

Engineer's Report for Gayle-Campbell-Sunshine Meadow Water Pipeline Project - Project Assessment District

Prepared For: Christian Valley Park CSD

Prepared By: Gerry LaBudde, P.E.

Reviewed By: Josh Horowitz, District Counsel

Date: 03/08/2007

I. PURPOSE

The purpose of the proposed formation of the Gayle-Campbell-Sunshine Meadow Loop Project assessment district ("Assessment District") described in this report is to finance construction of water pipelines to provide water service to a currently unserved area of the Christian Valley Park Community Services District ("District"). This area to be served by the new pipelines and water service connections lies within the District's existing territory and includes parcels abutting Gayle Lane, Hidden Pines Place, Campbell Drive, Happy Valley Lane, Frontier Oaks Court, and Sunshine Meadow Lane (the "Project"). But many wells in the Project area have become unproductive. As a result, a group of landowners have requested that the District construct facilities to make water service available to the Project area. This engineer's report concerning the estimated costs of the Project and the allocation of those costs to each parcel in the Assessment District is written in accordance with Proposition 218 and Streets & Highways Code section 10204, which is part of the Municipal Improvement Act of 1913.

II. PROPOSED ASSESSMENT DISTRICT

In order to construct the water service facilities extension requested by the Project area landowners, the District is proposing to form the Assessment District and levy an annual assessment on each of its 65 parcels for a period of 40 years to pay the costs of constructing the Project. The landowners would pay the Project's annual operations and maintenance and other recurring costs through water service rates and charges. The existing District system and boundaries of the Assessment District and individual parcels within it are shown on the maps attached as Exhibit A and incorporated into this report. The boundary lines in Exhibit A are shown as recorded in the Official Records of Placer County at pages 13, 14, and 23 of Book 76 of the Book of Maps. The individual parcels proposed to be included in the Assessment District are identified in Exhibit B, which is attached and incorporated into this report.

III. DESCRIPTION OF DISTRICT

The District is located in unincorporated Placer County approximately five miles north of the City of Auburn. The District serves treated water to approximately 550 single-family homes. The District does not provide any commercial or industrial water service. A location map and the existing water treatment, storage and distribution system (“District Water System”) are shown in Exhibit C, which is attached and incorporated into this report. The Project is located in the south-central portion of the District.

The District Water System consists of a water treatment plant, storage reservoir, distribution piping, one pump station, and appurtenances such as valves and fire hydrants. The District’s Frank J. Weigl Water Treatment Plant is a conventional water treatment plant with three pressure filters. Storage is provided by a 1.5 million gallon storage reservoir located near the water treatment plant adjacent to West Ridge Circle. The reservoir is gunnite lined with a hypolon liner and floating cover. The reservoir provides storage for just over one day of maximum day demand.

The majority of the distribution portion of the District Water System was constructed in the early to mid 1960’s and consists of four- to 10-inch diameter pipe. Pipe materials vary and include asbestos concrete, plastic, and steel. The approximate lengths of each diameter of existing pipe are shown in Table 1.

Table 1
Pipe Diameters and Lengths

Diameter (in)	Length (ft)
4	11,500
6	46,500
8	7,500
10	1,280

There are three pressure zones in the District Water System. Pressure Zone 1 is served by a booster pump station and hydro-pneumatic tank in the area surrounding the reservoir. Pressure Zone 2 makes up the majority of the system and is gravity fed from the reservoir. Pressure Zone 3 is downstream, adjacent to, and separated from Pressure Zone 2 by a pressure reducing station located on Stanley Drive. The pressure reducing station is necessary to prevent damage to the District Water System due to high pressure resulting from the static head caused by the elevation difference between Pressure Zone 3 and the District’s reservoir. The proposed project area is within Pressure Zone 2.

IV. PROPOSED IMPROVEMENTS

The Project consists of installing new water mains and appurtenances in the Assessment District and tying the new pipelines into the existing District Water System. The Project would require constructing water distribution pipelines in the rights-of-way along Gayle Lane, Sunshine Meadow Lane, Frontier Oaks Court, Hidden Pines Place, Campbell Drive, Happy Valley Lane, and then across the boundary lines of several private parcels to connect Sunshine Meadow Lane with Campbell Drive. The proposed Project layout is shown in Exhibit A, which is attached and incorporated into this report. The proposed Project improvements include necessary appurtenances such as valves, fire hydrants, and blow-offs. The Project would be operated as part of the District Water System.

A. DESIGN CRITERIA

The Project's preliminary pipeline diameters and lengths are shown in Table 2. All Project improvements will be constructed to meet the District's standards, including Title 22 of the Code of California Regulations and American Water Works standards.

Table 2
Preliminary Pipeline Layout

Street Name	Diameter (inches)	Length (feet)
Gayle Lane	8	3,500
Campbell Drive	8	4,300
Sunshine Meadow Lane	8	1,100
Hidden Pines Lane	6	1,260
Frontier Oaks	6	500
Happy Valley Lane	6	1,050

As proposed, the Project will include fire hydrants and valves installed at approximately 500-foot intervals. Pipe material will be plastic PVC. Blow-offs will be installed at all dead ends. Service lines and meter boxes will be installed per District standards. The water system in the Project area will operate under a static pressure of approximately 100 to 150 pounds per square inch.

Although most of the Project will be installed within the rights-of-way of public and private roads, a section of pipeline necessary to connect Sunshine Meadow Lane and Campbell Drive will have to be installed along the boundary lines of private property. The Gayle/Sunshine Meadow Home Owners Group, which is the Project proponent, has advised the District that the affected landowners are willing to grant the easements necessary for construction and operation of the portion of pipeline crossing private property. The District will require that the affected property owners grant such easements as a condition of receiving District water service.

B. COST ESTIMATE

A Project cost estimate has been developed based on the preliminary design for the proposed improvements. The estimate is based on a publicly bid project requiring payment of prevailing wages. Construction costs are influenced by a number of factors that cannot be controlled or predicted with certainty. Examples include the availability and cost of raw materials, availability of labor, and the season in which the project is bid. A detailed Project cost estimate, including unit costs and quantities, is attached as Exhibit D and incorporated into this report.

