

**Engineer's Opinion of Probable Cost**  
**Table K-1: RW Infill Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84		\$ -	
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>				<b>\$ -</b>	
Pipeline appurtenances	LS	15%		\$ -	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25		\$ -	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000		\$ -	
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ -</b>	
Design/Permitting	LS	8%		\$ -	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ -	Percentage of Construction Subtotal
Contingency	LS	20%		\$ -	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ -</b>	
Retrofit Category 1	LS		42	\$ 2,045,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS		6	\$ 440,000	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		2	\$ 190,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>50</b>	<b>\$ 2,675,000</b>	
<b>Overall Project Total</b>				<b>\$ 2,675,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-2: Lakehaven Dr Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84	1,000	\$ 84,000	Loaded cost inclusive of all items not otherwise detailed
8-inch pipeline	LF	\$ 112	3,100	\$ 347,200	Loaded cost inclusive of all items not otherwise detailed
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>4,100</b>	<b>\$ 431,000</b>	
Pipeline appurtenances	LS	15%		\$ 65,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	110,700	\$ 138,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000	1	\$ 15,000	Requires a saddle connection to an existing pipeline
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 649,000</b>	
Design/Permitting	LS	8%		\$ 52,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 45,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 130,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 876,000</b>	
Retrofit Category 1	LS		9	\$ 345,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS			\$ -	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		2	\$ 185,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>11</b>	<b>\$ 530,000</b>	
<b>Overall Project Total</b>				<b>\$ 1,406,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-3: Maude Ave Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84	6,800	\$ 571,200	Loaded cost inclusive of all items not otherwise detailed
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>6,800</b>	<b>\$ 571,000</b>	
Pipeline appurtenances	LS	15%		\$ 86,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	183,600	\$ 230,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000	1	\$ 15,000	Requires a saddle connection to an existing pipeline
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 902,000</b>	
Design/Permitting	LS	8%		\$ 72,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 63,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 180,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 1,217,000</b>	
Retrofit Category 1	LS		1	\$ 40,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS			\$ -	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		1	\$ 105,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>2</b>	<b>\$ 145,000</b>	
<b>Overall Project Total</b>				<b>\$ 1,362,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-4: Duane Ave Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84	4,900	\$ 411,600	Loaded cost inclusive of all items not otherwise detailed
8-inch pipeline	LF	\$ 112	1,800	\$ 201,600	Loaded cost inclusive of all items not otherwise detailed
10-inch pipeline	LF	\$ 140	7,900	\$ 1,106,000	Loaded cost inclusive of all items not otherwise detailed
12-inch pipeline	LF	\$ 168	1,900	\$ 319,200	Loaded cost inclusive of all items not otherwise detailed
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>16,500</b>	<b>\$ 2,038,000</b>	
Pipeline appurtenances	LS	15%		\$ 306,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	445,500	\$ 557,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000	2	\$ 30,000	Requires a saddle connection to an existing pipeline
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 2,931,000</b>	
Design/Permitting	LS	8%		\$ 234,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 205,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 586,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 3,956,000</b>	
Retrofit Category 1	LS		12	\$ 620,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS		7	\$ 485,000	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		4	\$ 560,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>23</b>	<b>\$ 1,665,000</b>	
<b>Overall Project Total</b>				<b>\$ 5,621,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-5: Kifer Rd East Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84	2,200	\$ 184,800	Loaded cost inclusive of all items not otherwise detailed
8-inch pipeline	LF	\$ 112	2,800	\$ 313,600	Loaded cost inclusive of all items not otherwise detailed
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>5,000</b>	<b>\$ 498,000</b>	
Pipeline appurtenances	LS	15%		\$ 75,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	135,000	\$ 169,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000	1	\$ 15,000	Requires a saddle connection to an existing pipeline
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 757,000</b>	
Design/Permitting	LS	8%		\$ 61,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 53,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 151,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 1,022,000</b>	
Retrofit Category 1	LS		4	\$ 200,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS			\$ -	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		1	\$ 110,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>5</b>	<b>\$ 310,000</b>	
<b>Overall Project Total</b>				<b>\$ 1,332,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-6: Kifer Rd West Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84	1,900	\$ 159,600	Loaded cost inclusive of all items not otherwise detailed
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>1,900</b>	<b>\$ 160,000</b>	
Pipeline appurtenances	LS	15%		\$ 24,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	51,300	\$ 64,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000	1	\$ 15,000	Requires a saddle connection to an existing pipeline
