REQUEST FOR PROPOSALS

FOR DESIGN AND ENGINEERING SERVICES
FOR THE

HUCKLEBERRY REPLACEMENT PUMP STATION PROJECT

CIP 15092

Receipt of Proposals due before: 4:00 p.m. PST on May 14, 2024

CALAVERAS COUNTY WATER DISTRICT
120 Toma Court
San Andreas, California 95249
(209) 754-3543 • ccwd.org

March 11, 2024

TABLE OF CONTENTS

ATTACHMENTS

EXHIBITS

The **Exhibits** (proposal reference documents) have been assembled in separate Adobe pdf files. Documents listed below.

Proposal Reference Documents	
1.	Professional Service Agreement (PSA).
2.	La Contenta, Phase 2 Huckleberry Lift Station Improvements As-Built Drawings, 1991.

I. PROJECT BACKGROUND

Calaveras County Water District provides wastewater collection and treatment service to the community of La Contenta located in Calaveras County. To provide these services the District operates the Huckleberry Lift Station (LS) which was constructed in 1991. The District has identified the need for the replacement of the existing Huckleberry LS. The District is seeking professional engineering services for the design of the proposed replacement pump station. The requirements of the pump station are described in the section below.

The Huckleberry LS is located at 2502 Huckleberry Ln., Valley Springs, California and is shown in Figure 1, attached at the end of the RFP. Preliminary design drawing and hydraulic calculations are also attached at the end of the RFP.

II. HUCKLEBERRY REPLACEMENT PUMP STATION

Pump Station. Design and construction of a pump station which can efficiently both during low flow conditions and having sufficient capacity for the build-out peak hour flowrate. To accomplish this goal, the station is to be designed with both low-flow and high-flow pumps configured as follows.

1. Two (2) low-flow pumps operated in a lead-lag configuration. Each low flow shall be individually capable of a flowrate of 150 *gpm* (9.5 *l/s*) at 200 (61.0 *m*) of TDH. Pump and motor speed shall be controlled with a VFD.
2. Three (3) high-flow pumps operated in a lead-lag-standby configuration. Each individual pump shall be capable of a flowrate of 700 *gpm* (44.2 *l/s*) at 260.0 *ft* (79.2 *m*) of TDH. Pump and motor speed to be controlled with a VFD.
3. Low and high flow pumps shall be submersible, non-clogging, wastewater duty type rated pump (Flygt®, Hidrostal®, or equivalent) suitable for operation with an alternating current solid state electronic VFD.

Electrical and Instrumentation. Electrical and instrumentation design and construction improvements for the proposed pump station shall be performed in compliance with NFPA 70E, *National Electric Code*, and NFPA 820, *Fire Protection in Wastewater Treatment and Collection Systems.* This work includes:

1. A building housing the electrical service entrance, ATS, MCC, VFD enclosures, and instrumentation cabinet for PLC and HMI. Building shall be constructed of split face masonry or similar.
3. Electrical building environmental controls including room lighting and air handling consisting of ventilation and air conditioning.
4. Relocation of and/or new PG&E pad and transformer.

Emergency Power. A diesel engine emergency generator with concrete foundation, fuel tank, day tank, and secondary containment sized for peak site electrical demand. On-site fuel storage sized for a minimum 24-hours engine/generator operation at peak output.

Foul Air. Design and construction of a foul air containment system utilizing negative air pressure ventilation of the station wetwell and treatment of exhaust foul air.

Flood Control. Design and construction of a flood control barrier, or other system, to protect pump station site from predicted FIRM 200-year recurrence interval high-water level in Cosgrove Creek.

Miscellaneous Site Work. Design and construction of site improvements for the proposed pump station including paving, access gate and security fence, and demolition of existing infrastructure required for construction.

III. PROPOSED PROJECT SCHEDULE

The District anticipates the following project schedule by milestone. Significant construction at the Huckleberry LS should be planned for a timeframe starting in late April and ending in early November due to flowrate conditions related to rainfall.