The Project cost estimate was developed with input from local contractors familiar with the general area and type of work. The total amount of the assessment was developed with input from the District's engineer and legal and financial consultants. Appropriate contingency factors were included in all assessment cost components and are necessary to account for fluctuations in construction costs and interest rates, changes to the preliminary Project design, and other unanticipated and unknown items. Before any assessment is levied to construct the Project, the District Board of Directors may reduce the actual amount of the total assessment amount in accordance with refinements to the preliminary design, actual bids received for construction of the Project, and amount of actual costs incurred for legal, financing and other administrative services.

The Project's annual operation and maintenance costs will be paid through monthly water service charges billed to water users benefited by the Project. Addition of new services resulting from the Project will not negatively impact ongoing distribution system and treatment plant operations or affect the rates of existing District water users.

V. BASIS OF ALLOCATION OF ASSESSMENT

In accordance with Proposition 218 and Streets & Highways Code section 10204, the proposed annual assessments for parcels within the Assessment District are based upon the proportionate share of the estimated benefits that each parcel in the Assessment District will receive from the Project. There are 65 parcels included in the proposed Assessment District. A list of property owners, and the address and assessor's parcel number for each parcel proposed to be included in the Assessment District are shown in Exhibit B. The parcels in the Assessment District range in size from approximately one to nine acres.

A discussion of the proposed assessment allocation based on the benefits received by each parcel owner within the proposed Assessment District is included below. A discussion follows addressing the benefits received by the District and based on those benefits, the appropriate level of financial participation by the District in the Project.

A. Description and Allocation of Benefits to Property Owners within the Proposed Assessment District

The Project will provide treated water and fire protection to all of the parcels within the proposed Assessment District. The Project will include all pipelines, hydrants, and other appurtenances necessary to provide treated water and fire protection service in accordance with all applicable

state and federal regulations. The Project will not include commercial or industrial services that could place excessive capacity requirements on the Project. Such service would require constructing oversized facilities that would increase the overall cost of the Project. Larger residential parcels that may generate larger water demands will pay for such higher demands through higher monthly metered water bills.

All of the Project's water services will be for residential use and each will be supplied with a 3/4-inch water meter. Each residential service connection will extend from the main pipeline constructed as part of the Project to the property line and a meter box will be located along the road frontage. Each parcel owner will be responsible for extending a service pipeline from the outlet side of the District-supplied meter to his or her residence. Because each parcel owner will be responsible for connecting his or her home to the water meter, the per-parcel benefit allocation does not include a calculation for any cost differential for the distance by which the residence on each parcel is set off the road it fronts.

The base benefit from the Project to all parcels within the Assessment District is considered to be equal because each will be receiving a 3/4-inch metered residential water service. Thus, the initial allocation of the benefit on a per-parcel basis for the Project's costs will be spread equally to all parcels within the Assessment District.

B. Allocation of Benefits to Existing District Water System Customers

1. General Description. The District Water System satisfies all statutory requirements and California Department of Health Services regulations for minimum pressures. However, parcels located on the northern end of the District Water System experience pressure fluctuations during peak demand periods in the summer. The pressure fluctuations are significant enough to impact existing customers' ability to effectively utilize their water services at certain times. Looping the existing water main will cure the pressure fluctuation problem by permitting the District to maintain sufficient pressures throughout the northern area. As shown in Exhibit C, the water supply for the majority of the District Water System is provided by a 6-inch water main that runs along Christian Valley Road. The existing main in Gayle Lane extends from the 6-inch main along Christian Valley Road and dead ends approximately half-way down Gayle Lane. The Project will connect the stub end of the existing water main in Gayle Lane to new pipeline that will run northwesterly approximately 3,500 feet to where the new pipeline segment would connect with an existing District water main in Stanley Drive. A second loop will also be provided along Sunshine Meadow Lane and Campbell Drive.

Adding 65 new units to the existing District Water System would aggravate the existing pressure fluctuations to the extent that the District will be unable to maintain the legally-required minimum pressures in the northern portion of the existing distribution system. Therefore, the Project has been designed to create a loop that will cure the existing pressure fluctuations in the District Water System and prevent new fluctuations from occurring in previously unaffected portions of the system. The benefits of the Project to existing District customers are that the District Water System will provide higher and more constant service pressures throughout the

distribution system and provide additional reliability and operational flexibility. In previous planning studies, the District already identified the Gayle Lane portion of the Project as a desirable improvement to the District Water System.

The Project also includes construction of a second loop that would be installed along Campbell Drive and Sunshine Meadow Lane with connections at either end to the pipeline in Gayle Lane. Although this secondary loop has not previously been considered by the District, its addition to the Project will provide benefit to the existing District residents. The incorporation of this second loop into the Project will also further reduce pressure fluctuations and increase the reliability and flexibility of the District Water System. The secondary loop will also provide a means for the District to construct an interconnection between Sunshine Meadow Lane and Kenneth Way along private easements to be acquired sometime in the future.

The existing District customers' financial contribution for the Project was determined by calculating the incremental oversizing cost of the pipeline segments making up the two loops. The District's estimated financial participation in the Project is provided below and is based on estimated construction costs for all necessary facilities.

2. Gayle Lane Oversizing. The financial benefit received by the District's existing residents from the completion of the Gayle Lane loop was calculated by comparing the difference in the estimated capital cost of a project constructed solely to provide water service to the parcels along Gayle Lane as compared to the cost if the District were to construct the project solely for the purpose of providing the loop to upgrade pressures in the existing District Water System. Therefore three construction costs were calculated:

- The estimate of the complete Gayle Lane loop portion of the Project is \$520,000, including an 8-inch pipeline, services, hydrants, etc.
- The estimate for the portion of proposed Gayle Lane pipeline that provides benefit to existing District customers, which excludes services and fire hydrants, is \$450,000. This estimate represents the project cost if the District were to construct a pipeline solely for the purpose of creating a loop to benefit existing District customers without providing water service to unserved parcels along Gayle Lane.
- The minimum estimated cost to serve water to the unserved parcels along Gayle Lane including a 4-inch diameter pipeline, services and fire hydrants without providing the benefit of the loop to existing District customers, is \$390,000.

