order Preparation Assistance – Site Electrical Service
- 3.05 Purchase Order Preparation Assistance – Site Grading and Surfacing

Brelje & Race staff would assist LCSD staff for all the above purchase orders by preparing detailed lists based on project specifications. Some items could also be installed through a bidding process. It is assumed most equipment would be installed by District personnel, however, some specialized project tasks such as the electrical service and site paving or concrete work is likely to require an outside contractor. These P.O.s would be coordinated through the District’s Project Manager. (No actual installation work would be performed by B&R staff, however, we could also provide observations and quality assurance upon request for separate fee.)

FEES

Our fees for this work will be billed monthly on a time and materials basis per the Schedule of Rates provided and included in our On-Call contract with Lake County Special Districts. The fees for each task have been estimated as:

Task 1 – Surveys & Preliminary Layouts:	\$ 29,700
Task 2 – Construction Documents:	\$ 118,400
<u>Task 3 – Procurement Assistance:</u>	<u>\$ 6,900</u>
Total - Design & Engineering Services:	\$ 155,000
<u>Equipment/Installation Allowances:</u>	<u>\$ 245,000 (est.)</u>
Total Budget Recommendation:	\$ 400,000

Equipment Procurement and installation costs have been estimated at \$245,000. This figure is likely to be different but has been estimated based on the cost of the equipment purchased for the SE Sewage Dump Station (\$120,000), and a rough estimate of the power and controls (\$80,000) and site surfacing that will be needed around the equipment (\$45,000). These costs are based on pre-purchased equipment. Actual costs may be better estimated upon completion of Tasks 1 & 2, and a determination of overall site improvements needed, and extent of the facility to be constructed using a bid/build delivery method.

ASSUMPTIONS AND LIMITATIONS

1. Only the tasks as described herein are currently included. No additional scope of work has been included other than what has been specifically described.
2. Additional services, such as construction and bidding services, and construction observations have not been included at this time but can be added for additional fees if requested.

NORTHWEST SEWAGE DUMP STATION (Task Order No. 5)
 Lake County Special Districts
TASK, WORK HOUR and COST TABULATION
 November 17, 2024

TASK	DESCRIPTION	WORKHOURS												
		Senior Principal	Senior Engineer	Engineering Technician II	CAD Technician Supervisor	CAD Designer	Senior Planner	Senior Surveyor	Survey Technician	Survey Crew (2 party crew)	Clerical	Technical Writer	EE Subconsultant (\$)	Geotechnical Subconsultant (\$)
		Coleman	Grubb	Barnard	Erickson	Staff		Roach	Simkins	Staff	Tallman	Morand	ATEEM	RGH
1 Site Surveys, Base Mapping & Preliminary Layout Plan	1.01 Kickoff Meeting & Initial Site Visit	4	4	4										
	1.02 Topographical Survey		2					1	3	8				
	1.03 Base Map Preparation	1	4		1	24								
	1.04 Equipment Research	1		12										
	1.05 Preliminary Site Layouts	2	8	26		32								
	1.06 Layout & Review Meetings	2	2	2										
	Subtotal	10	20	44	1	56	0	1	3	8	0	0	\$0	\$0
2 Construction Documents Preparation	2.01 40% Design Development	4	8	80	1	80								\$10,000
	2.02 75% Design (PS&E)	4	8	40	1	40					16	8	\$15,000	\$2,500
	2.03 95% Design (PS&E) & NOE	2	4	24	1	24	8				8	5	\$4,000	
	2.04 Final Bid-Ready PS&E	2	2	16		16					4	2		
	2.05 Design Review Meetings & Communications	8	4	4									\$1,000	\$1,500
	Subtotal	20	26	164	3	160	8	0	0	0	28	15	\$20,000	\$14,000
3 Equipment Procurement & Installation Assistance	3.01 P.O. - Grinder, Washer and Compactor	2	4											
	3.02 P.O. - Miscellaneous Equipment	1	2											
	3.03 P.O. - Equipment Installation	1	2											
	3.04 P.O. - Site Electrical	1	2										\$2,000	
	3.05 P.O. - Site Grading & Surfacing	1	2											
	Subtotal	6	12	0	0	0	0	0	0	0	0	0	\$2,000	\$0
Total Hours		36	58	208	4	216	8	1	3	8	28	15	N/A	N/A
Hourly Rate		\$265	\$220	\$180	\$175	\$160	\$190	\$200	\$170	\$350	\$100	\$130	N/A	N/A
Subtotal Cost		\$9,540	\$12,760	\$37,440	\$700	\$34,560	\$1,520	\$200	\$510	\$2,800	\$2,800	\$1,950	\$22,000	\$14,000
SUBTOTAL		\$140,780												
CONTINGENCY 7.5%		\$10,600												
EQUIPMENT		\$245,000 (Note: Estimated costs covering LCSD direct purchase of sewage handling equipment only)												
SUBCONSULTANT MARK-UP 10%		\$3,600												
TOTAL		\$400,000												

\$2,660
 \$3,950
 \$5,160
 \$2,425
 \$12,090
 \$1,330
\$27,615
 \$40,195
 \$36,735
 \$16,715
 \$7,070
 \$6,220
\$106,935
 \$1,410
 \$705
 \$705
 \$2,705
 \$705
\$6,230