PROJECT SCHEDULE MILESTONES

Milestone	Date
Design and Engineering Services Selection	
Project RFP	March 11, 2024
Job Walk Appointments	March 25 thru May 3, 2024
Proposal Deadline	May 14, 2024
District Review, Selection, and Staff Recommendation	June 13, 2024
Board Approval and Contract Award (FY 2024-25)	July 10, 2024
Design and Construction	
Final Design Report	October 2024
Final Design and Construction Documents	April 2025
Construction Bid and Award (FY 2025-26, FY 2026-27)	July 2025
Completion of Construction	August 2026
Record Drawings	September 2026

IV. PROJECT APPROACH AND SCOPE OF SERVICES

This Section describes the nature and scope of the engineering services to be provided and tasks to accomplish those services. The District expects the Consultant to work closely with District staff throughout the project by correspondence and regular meetings to accomplish their scope of work.

A. PROJECT MANAGEMENT

Consultant will ensure continuous control of the project in terms of staffing, budget, schedule and scope; promote communication within the project team and document key decisions. Items covered under this task include:

1. Consultant project management of project including communication, scope, schedule, deliverables, and budget.
2. Submittal of progress reports with Consultant invoices.
3. Quality assurance and quality control Implementation.
4. Create and maintain Decision Log of key project decisions.

It is the responsibility of the Consultant's project manager to immediately notify the District Engineer of any District directed task/assignment/request the Consultant believes is beyond contract scope of service. Approval of additional work by the District Engineer is required prior to execution of the work. Costs related to the performance of additional work will not be paid unless first approved by the District Engineer.

Deliverables: Project progress reports and Decision Log throughout length of contract.

B. PROJECT DESIGN REPORT

The project design report will describe the project and project improvements elements/components. At a minimum, the design report shall address the following:

1. Design criteria, preliminary equipment selection including pumps major electrical components, and material selection.
2. Estimated construction probable construction cost.
3. Recommendations concerning methods for reducing costs and/or alternative improvement solutions.
4. Method of construction to allow operation of the existing lift station during construction.
5. Odor control method for wetwell exhaust gas.
6. Preliminary hydraulic calculations.
7. Anticipated electrical loads.
8. Preliminary scaled design concept drawings.

Deliverables: Draft a design report attendance of draft design report review meeting. The final design report shall address District comments, questions, changes, or decisions regarding draft report. Subsequent direction by District concerning project design shall be tracked by Decision Log.

C. TOPOGRAPHIC SURVEY

Design services are to include a topographic site survey of the Huckleberry Lift Station site. Survey shall conform to the North American Datum (NAD83), California Zone 3 and North American Vertical Datum of 1988 (NAVD88). All survey work shall be conducted under the direction of a California licensed land surveyor, or civil engineer licensed in California before January 1, 1982 (license number C33965 or below).

Survey shall include utility easements, edge of paving, driveways, structures, buildings, manholes, vaults, pads, panels, walls, trees, utilities, poles, signs, fences, slopes, curbs, drop inlets, culverts, and other similar structures located at the lift station.

D. GEOTECHNICAL INVESTIGATION

Proposals shall include design and engineering services by a California licensed geotechnical engineer to prepare a project geotechnical study. Study shall include recommended methods of site excavation, allowable temporary and permanent slope design, foundation design, compaction requirements, and passive soil loads.

E. PERMIT AND ENVIRONMENTAL ASSISTANCE

The District plans to address environmental related project impacts with a California Environmental Quality Act (CEQA) mitigated negative declaration (MND). Preparation of the MND will be done by the District, or under a separate consultant contract. Project MND environmental requirements will be incorporated by the Consultant in the final bid ready construction and bid documents. The District does not anticipate the project will require an Environmental Impact Report.

F. PROJECT DESIGN

Drawings. The Consultant shall provide all necessary civil, mechanical, process, electrical, and instrumentation drawings for execution of project construction. This includes standard drawings such as: cover sheet, index of drawings, vicinity and location map, general notes, project notes, standard details, description of symbols, and abbreviations.