The financial benefit to existing residents is considered to be the difference in the cost of oversizing the pipeline from the minimum project to provide service to the homes along Gayle Lane (\$390,000) and the project cost to create the loop without servicing the parcels along Gayle Lane (\$450,000). The calculated cost of oversizing the pipeline is \$60,000. The unit costs and methodology is shown in Exhibit E.

3. Sunshine Meadow Lane/Campbell Oversizing. The financial benefit received by the District's existing residents from the completion of the Sunshine Meadow Lane/Campbell Drive loop was calculated by comparing the difference in the estimated capital cost of a project constructed solely to provide water service to the parcels along Sunshine Meadow Lane/Campbell Drive as compared to the cost if the District were to construct the project solely for the purpose of providing the loop to upgrade pressures in the existing District Water System. Therefore three construction costs were calculated:

- The estimate of the complete Sunshine Meadow Lane/Campbell Drive pipeline project is \$800,000 (\$580,000 + \$220,000), including an 8-inch pipeline, services, hydrants, etc.
- The estimate for the proposed portion of Sunshine Meadow Lane/Campbell Drive pipeline that provides benefit to existing District customers, which excludes services and fire hydrants, is \$690,000 (\$500,000 + \$190,000). This estimate represents the project cost if the District were to construct a pipeline solely for the purpose of creating a loop to benefit existing District customers without providing water service to unserved parcels in this area.
- The minimum estimated cost to serve water to the unserved parcels along Sunshine Meadow Lane/Campbell Drive, including a 4-inch diameter pipeline, services and fire hydrants without providing the benefit of the future loop to existing District customers, is \$580,000 (\$400,000 + \$180,000).

The financial benefit to existing residents is considered to be the difference in the cost of oversizing the pipeline from the minimum project to provide service to the homes along Sunshine Meadow Lane/Campbell Drive (\$690,000) and the project cost to create the loop without servicing the parcels along Sunshine Meadow Lane (\$580,000). The oversizing component would be \$110,000. The unit costs and methodology is shown in Exhibit E.

Based on the project cost estimate, the total financial benefit to existing District customers is \$170,000, or 10.7 percent of the entire project cost. After the bids for the Project are received, the District will contribute 10.7 percent of the contract cost based on the incremental cost of the oversizing. The District will subtract the actual amount of the oversizing from the total Project cost and determine the per parcel assessment amount to be levied on the entire group of parcels participating in the Project area.

VI. PROPOSED ASSESSMENT

The proposed assessment was calculated based on the total project cost less the District contribution. As discussed above, the benefit was allocated equally among the parcels in the assessment district. A summary of the estimated costs for constructing the project, debt service, and administrative costs is included in Table 3.

The Project will be funded by the United States Department of Agriculture Rural Utilities Program. The loan duration will be 40 years; however, the exact interest rate will not be known

until USDA has committed funding to the project. The District is currently in the process of submitting an application for funding. Until the loan commitment is received from the USDA, an interest rate of 4.5% has been assumed. Current USDA loan interest is approximately 4.2%, and is adjusted quarterly. Based on discussions with USDA staff 4.5% is considered conservative, and the final interest rate is expected to be lower. The estimated annual per parcel assessment based on the assumed USDA loan terms and the 65 parcels is \$1,164.51.

Table 3
Estimated Assessment (a)

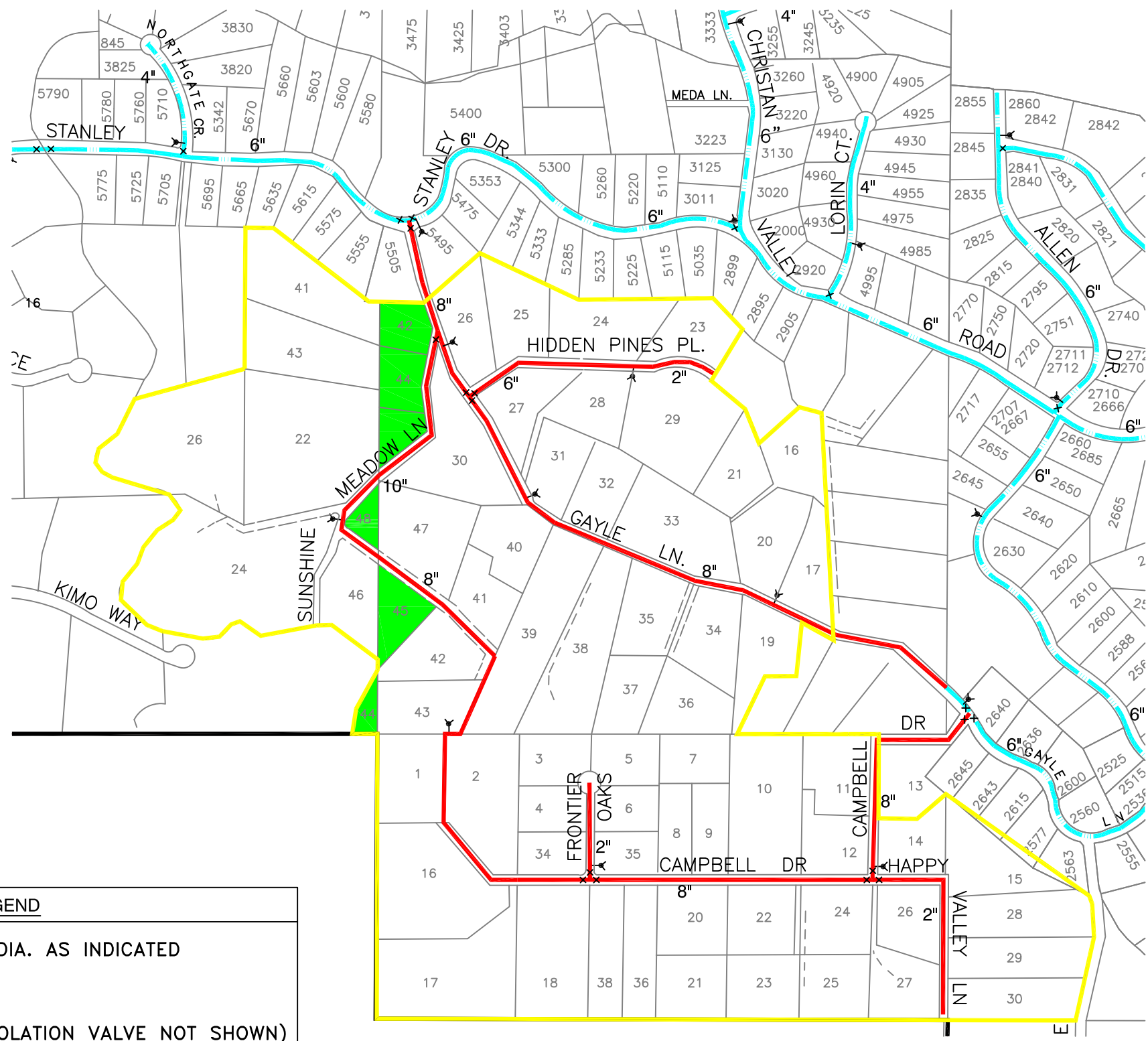
Cost Summary	
Total Project Cost	\$1,584,300
District Contribution	\$170,000
Total Assessment	\$1,414,300
 Payment Summary	
Total Annual Payment	\$76,857.51
Annual Payment per Parcel	\$1,182.42
(a) Based on loan term of 40 yrs at 4.5% and a total of 65 parcels.	