Special Construction (6-inch)	LF	\$ 210	200	\$ 42,000	Creek/Channel crossing
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 305,000</b>	
Design/Permitting	LS	8%		\$ 24,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 21,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 61,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 411,000</b>	
Retrofit Category 1	LS		4	\$ 200,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS			\$ -	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		1	\$ 170,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>5</b>	<b>\$ 370,000</b>	
<b>Overall Project Total</b>				<b>\$ 781,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-7: Wolfe Rd Main Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84		\$ -	
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168	3,300	\$ 554,400	Loaded cost inclusive of all items not otherwise detailed
16-inch pipeline	LF	\$ 224	7,300	\$ 1,635,200	Loaded cost inclusive of all items not otherwise detailed
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336	2,700	\$ 907,200	Loaded cost inclusive of all items not otherwise detailed
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>13,300</b>	<b>\$ 3,097,000</b>	
Pipeline appurtenances	LS	15%		\$ 465,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	449,100	\$ 561,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000	1	\$ 15,000	Requires a saddle connection to an existing pipeline
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560	400	\$ 224,000	Caltrain
Special Construction (24-inch)	LF	\$ 840	450	\$ 378,000	Hwy 82 @ Wolfe
<b>Construction Subtotal</b>				<b>\$ 4,740,000</b>	
Design/Permitting	LS	8%		\$ 379,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 332,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 948,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 6,399,000</b>	
Retrofit Category 1	LS		10	\$ 520,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS		1	\$ 70,000	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		2	\$ 250,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>13</b>	<b>\$ 840,000</b>	
<b>Overall Project Total</b>				<b>\$ 7,239,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-8: Wolfe (16-in) Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84		\$ -	
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224	13,300	\$ 2,979,200	Loaded cost inclusive of all items not otherwise detailed
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>13,300</b>	<b>\$ 2,979,000</b>	
Pipeline appurtenances	LS	15%		\$ 447,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	478,800	\$ 599,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000	1	\$ 15,000	Requires a saddle connection to an existing pipeline
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560	850	\$ 476,000	Caltrain and Hwy 82 @ Wolfe
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 4,516,000</b>	
Design/Permitting	LS	8%		\$ 361,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 316,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 903,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 6,096,000</b>	
Retrofit Category 1	LS		10	\$ 520,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS		1	\$ 70,000	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		2	\$ 250,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>13</b>	<b>\$ 840,000</b>	
<b>Overall Project Total</b>				<b>\$ 6,936,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-9: Wolfe (30-in) Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84		\$ -	
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420	13,300	\$ 5,586,000	Loaded cost inclusive of all items not otherwise detailed
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>13,300</b>	<b>\$ 5,586,000</b>	
Pipeline appurtenances	LS	15%		\$ 838,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	598,500	\$ 748,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000	1	\$ 15,000	Requires a saddle connection to an existing pipeline
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	Caltrain and Hwy 82 @ Wolfe
Special Construction (30-inch)	LF	\$ 1,050	850	\$ 893,000	
<b>Construction Subtotal</b>				<b>\$ 8,080,000</b>	
Design/Permitting	LS	8%		\$ 646,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 566,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 1,616,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 10,908,000</b>	
Retrofit Category 1	LS		10	\$ 520,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS		1	\$ 70,000	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		2	\$ 250,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>13</b>	<b>\$ 840,000</b>	
<b>Overall Project Total</b>				<b>\$ 11,748,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-10: Wolfe (42-in) Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84		\$ -	
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588	13,300	\$ 7,820,400	Loaded cost inclusive of all items not otherwise detailed
<b>Pipeline Subtotal</b>			<b>13,300</b>	<b>\$ 7,820,000</b>	
Pipeline appurtenances	LS	15%		\$ 1,173,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	718,200	\$ 898,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000	1	\$ 15,000	Requires a saddle connection to an existing pipeline
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	Caltrain and Hwy 82 @ Wolfe
Special Construction (42-inch)	LF	\$ 1,470	850	\$ 1,250,000	
<b>Construction Subtotal</b>				<b>\$ 11,156,000</b>	
Design/Permitting	LS	8%		\$ 892,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 781,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 2,231,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 15,060,000</b>	
Retrofit Category 1	LS		10	\$ 520,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS		1	\$ 70,000	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		2	\$ 250,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>13</b>	<b>\$ 840,000</b>	