Deliverables: Fifty (50) percent, 90 percent 100 percent, and Bid-Ready drawings for incorporation with Project Manual. Drawing submittals shall be furnished to the District in Adobe® Acrobat™ Public Document Format (Adobe pdf) file format for reproduction

as both 11”x17” (ANSI C) and 22”x34” (ANSI D) paper size. Bid-Ready drawings shall also be furnished in Autodesk® AutoCAD™ format.

The 90 percent and 100 percent deliverables shall identify and detail all infrastructure to be constructed. The 100 percent drawings shall represent the final project design. The Consultant shall anticipate revisions to the 100 percent drawing based upon final District comments prior to production of final Bid-Ready set.

Project Manual. The Consultant shall prepare a project manual including front end document, technical specifications, and appendices. The manual’s front-end documents shall be based on the 2018 edition of the *Engineers Joint Contract Documents Committee Standards* (EJCDC®). A copy of the standards will be furnished to the Consultant by the District. The Consultant shall edit the EJCDC® documents adding any project specific and State of California contract requirements. Consultant shall provide a bid schedule, detailed descriptions for each bid item, alternative bid items, if any, and description of sequence of work.

The technical specifications shall be based upon the Consultant’s standards, or if applicable, adapted from District standards. Project Manual appendices shall include CEQA documents, geotechnical study, and other such reports.

Deliverables: Ninety (90) percent 100 percent, and Bid-Ready Project Manual.

G. CONSTRUCTION ASSISTANCE

Construction Bid Services, Addendum, and Conformed Documents. The District shall advertise and conduct the public bid. Distribution of project manual and drawings to bidders and plan holder rooms will be electronic. All correspondence with potential project bidders will be solely conducted by the District including issuing all project addendum and responds to bidder Requests for Information (RFI).

The Consultant shall attend pre-bid job walk and as requested the Consultant shall assist the District prepare addendum and answer RFIs. Addendum may be the result of errors in preparing bid ready drawings and project manual or result of bidders’ questions and comments.

Upon award of construction contract and but prior to subsequent notice to proceed, the Consultant shall furnish the confirmed contract documents.

Construction Engineering. Consultant scope of services during construction shall include review of project shop drawings and submittals, answer of construction RFIs, assistance with engineering aspects of potential construction contract change orders, site and construction meeting upon request.

Record Drawings. The Consultant shall furnish record drawings and deliver in AutoCAD® 2018 format based upon the contractor and District inspector marked-up drawings.

H. BASIS OF COMPENSATION

The Consultant shall be required to enter into the Professional Services Agreement (PSA) provided as **Exhibit 1**. Agreement to the PSA contract terms and conditions, including adjustment in hourly rates, per diem or incidental costs, is required for the term of the contract. Acknowledgement to the PSA contract terms shall be included in a cover letter.

V. ORGANIZATION AND CONTENT OF PROPOSAL

A. SUBMITTAL INSTRUCTIONS

Proposals shall be submitted electronically to Calaveras County Water District no later than 4:00 p.m., May 14, 2024. The Proposal shall assemble as a single Adobe® pdf file. Paginate proposal for two-sided printing at the District office. Paper size is limited to 8-1/2"x11" (ANSI B) with figures, drawing, etc. no greater than 11"x17" (ANSI C).

Proposals attached to email are limited to 50 megabytes in size. Proposal delivery using a file "cloud" sharing site, or similar, is acceptable provided the District receives a HTTP or FTP link and download instructions. The District will notify the Consultant upon receipt and successful download. No hard "printed" copy of proposal is required.

Email proposal, or link for file download to the attention of:

Kevin Williams, P.E.
Senior Civil Engineer
kevinw@ccwd.org
office: (209) 754-3184
cell: (209) 419-3979

B. ORGANIZATION AND CONTENT

Contents of proposal shall be organized in the sections listed in the table below.