These costs do not include connection charges that each property owner within the Project area will be required to pay to the District as a condition of hooking up to the District Water System, which under District regulations is a one time charge paid prior to the start of water service. As discussed above, each property owner also would be responsible for paying the costs to connect his or her residence to the service connection that the District will provide as part of the Project.

EXHIBITS



1"=600'



NOTES:

- 1. PARCEL NUMBERS HAVE BEEN TRUNCATED. THE NUMBERS ARE FROM MAP BOOK 76 PAGE 23 (076-023-XX).
- 2. PARCELS IDENTIFIED WITH NUMBERS ARE INTERESTED IN DISTRICT WATER BASED ON PRELIMINARY PLANNING INPUT FROM HOME OWNERS SUBJECT TO CHANGE.
- 3. PIPELINE SIZES AND LOCATIONS OF HYDRANTS ARE PRELIMINARY.
- 4. HYDRANT ISOLATION VALVES NOT SHOWN FOR CLARITY.

LEGEND

- 4" EX. WATER LINE, DIA. AS INDICATED
- x VALVE
- FIRE HYDRANT (ISOLATION VALVE NOT SHOWN)
- PROPOSED PIPELINE
- ASSESMENT BOUNDARY
- NON-CONFORMING LOT-NOT INCLUDED IN PARCEL COUNT

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**EXHIBIT B
LIST OF PARCELS**