<b>Overall Project Total</b>				<b>\$ 15,900,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-11: Iris Ave Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84	600	\$ 50,400	Loaded cost inclusive of all items not otherwise detailed
8-inch pipeline	LF	\$ 112	1,700	\$ 190,400	Loaded cost inclusive of all items not otherwise detailed
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>2,300</b>	<b>\$ 241,000</b>	
Pipeline appurtenances	LS	15%		\$ 36,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	62,100	\$ 78,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000		\$ -	
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 355,000</b>	
Design/Permitting	LS	8%		\$ 28,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 25,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 71,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 479,000</b>	
Retrofit Category 1	LS			\$ -	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS		1	\$ 50,000	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		1	\$ 105,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>2</b>	<b>\$ 155,000</b>	
<b>Overall Project Total</b>				<b>\$ 634,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-12: Marion Way Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84	2,600	\$ 218,400	Loaded cost inclusive of all items not otherwise detailed
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>2,600</b>	<b>\$ 218,000</b>	
Pipeline appurtenances	LS	15%		\$ 33,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	70,200	\$ 88,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000		\$ -	
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 339,000</b>	
Design/Permitting	LS	8%		\$ 27,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 24,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 68,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 458,000</b>	
Retrofit Category 1	LS		2	\$ 85,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS			\$ -	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		1	\$ 105,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>3</b>	<b>\$ 190,000</b>	
<b>Overall Project Total</b>				<b>\$ 648,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-13: Dartshire Way Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84	1,500	\$ 126,000	Loaded cost inclusive of all items not otherwise detailed
8-inch pipeline	LF	\$ 112	4,000	\$ 448,000	Loaded cost inclusive of all items not otherwise detailed
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>5,500</b>	<b>\$ 574,000</b>	
Pipeline appurtenances	LS	15%		\$ 86,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	148,500	\$ 186,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000		\$ -	
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280	150	\$ 42,000	Creek/Channel crossing
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 888,000</b>	
Design/Permitting	LS	8%		\$ 71,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 62,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 178,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 1,199,000</b>	
Retrofit Category 1	LS		1	\$ 40,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS		1	\$ 50,000	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		1	\$ 80,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>3</b>	<b>\$ 170,000</b>	
<b>Overall Project Total</b>				<b>\$ 1,369,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

Engineer's Opinion of Probable Cost  
Table K-14: Main Loop Alignment

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84		\$ -	
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224	12,800	\$ 2,867,200	Loaded cost inclusive of all items not otherwise detailed
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336	12,000	\$ 4,032,000	Loaded cost inclusive of all items not otherwise detailed
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>24,800</b>	<b>\$ 6,899,000</b>	
Pipeline appurtenances	LS	15%		\$ 1,035,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	892,800	\$ 1,116,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000	1	\$ 15,000	Requires a saddle connection to an existing pipeline
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560	1,000	\$ 560,000	Hwy 82 @ Pastoria (250'), Caltrain (250'), & Central Expy (500')
Special Construction (24-inch)	LF	\$ 840	450	\$ 378,000	SCVWD Canal (100') & Hwy 82 @ Fair Oaks (350')
<b>Construction Subtotal</b>				<b>\$ 10,003,000</b>	
Design/Permitting	LS	8%		\$ 800,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 700,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 2,001,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 13,504,000</b>	
Retrofit Category 1	LS		35	\$ 1,745,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS		6	\$ 505,000	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		2	\$ 160,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>43</b>	<b>\$ 2,410,000</b>	
<b>Overall Project Total</b>				<b>\$ 15,914,000</b>	

Notes:

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-15: Gail Ave Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84	1,000	\$ 84,000	Loaded cost inclusive of all items not otherwise detailed
8-inch pipeline	LF	\$ 112	700	\$ 78,400	Loaded cost inclusive of all items not otherwise detailed
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>1,700</b>	<b>\$ 162,000</b>	
Pipeline appurtenances	LS	15%		\$ 24,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	45,900	\$ 57,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000		\$ -	
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 243,000</b>	
Design/Permitting	LS	8%		\$ 19,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 17,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 49,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 328,000</b>	
Retrofit Category 1	LS		2	\$ 95,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS		2	\$ 155,000	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS			\$ -	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>4</b>	<b>\$ 250,000</b>	
<b>Overall Project Total</b>				<b>\$ 578,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-16: Old San Francisco Rd Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84	1,500	\$ 126,000	Loaded cost inclusive of all items not otherwise detailed