PROPOSAL ORGANIZATION

Section	Content	Page Length
Cover Letter	Statement of interest and qualifications including agreement to PSA requirements.	1 to 2
A	Project Overview	1 to 3
B	Understanding and Approach	1 to 4
C	Team Organization	1 to 2
D	Project Schedule	1 to 2
E	Representative Project Experience	1 to 5
F	Labor Estimate	1 to 2
G	Project Team Resumes	as required

Cover Letter. Cover letter shall include both a state of interest and statement of qualification. Acknowledgement and acceptance of the terms and requirements of the District Professional Service Agreement shall also be included.

Project Overview. Provide a narrative description of the project based on the scope of services and proposed schedule presented in this Request for Proposal (RFP). The District will assess your understanding of all aspects of the project based on the overview.

Understanding and Approach. Provide a detailed description of the proposed approach to the project as described in the RFP. The description shall include details to implement the tasks described in the scope of service and any recommended revisions to the list of tasks. The approach should recognize, address, and provide for resolution of all aspects of the project.

Team Organization. The proposed consultant team shall be identified including project manager, and project engineer. Key tasks and the associated personnel shall be identified. The percentage of time devoted to this project for these key personnel shall be stated and guaranteed. A consultant team organization diagram shall be included.

The geographic location of the firm and key personnel shall be identified. Any proposed subcontractors shall be identified; tasks assigned, and experience included similarly to the firm's own project personnel. The successful Consultant should be comfortable working in a structured team setting with District Staff.

Project Schedule. A project schedule for completion of the project shall be submitted with the proposal. All major outputs and meetings shall be included in the schedule. Time shall be allocated for District review, typically three weeks for each deliverable.

Representative Project Experience. Provide a summary of experience of similar projects that the firm and the proposed team have completed. The description of each project should include the year(s) during which the work was performed and a description of process design components. The firm's role in the project should also be described (predesign, design construction management, etc.). Include the name, title, and phone number of the primary contact person at each facility or project location listed.

Staff Labor Estimate. Provide a staff estimate of time for each task to permit the District to determine the level of detail and the number of management, engineering, technical, drafting and support personnel hours envisioned for each task. Estimates of hours for each staff classification shall be provided for each task.

Project Team Resumes. A resume of key team members shall be included. Each resume should include a description of projects in related areas. At minimum, resumes of the Consultant's project manager and those of the engineering staff shall be included.

VI. EVALUATION AND SELECTION CRITERIA

Consultant proposals will be evaluated by District staff members including the District Engineer, Director of Operations, Operations Manager, and General Manager. Proposals will be evaluated by each reviewer with each proposal receiving a weighted score. Each evaluator's weighted score will be tabulated and the firm with the highest combined score will be selected and recommended to the District Board. If two or more proposals are similarly ranked, and no clear decision can be made, the District will request interviews before final selection.

PROPOSAL EVALUATION WEIGHTED CRITERIA TABLE.

Criteria	Evaluator's Score (0 to 5)	Score Weight (Multiplier)	Evaluator's Weighted Score
Project Understanding and Approach		5 *(25%)*	
Project Management		3 *(15%)*	
Project Team and Staff Qualifications		4 *(20%)*	
Related Project Experience		3 *(15%)*	
Schedule and Production Capability		5 *(25%)*	

Maximum weighted score = 100.

*** END OF RFP ***

FIGURE 1

LOCATION MAP

La Contenta Huckleberry Lift Station

Calaveras County Water District / La Contenta Request for Proposals

February 2024

FIGURE 1

PRELIMINARY DRAWINGS

HALF SIZED

DESIGNED BY:	R. GODWIN
DRAFTED BY:	R. GODWIN
CHECKED BY:	
DATE:	2/18/24
SCALE:	1" = 10'-0"
BAR LENGTH ONE INCH ON SCALED DRAWING	

REVISION:	DESCRIPTION:	DATE:	BY:

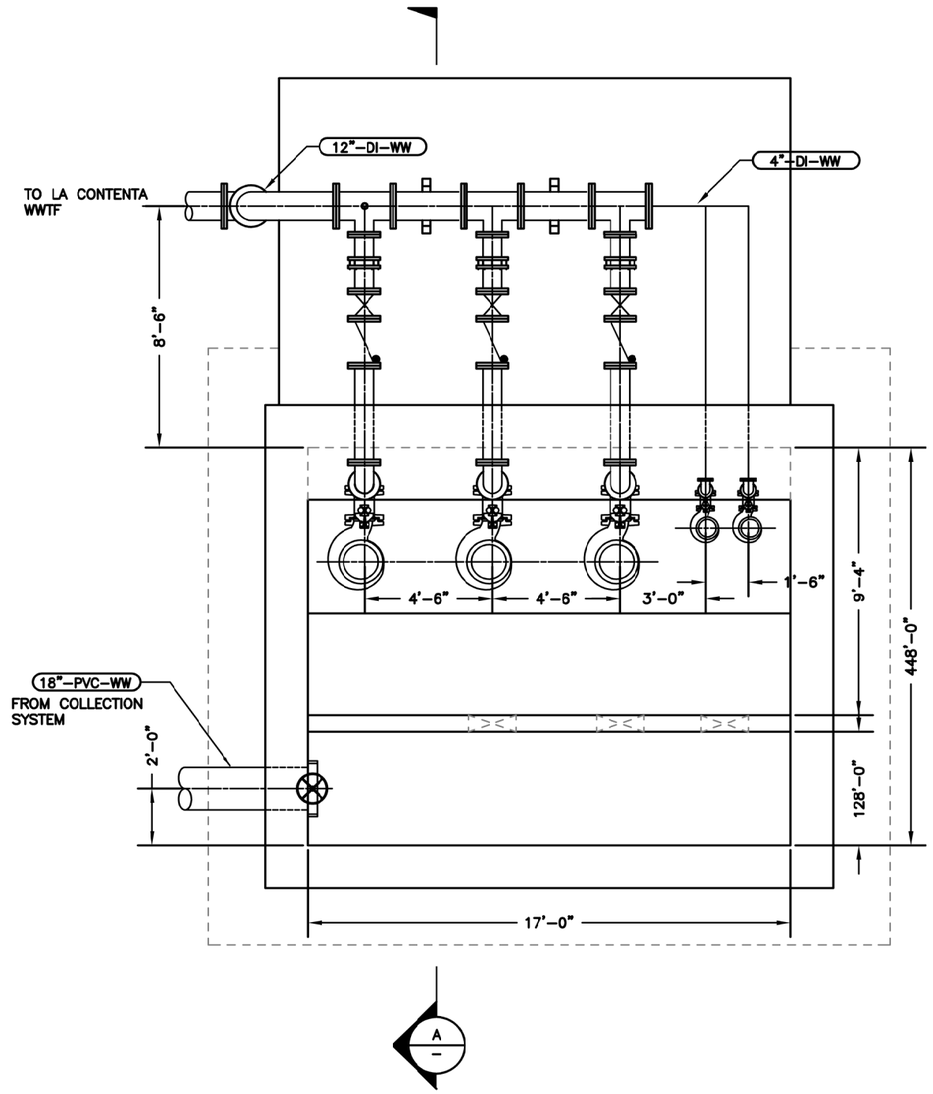
CALAVERAS COUNTY WATER DISTRICT

120 TOMA COURT
POST OFFICE BOX 846
SAN ANDREAS, CALIFORNIA 95249
PHONE: (209) 754-3543

HUCKLEBERRY LIFT STATION IMPROVEMENTS SITE PLAN PHASE 3 IMPROVEMENT PROJECT LA CONTENTA WASTEWATER TREATMENT FACILITY

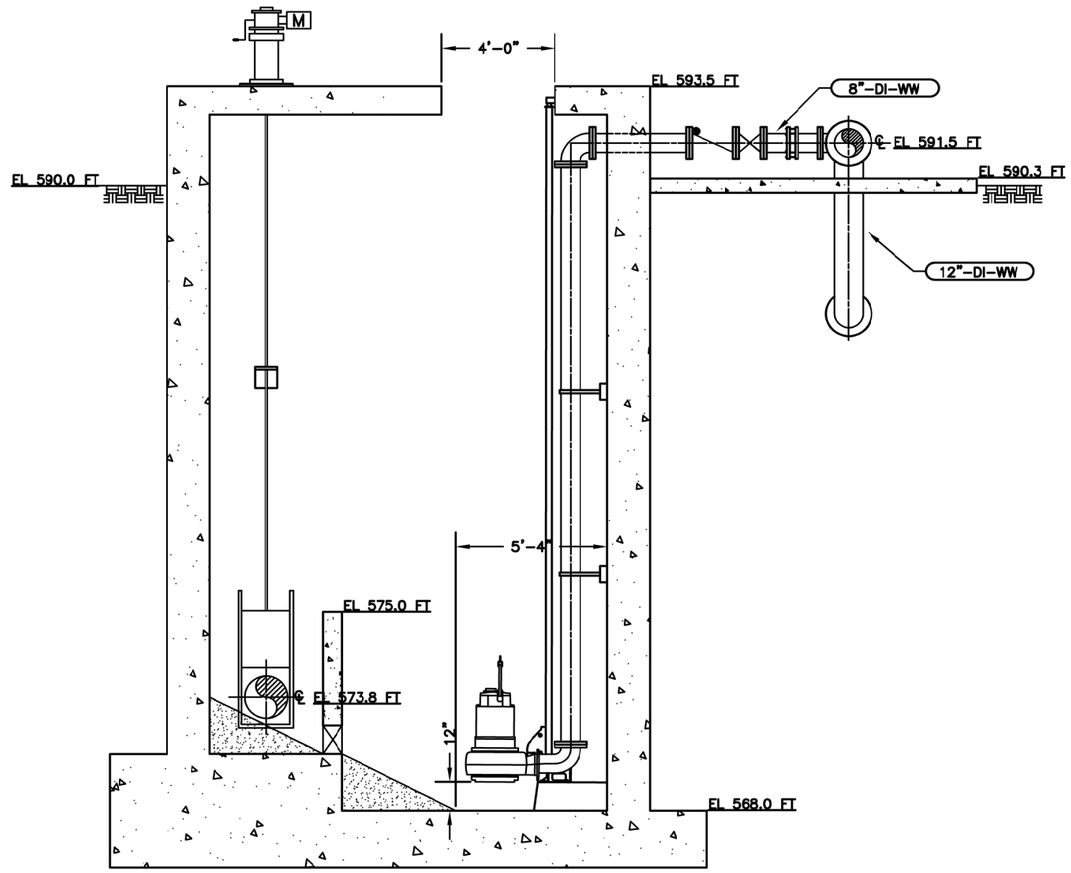
PROJECT NUMBER	15097
DRAWING NUMBER	C111A
SHEET NUMBER	– OF –

C:\Users\Bob Godwin\Documents\Calaveras County Project Files\LA_CONTENTA\15097_CADD_15097\MASTER_COMPOSITE\MASTER\C111A_HUCKLEBERRY_15097.DWG 2/18/24 3:30pm Bob Godwin



HUCKLEBERRY LIFT STATION

SCALE: 3/8" = 1'-0"



SECTION

SCALE: 3/8" = 1' -0"

0 2' 4' 6' 8'

SCALE: 3/8" = 1'-0"

HALF SIZED

DESIGNED BY:	R. GODWIN
DRAFTED BY:	R. GODWIN
CHECKED BY:	
DATE:	2/18/24
SCALE:	AS INDICATED
BAR LENGTH ONE INCH ON SCALED DRAWING	

REVISION:	DESCRIPTION:	DATE:	BY:

CALAVERAS COUNTY WATER DISTRICT

120 TOMA COURT
POST OFFICE BOX 846
SAN ANDREAS, CALIFORNIA 95249
PHONE: (209) 754-3543

PROPOSED HUCKLEBERRY PUMP STATION PLAN AND SECTION PHASE 3 IMPROVEMENT PROJECT LA CONTENTA WASTEWATER TREATMENT FACILITY

15097	
PROJECT NUMBER	C116
DRAWING NUMBER	– OF –
SHEET NUMBER	

PRELIMINARY PUMP STATION AND FORCEMAIN HYDRAULIC CALCULATIONS

Preliminary Design Calculations for the Huckleberry Lift Station

Static Head = El. of FM High Point - Water Level in LS		
El. of Forcemain High Point (ft)	762.00	
Water El. in LS Wetwell (pumps off)	571.50	
High Water El. in LS Wetwell		575.50
Total Static Head (min)		186.50
Total Static Head (max)	190.50	

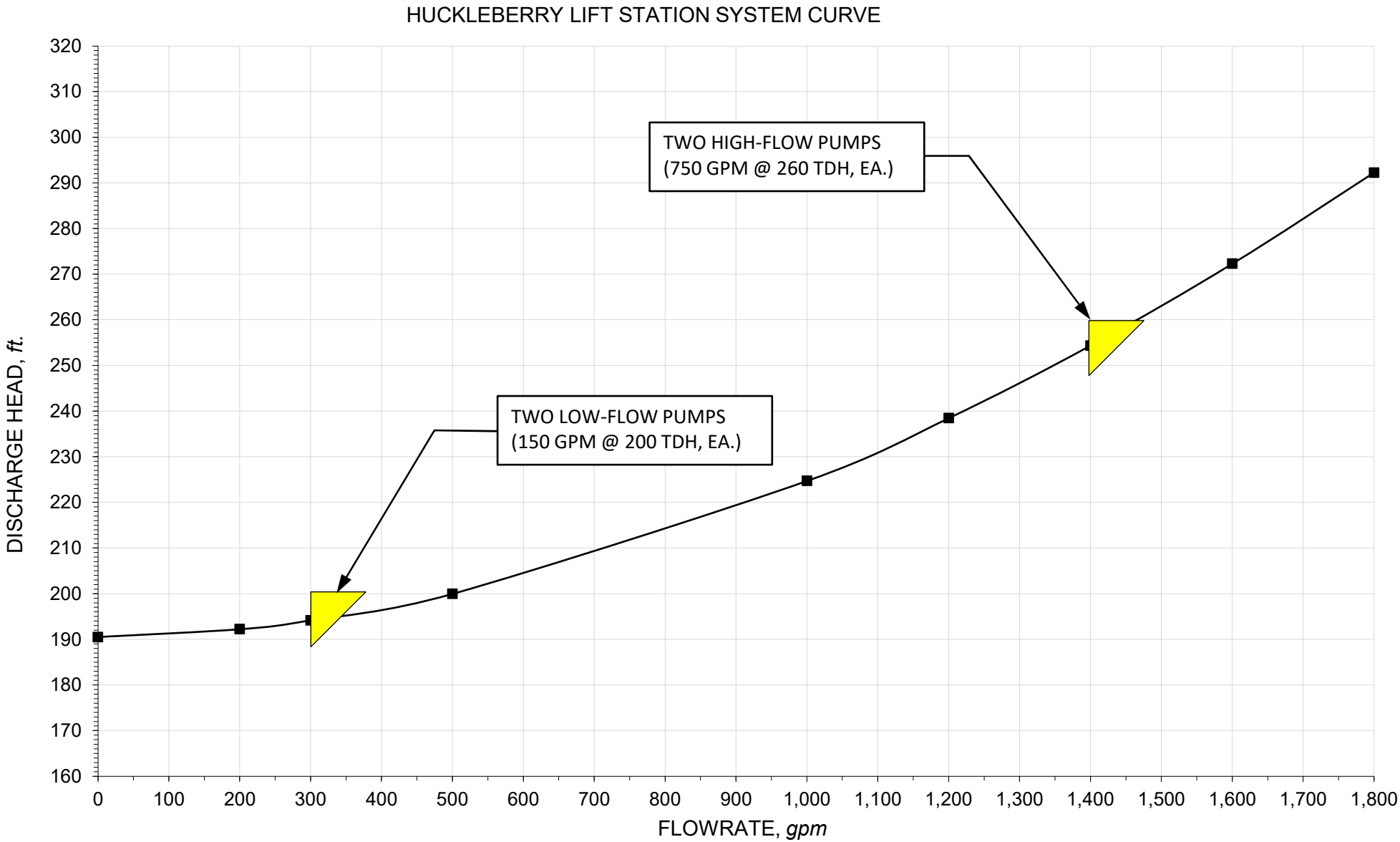
Fitting and Valve Minor Losses, $h_{fv} = (K * v^2) /2g$			
Type of Minor Loss	Quantity	K	Total K
45 Degree Elbow	10	0.25	2.50
Exit	1	1.00	1.00
8"x12" Reducing Tee	1	0.75	0.75
Check Valve	1	1.75	1.75
Gate Valve	5	0.30	1.50
Total			7.50