Assessment Lot Number	APN	Acreage	Name	Address
1	076-232-016-000	2.6	Moore, Garry and Debbie	2844 Gayle Lane
2	076-232-017-000	2.5	Canham, Gordon	2800 Gayle Lane
3	076-232-019-000	2.6	Arrighini, Debbie	2835 Gayle Lane
4	076-232-020-000	2.7	Benedict, Rick and Paulette	2840 Gayle Lane
5	076-232-021-000	2.4	Toney, Mark and MaryAnn	2848 Gayle Lane
6	076-232-026-000	2.3	Milton, Mike	3180 Gayle Lane
7	076-232-028-000	2.5	Still, James and Janice	3120 Gayle Lane
8	076-232-029-000	5.3	Webber, Herb and Lillian	2850 Gayle Lane
9	076-232-030-000	5	Kelly, Sean and Julie	3135 Gayle Lane
10	076-232-031-000	2.4	Hoffmeier, James and Susan	3110 Gayle Lane
11	076-232-032-000	2.4	McPherson, Tom and Carol	3056 Gayle Lane
12	076-232-033-000	5	Webber, Herb and Lillian	2850 Gayle Lane
13	076-232-034-000	2.7	Elkin, Jack and Barbara	2855 Gayle Lane
14	076-232-035-000	2.7	VanderLinden, Lourens & Tiffany	2905 Gayle Lane
15	076-232-036-000	2.4	Zink, Christine and Bud	2865 Gayle Lane
16	076-232-037-000	2.3	Taylor, Irene	2885 Gayle Lane
17	076-232-038-000	4.9	Devore, Warren and Irma	2935 Gayle Lane
18	076-232-039-000	5	Kelly, Dave and Angie	2975 Gayle Lane
19	076-232-040-000	3.4	Robertson, David and Pamela	3105 Gayle Lane
20	076-130-022-000	8.7	Dumont, John and Jennifer	3180 Sunshine Meadow Lane
21	076-130-041-000	4.1	Wolfe, Charles and Jan	3100 Sunshine Meadow Lane
22	076-130-042-000	1.1	" "	" "
23	076-130-043-000	4.1	Jakosa, Albert and Evalyne	24 Fox Trail, Lincolnshire, IL 60069
24	076-130-044-000	1.1	" "	" "
25	076-232-047-000	4.8	Morgado, Edwin and Judith	3080 Sunshine Meadow Lane
26	076-232-048-000	**	" "	" "
27	076-232-023-000	2.3	Hansen, Michael and Frances	14041 Hidden Pines Place
28	076-232-024-000	2.3	Wright, Bob and Mary	14031 Hidden Pines Place
29	076-232-025-000	2.3	Williams, Frank and Connie	14021 Hidden Pines Place
30	076-232-027-000	2.9	Bautista, Linda	14026 Hidden Pine Place
31	076-232-041-000	2.3	Wright, Thomas and Nickolina	3040 Sunshine Meadow Lane POB 6088, Auburn, 95604
32	076-232-042-000	2.8	Biggers, Jerry and Alicia	3050 Sunshine Meadow Lane
33	076-232-043-000	2.2	Dilworth, Shellie	3060 Sunshine Meadow Lane
34	076-232-044-000	**	Dilworth, Shellie	" "
35	076-232-045-000	1.9	Hammer, Richard and Ruby	" "
36	076-232-046-000	3.1	Hammer, Richard and Ruby	3030 Sunshine Meadow Lane
37	076-233-001-000	3.3	Harding, Dennis and Kris	2960 Campbell Drive
38	076-233-002-000	4.5	Gavranich, Carolyn	2940 Campbell Drive
39	076-233-003-000	1.5	Fennelly, Pat and Marlene	13991 Frontier Oaks Court
40	076-233-004-000	1.7	Kuelper, Don and Jane	13985 Frontier Oaks Court
41	076-233-005-000	1.6	Sands, Tim and Colleen	13990 Frontier Oaks Court
42	076-233-006-000	1.6	Cone, Scott and Diane	13980 Frontier Oaks Court
43	076-233-007-000	1.7	Onorato, Fred and Carol	2830 Campbell Drive
44	076-233-008-000	1.7	Fritz, Lisa	2840 Campbell Drive
45	076-233-009-000	1.7	Champman, Clyde and Vera	2820 Campbell Drive
46	076-233-010-000	4.9	Steinhauer, Art and Pat	2760 Campbell Drive
47	076-233-011-000	2.4	Rossell, Ron and Loretta	2690 Campbell Drive
48	076-233-012-000	2.6	Prutz, Jan and Jack	2700 Campbell Drive/17520 Sawmill Road, MV (Mail)
49	076-233-014-000	2.6	Eastman, Jerry and Lisa	2667 Campbell Drive
50	076-233-015-000	2.8	Schedler, Fred and Shari	2688 Happy Valley Lane
51	076-233-016-000	6	Pitts, Tony and Michele	2951 Campbell Drive
52	076-233-017-000	6.1	Pitts, Ken and Aileen	2947 Campbell Drive
53	076-233-018-000	4.9	Kaiser, Jim and Jeannie	2943 Campbell Drive
54	076-233-020-000	2.4	McLellan, Milt and Sandy	2823 Campbell Drive
55	076-233-021-000	2.5	Mays, John and Ramona	2833 Campbell Drive
56	076-233-022-000	2.5	McPeak, Bill and Carol	2767 Campbell Drive
57	076-233-023-000	2.5	Rineer, Terry and Dawn	2747 Campbell Drive
58	076-233-024-000	2.7	Owners Unknown, property sold	2727 Campbell Drive
59	076-233-025-000	2.4	Rineer, Terry and Dawn	2737 Campbell Drive
60	076-233-026-000	2.5	Collins, Mike and Sandy	2717 Happy Valley Lane
61	076-233-027-000	2.5	Wilcox, Joe and Margarita	2725 Campbell Drive
62	076-233-028-000	3.1	McNicholas, Dan and Laura	2656 Happy Valley Lane
63	076-233-029-000	3.1	Gamez, Jerome and Norma	2626 Happy Valley Lane
64	076-233-030-000	3	Bliss, John and Linda	2806 Happy Valley Lane
65	076-233-034-000	1.7	Gavranich, Carolyn	2940 Campbell Drive
66	076-233-035-000	1.7	Graves, Randy and Shelly	2880 Campbell Drive
67	076-233-036-000	2.5	Pauly, Matt and Georgia	2875 Campbell Drive
68	076-233-038-000	2.4	Kirk, Jacqueline	2919 Campbell Drive
69	076-130-026-000	7	Allen, Steve and Pat	3170 Sunshine Meadow Lane
70	076-130-024-000	9.9	Harbour, John and Jamie	3180 Sunshine Meadow Lane

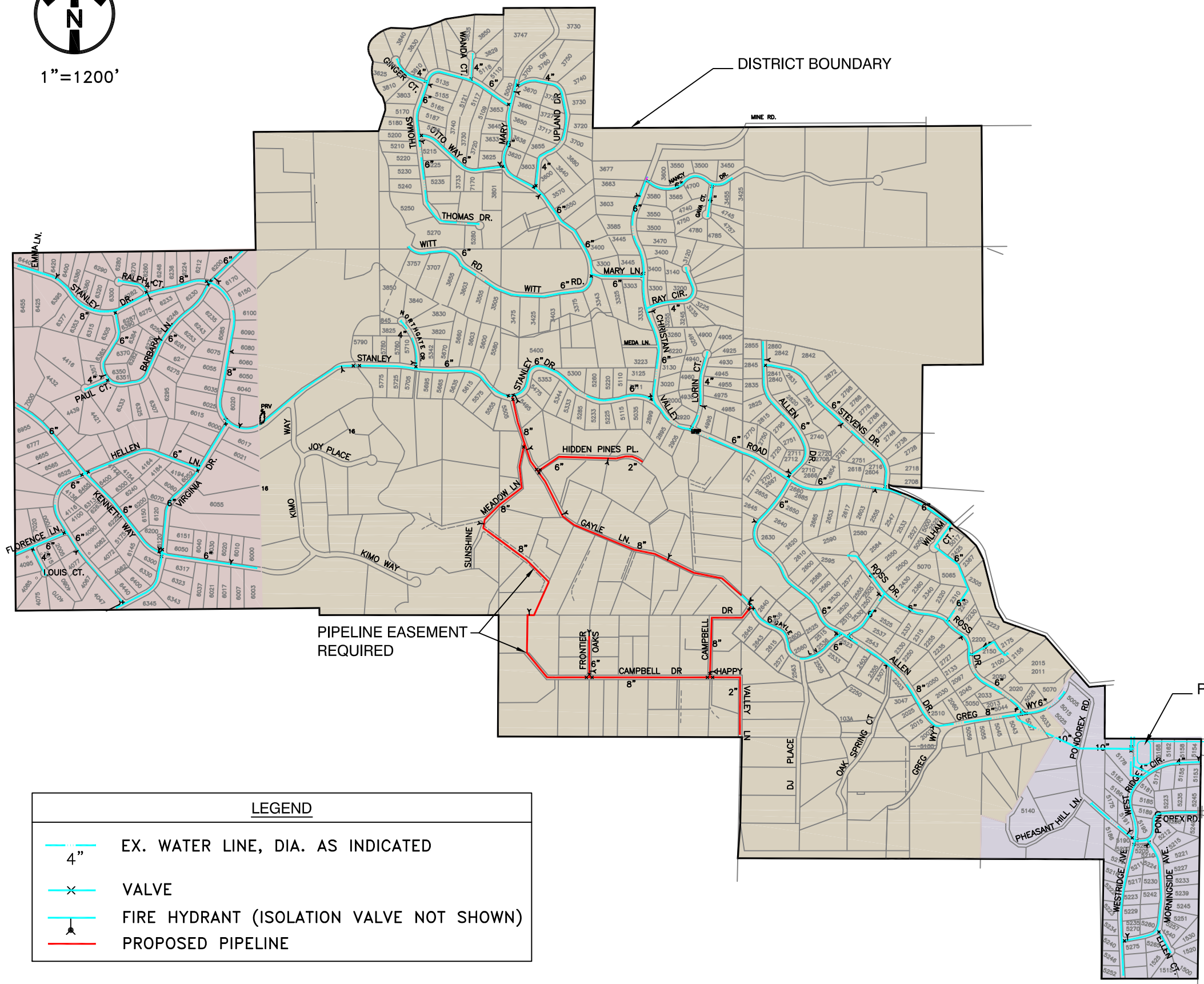
* Shading represents two parcels with the same owner where one parcel appears to be nonconforming and unbuildable.

Nonconforming parcel not included in the assessment.

** Acreage unknown at time of publication.



1"=1200'



LEGEND	
	EX. WATER LINE, DIA. AS INDICATED
	VALVE
	FIRE HYDRANT (ISOLATION VALVE NOT SHOWN)
	PROPOSED PIPELINE

RESERVOIR
WATER TREATMENT PLANT

EXHIBIT C - CHRISTIAN VALLEY PARK CSD DISTRIBUTION SYSTEM

EXHIBIT D

**Gayle Lane Project
Preliminary Construction Cost Estimate (a)**

				Total Project
<i>Sunshine Meadow Ln - (Gayle Ln. to EO Pvt Drive)</i>	Units	Unit Cost	Quantity	Cost
Sheeting and Shoring	LS	\$2,500	1	\$2,500
Mobilization and bonds (15%)	LS		1	\$30,000
Potholing	LS	\$2,500	1	\$2,500
Traffic Control	LS	\$2,500	1	\$2,500
Road Repair	SY	\$35	367	\$12,800
8-inch PVC	FT	\$56	1100	\$61,600
Air Release	EA	\$3,500	2	\$7,000
Fire Hydrants	EA	\$5,000	1	\$5,000
Service Connections	EA	\$2,000	7	\$14,000
Tie-ins	EA	\$3,500	1	\$3,500
Sub-Total				\$141,400
Contingencies	15			\$21,200
Sub-Total				\$162,600
Engineering, Survey, Admin, Inspection	20			\$32,500
Easement along Private Driveway				\$20,300
Total				\$220,000

				Total Project
<i>Campbell Dr (Gayle to SO Pvt Drive)</i>	Units	Unit Cost	Quantity	
Sheeting and Shoring	LS	\$2,500	1	\$2,500
Mobilization and bonds (15%)	LS		1	\$50,000
Potholing	LS	\$2,500	1	\$2,500
Traffic Control	LS	\$5,000	1	\$5,000
Road Repair	SY	\$35	1433	\$50,200
8-inch PVC	FT	\$56	4300	\$240,800
Air Release	EA	\$3,000	2	\$6,000
Fire Hydrants	EA	\$5,000	2	\$10,000
Service Connections	EA	\$2,000	24	\$48,000
Tie-ins	EA	\$5,000	1	\$5,000
Sub-Total				\$420,000
Contingencies	15			\$63,000
Sub-Total				\$483,000
Engineering, Survey, Admin, Inspection	20			\$96,600
Total				\$580,000

				Total Project
<i>Gayle Ln (Tie in to Stanley Dr)</i>	Units	Unit Cost	Quantity	
Sheeting and Shoring	LS	\$2,500	1	\$2,500
Mobilization and bonds (15%)	LS		1	\$50,000
Potholing	LS	\$5,000	1	\$5,000
Traffic Control	LS	\$5,000	1	\$5,000
Road Repair	SY	\$35	1167	\$40,833
8-inch PVC	FT	\$56	3500	\$196,000
Air Release	EA	\$3,000	2	\$6,000
Fire Hydrants	EA	\$5,000	2	\$10,000
Service Connections	EA	\$2,000	19	\$38,000
Tie-ins (b)	EA	\$10,000	2	\$20,000
Sub-Total				\$373,300
Contingencies	15			\$56,000
Sub-Total				\$429,300
Engineering, Survey, Admin, Inspection	20			\$85,900
Total				\$520,000

EXHIBIT D (CONT)
Gayle Lane Project
Preliminary Construction Cost Estimate (continued)