Minor Losses for 12" Fitting and Valves									
Flow (*gpm*)	0	200	300	500	1,000	1,200	1,400	1,600	1,800
Flow (*cfs*)	0.00	0.45	0.67	1.11	2.23	2.67	3.12	3.57	4.01
Diameter (*in*)	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
K	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
h_l (*ft*)	0.0	0.0	0.1	0.2	0.9	1.3	1.8	2.4	3.0

Dynamic Headloss in 12" Pipeline - Forcemain to the La Contenta WWTF									
Flow (*gpm*)	0	200	300	500	1,000	1,200	1,400	1,600	1,800
Length (*ft*)	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300
Diameter (*in*)	12	12	12	12	12	12	12	12	12
Pipe Friction Coefficient (used)	120	120	120	120	120	120	120	120	120
h_f (*ft*)	0.0	1.7	3.6	9.2	33.3	46.6	62.0	79.4	98.7

Total Headloss									
Flow (*gpm*)	0	200	300	500	1,000	1,200	1,400	1,600	1,800
Maximum TDH (*ft*)	191	192	194	200	225	238	254	272	292

Sheet Stations, *ft*	Accum. Length, *ft*	Crown Elevation, *ft*	Notes
100		568.5	Bottom of wetwell
100	100	581.0	Forcemain A
1500	1,500	585.0	
0	1,500	585.0	Forcemain B
1080	2,580	615.0	
2270	3,770	621.0	
2800	4,300	626.0	
38	4,300	626.0	Forcemain C
670	4,932	687.0	
780	5,042	686.0	
1340	5,602	642.0	
1647	5,909	659.0	
2010	6,272	628.0	
2264	6,526	646.0	
2500	6,762	626.0	
2845	7,107	657.0	
100	7,107	657.0	Forcemain D
360	7,367	632.5	
1300	8,307	692.0	
1398	8,405	704.0	
2370	9,377	762.0	High Point
3000	10,007	711.5	
3350	10,357	741.0	
3760	10,767	706.0	
550	11,317	748.0	Inside treatment plant
TOTAL	**11,300**		


HUCKLEBERRY LIFT STATION SYSTEM CURVE
DISCHARGE HEAD, ft.
320
310
300
290
280
270
260
250
240
230
220
210
200
190
180
170
160
TWO HIGH-FLOW PUMPS
(750 GPM @ 260 TDH, EA.)
TWO LOW-FLOW PUMPS
(150 GPM @ 200 TDH, EA.)
0
100
200
300
400
500
600
700
800
900
1,000
1,100
1,200
1,300
1,400
1,500
1,600
1,700
1,800
FLOWRATE, gpm