Hidden Pines Lane	Units	Unit Cost	Quantity	Total Project
Sheeting and Shoring	LS	\$0	1	\$0
Mobilization and bonds (15%)	LS		1	\$20,000
Potholing	LS	\$1,000	1	\$1,000
Traffic Control	LS	\$1,000	1	\$1,000
Road Repair	SY	\$35	420	\$14,700
6-inch PVC	FT	\$45	1260	\$56,700
Air Release	EA	\$3,000	2	\$6,000
Tie-ins	EA	\$3,500	1	\$3,500
Fire Hydrants	EA	\$5,000	1	\$5,000
Service Connections	EA	\$2,000	3	\$6,000
Sub-Total				\$113,900
Contingencies	15			\$17,100
Sub-Total				\$131,000
Engineering, Survey, Admin, Inspection	20			\$26,200
Total				\$160,000
Frontier Oaks	Units	Unit Cost	Quantity	Total Project
Sheeting and Shoring	LS	\$0	0	\$0
Mobilization and bonds (10% - smaller job)	LS		1	\$5,000
Potholing	LS	\$1,000	0	\$0
Traffic Control	LS	\$1,000	0	\$0
Road Repair	SY	\$35	83	\$2,900
2-inch PVC	FT	\$20	500	\$10,000
Air Release	EA	\$3,000	0	\$0
Tie-ins	EA	\$3,500	1	\$3,500
Fire Hydrants	EA	\$5,000	0	\$0
Service Connections	EA	\$2,000	4	\$8,000
Sub-Total				\$29,400
Contingencies	15			\$4,400
Sub-Total				\$33,800
Engineering, Survey, Admin, Inspection	20			\$6,800
Total				\$40,000
Happy Valley Ln	Units	Unit Cost	Quantity	Total Project
Sheeting and Shoring	LS	\$0	0	\$0
Mobilization and bonds (10% - smaller job)	LS	\$1		\$6,000
Potholing	LS	\$1,000	0	\$0
Traffic Control	LS	\$1,000	0	\$0
Road Repair	SY	\$35	175	\$6,100
2-inch PVC	FT	\$20	1050	\$21,000
Air Release	EA	\$3,000	0	\$0
Tie-ins	EA	\$3,500	1	\$3,500
Fire Hydrants	EA	\$5,000	0	\$0
Service Connections	EA	\$2,000	5	\$10,000
Sub-Total				\$46,600
Contingencies	15			\$7,000
Sub-Total				\$53,600
Engineering, Survey, Admin, Inspection	20			\$10,700
				\$64,300
Total \$				1,584,300

(a) ENR 20 Cities Feb 2007 - 7800

(b) Tie in on Stanley Drive will require more work than others and has been adjusted upwards.

(c) Amount to be determined after bids are received and based on percentage of construction cost for each alignment.

(d) Engineering, Survey, Admin, Inspection, Legal increased from 20 to 25 to address costs associated with bonding ; 20

(e) Contingency % 15

EXHIBIT E

Gayle Lane Project
Preliminary Construction Cost Estimate (a)

CVPCSD and ASSESSMENT DISTRICT SHARED COSTS

FULL PROJECT

	Units	Unit Cost	Quantity	Total Project Cost	Facility Costs Benefiting CVP
Shine Meadow Ln - (Gayle Ln. to EO Pvt Drive)					
Sheeting and Shoring	LS	\$2,500	1	\$2,500	\$2,500
Mobilization and bonds (15%)	LS		1	\$30,000	\$30,000
Potholing	LS	\$2,500	1	\$2,500	\$2,500
Traffic Control	LS	\$2,500	1	\$2,500	\$2,500
Road Repair	SY	\$35	367	\$12,800	\$12,800
8-inch PVC	FT	\$56	1100	\$61,600	\$61,600
Air Release	EA	\$3,500	2	\$7,000	\$7,000
Fire Hydrants	EA	\$5,000	1	\$5,000	\$0
Service Connections	EA	\$2,000	7	\$14,000	\$0
Tie-ins	EA	\$3,500	1	\$3,500	\$3,500
Sub-Total				\$141,400	\$122,400
Contingencies	15			\$21,200	\$19,400
Sub-Total				\$162,600	\$140,800
Engineering, Survey, Admin, Inspection	20			\$32,500	\$28,200
Easement along Private Drivewa				\$20,300	\$20,300
Total				\$220,000	\$190,000
Oversizing component					
	Full Project	CVP Project	HOA Project	Oversize	
	\$220,000	\$190,000	\$180,000	\$10,000	
Campbell Dr (Gayle to SO Pvt Drive)					
	Units	Unit Cost	Quantity	Total Project	District Benefit
Sheeting and Shoring	LS	\$2,500	1	\$2,500	\$2,500
Mobilization and bonds (15%)	LS		1	\$50,000	50,000
Potholing	LS	\$2,500	1	\$2,500	2,500
Traffic Control	LS	\$5,000	1	\$5,000	5,000
Road Repair	SY	\$35	1433	\$50,200	\$0,200
8-inch PVC	FT	\$56	4300	\$240,800	240,800
Air Release	EA	\$3,000	2	\$6,000	6,000
Fire Hydrants	EA	\$5,000	2	\$10,000	-
Service Connections	EA	\$2,000	24	\$48,000	-
Tie-ins	EA	\$5,000	1	\$5,000	\$5,000
Sub-Total				\$420,000	\$362,000
Contingencies	15			\$63,000	\$54,300
Sub-Total				\$483,000	\$416,300
Engineering, Survey, Admin, Inspection	20			\$96,600	\$83,300
Total				\$580,000	\$500,000
Oversizing component					
	Full Project	CVP Project	HOA Project	Oversize	
	\$580,000	\$500,000	\$400,000	\$100,000	
Gayle Ln (Tie in to Stanley Dr)					
	Units	Unit Cost	Quantity	Total Project	District Benefit
Sheeting and Shoring	LS	\$2,500	1	\$2,500	2,500
Mobilization and bonds (15%)	LS		1	\$50,000	50,000
Potholing	LS	\$5,000	1	\$5,000	5,000
Traffic Control	LS	\$5,000	1	\$5,000	5,000
Road Repair	SY	\$35	1167	\$40,833	40,833
8-inch PVC	FT	\$56	3500	\$196,000	196,000
Air Release	EA	\$3,000	2	\$6,000	6,000
Fire Hydrants	EA	\$5,000	2	\$10,000	-
Service Connections	EA	\$2,000	19	\$38,000	-
Tie-ins (b)	EA	\$10,000	2	\$20,000	20,000
Sub-Total				\$373,300	\$325,300
Contingencies	15			\$56,000	\$48,800
Sub-Total				\$429,300	\$374,100
Engineering, Survey, Admin, Inspection	20			\$85,900	\$74,800
Total				\$520,000	\$450,000
Oversizing component					
	Full Project	CVP Project	HOA Project	Oversize	
	\$520,000	\$450,000	\$390,000	\$60,000	
Hidden Pines Lane					
	Units	Unit Cost	Quantity	Total Project	District Benefit
Sheeting and Shoring	LS	\$0	1	\$0	-
Mobilization and bonds (15%)	LS		1	\$20,000	-
Potholing	LS	\$1,000	1	\$1,000	-
Traffic Control	LS	\$1,000	1	\$1,000	-
Road Repair	SY	\$35	420	\$14,700	-
6-inch PVC	FT	\$45	1260	\$56,700	-
Air Release	EA	\$3,000	2	\$6,000	-
Tie-ins	EA	\$3,500	1	\$3,500	-
Fire Hydrants	EA	\$5,000	1	\$5,000	-
Service Connections	EA	\$2,000	3	\$6,000	-
Sub-Total				\$113,900	\$0
Contingencies	15			\$17,100	\$0
Sub-Total				\$131,000	\$0
Engineering, Survey, Admin, Inspection	20			\$26,200	\$0
Total				\$160,000	\$0
Frontier Oaks					
	Units	Unit Cost	Quantity	Total Project	District Benefit
Sheeting and Shoring	LS	\$0	0	\$0	-
Mobilization and bonds (10% - smaller job)	LS		1	\$5,000	-
Potholing	LS	\$1,000	0	\$0	-
Traffic Control	LS	\$1,000	0	\$0	-
Road Repair	SY	\$35	83	\$2,900	-
2-inch PVC	FT	\$20	500	\$10,000	-
Air Release	EA	\$3,000	0	\$0	-
Tie-ins	EA	\$3,500	1	\$3,500	-
Fire Hydrants	EA	\$5,000	0	\$0	-
Service Connections	EA	\$2,000	4	\$8,000	-
Sub-Total				\$29,400	\$0
Contingencies	15			\$4,400	\$0
Sub-Total				\$33,800	\$0
Engineering, Survey, Admin, Inspection	20			\$6,800	\$0
Total				\$40,000	\$0
Happy Valley Ln					
	Units	Unit Cost	Quantity	Total Project	District Benefit
Sheeting and Shoring	LS	\$0	0	\$0	-
Mobilization and bonds (10% - smaller job)	LS	\$1	0	\$6,000	-
Potholing	LS	\$1,000	0	\$0	-
Traffic Control	LS	\$1,000	0	\$0	-
Road Repair	SY	\$35	175	\$6,100	-
2-inch PVC	FT	\$20	1050	\$21,000	-
Air Release	EA	\$3,000	0	\$0	-
Tie-ins	EA	\$3,500	1	\$3,500	-
Fire Hydrants	EA	\$5,000	0	\$0	-
Service Connections	EA	\$2,000	5	\$10,000	-
Sub-Total				\$46,600	\$0
Contingencies	15			\$7,000	\$0
Sub-Total				\$53,600	\$0
Engineering, Survey, Admin, Inspection	20			\$10,700	\$0
Total				\$64,300	\$0

Total Shared Cost

TOTAL PROJECT \$1,584,300
OVERSIZE \$170,000
ASSESSMENT \$1,414,300
% of TOTAL 10.7%

MINIUM PROJECT (PROVIDE SERVICE JUST FOR HOMEOWNERS)

	Units	Unit Cost	Quantity	Cost
Shine Meadow Ln - (Gayle Ln. to EO Pvt Drive)				
Sheeting and Shoring	LS	\$2,500	1	\$2,500
Mobilization and bonds (15%)	LS		1	\$30,000
Potholing	LS	\$2,500	1	\$2,500
Traffic Control	LS	\$2,500	1	\$2,500
Road Repair	SY	\$35	367	\$12,800
4-inch PVC	FT	\$30	1100	\$33,000
Air Release	EA	\$3,500	2	\$7,000
Fire Hydrants	EA	\$5,000	1	\$5,000
Service Connections	EA	\$2,000	7	\$14,000
Tie-ins	EA	\$3,500	1	\$3,500
Sub-Total				\$112,800
Contingencies	15			\$16,900
Sub-Total				\$129,700
Engineering, Survey, Admin, Inspection	20			\$25,900
Easement along Private Drivewa				\$20,300
Total				\$180,000
Campbell Dr (Gayle to SO Pvt Drive)				
	Units	Unit Cost	Quantity	Cost
Sheeting and Shoring	LS	\$2,500	1	\$2,500
Mobilization and bonds (15%)	LS		1	\$30,000
Potholing	LS	\$2,500	1	\$2,500
Traffic Control	LS	\$5,000	1	\$5,000
Road Repair	SY	\$35	1433	\$50,200
4-inch PVC	FT	\$30	4300	\$129,000
Air Release	EA	\$3,000	2	\$6,000
Fire Hydrants	EA	\$5,000	2	\$10,000
Service Connections	EA	\$2,000	24	\$48,000
Tie-ins	EA	\$5,000	1	\$5,000
Sub-Total				\$288,200
Contingencies	15			\$43,200
Sub-Total				\$331,400
Engineering, Survey, Admin, Inspection	20			\$66,300
Total				\$400,000
Gayle Ln (Tie in to Stanley Dr)				
	Units	Unit Cost	Quantity	Total Project
Sheeting and Shoring	LS	\$2,500	1	\$2,500
Mobilization and bonds (15%)	LS		1	\$50,000
Potholing	LS	\$5,000	1	\$5,000
Traffic Control	LS	\$5,000	1	\$5,000
Road Repair	SY	\$35	1167	\$40,833
8-inch PVC	FT	\$30	3500	\$105,000
Air Release	EA	\$3,000	2	\$6,000
Fire Hydrants	EA	\$5,000	2	\$10,000
Service Connections	EA	\$2,000	19	\$38,000
Tie-ins (b)	EA	\$10,000	2	\$20,000
Sub-Total				\$282,300
Contingencies	15			\$42,300
Sub-Total				\$324,600
Engineering, Survey, Admin, Inspection	20			\$64,900
Total				\$390,000
NO DISTRICT BENEFIT				
NO DISTRICT BENEFIT				
NO DISTRICT BENEFIT				
NO DISTRICT BENEFIT				

\$970,000

(a) ENR 20 Cities Feb 2007 - 7800

(b) Tie in on Stanley Drive will require more work than others and has been adjusted upwards.

(c) Amount to be determined after bids are received and based on percentage of construction cost for each alignment.

(d) Engineering, Survey, Admin, Inspection, Legal increased from 20 to 25 to address costs associated with bonding and legal.