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>1,500</b>	<b>\$ 126,000</b>	
Pipeline appurtenances	LS	15%		\$ 19,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	40,500	\$ 51,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000		\$ -	
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 196,000</b>	
Design/Permitting	LS	8%		\$ 16,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 14,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 39,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 265,000</b>	
Retrofit Category 1	LS		2	\$ 80,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS		1	\$ 105,000	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS			\$ -	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>3</b>	<b>\$ 185,000</b>	
<b>Overall Project Total</b>				<b>\$ 450,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-17: Manet Dr Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84	400	\$ 33,600	Loaded cost inclusive of all items not otherwise detailed
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140	700	\$ 98,000	Loaded cost inclusive of all items not otherwise detailed
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>1,100</b>	<b>\$ 132,000</b>	
Pipeline appurtenances	LS	15%		\$ 20,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	29,700	\$ 37,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000		\$ -	
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 189,000</b>	
Design/Permitting	LS	8%		\$ 15,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 13,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 38,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 255,000</b>	
Retrofit Category 1	LS		2	\$ 110,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS			\$ -	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		1	\$ 80,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>3</b>	<b>\$ 190,000</b>	
<b>Overall Project Total</b>				<b>\$ 445,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-18: Sunnyvale Saratoga Rd Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84	1,900	\$ 159,600	Loaded cost inclusive of all items not otherwise detailed
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>1,900</b>	<b>\$ 160,000</b>	
Pipeline appurtenances	LS	15%		\$ 24,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	51,300	\$ 64,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000		\$ -	
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 248,000</b>	
Design/Permitting	LS	8%		\$ 20,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 17,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 50,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 335,000</b>	
Retrofit Category 1	LS		5	\$ 260,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS			\$ -	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS			\$ -	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>5</b>	<b>\$ 260,000</b>	
<b>Overall Project Total</b>				<b>\$ 595,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-19: Remington Dr Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84	1,900	\$ 159,600	Loaded cost inclusive of all items not otherwise detailed
8-inch pipeline	LF	\$ 112	5,200	\$ 582,400	Loaded cost inclusive of all items not otherwise detailed
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>7,100</b>	<b>\$ 742,000</b>	
Pipeline appurtenances	LS	15%		\$ 111,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	191,700	\$ 240,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000		\$ -	
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 1,093,000</b>	
Design/Permitting	LS	8%		\$ 87,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 77,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 219,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 1,476,000</b>	
Retrofit Category 1	LS		1	\$ 55,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS		2	\$ 115,000	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS		1	\$ 105,000	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>4</b>	<b>\$ 275,000</b>	
<b>Overall Project Total</b>				<b>\$ 1,751,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-20: Carson Dr Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84	1,500	\$ 126,000	Loaded cost inclusive of all items not otherwise detailed
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336		\$ -	
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>1,500</b>	<b>\$ 126,000</b>	
Pipeline appurtenances	LS	15%		\$ 19,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	40,500	\$ 51,000	Represents varying paving widths according to pipe diameter
Hot Tap Connection	LS	\$ 15,000		\$ -	
Special Construction (6-inch)	LF	\$ 210		\$ -	
Special Construction (8-inch)	LF	\$ 280		\$ -	
Special Construction (16-inch)	LF	\$ 560		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 196,000</b>	
Design/Permitting	LS	8%		\$ 16,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 14,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 39,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 265,000</b>	
Retrofit Category 1	LS		1	\$ 40,000	Category 1: retrofits for sites up to 10 AFY demand
Retrofit Category 2	LS		1	\$ 65,000	Category 2: retrofits for sites between 10 and 25 AFY
Retrofit Category 3	LS			\$ -	Category 3: retrofits for sites 25+ AFY
<b>Retrofit Design/Construction</b>	<b>LS</b>		<b>2</b>	<b>\$ 105,000</b>	
<b>Overall Project Total</b>				<b>\$ 370,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-21: San Lucar Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84		\$ -	
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336	500	\$ 168,000	Loaded cost inclusive of all items not otherwise detailed
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>500</b>	<b>\$ 168,000</b>	
Pipeline appurtenances	LS	15%		\$ 25,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	18,000	\$ 23,000	Represents varying paving widths according to pipe diameter
Booster Pump Station	Hp	\$ 5,200	110	\$ 572,000	
Storage Tank	gal	\$ 0.80		\$ -	
0.5 MG Storage Tank Demolition	LS	\$ 600,000		\$ -	
Special Construction (24-inch)	LF	\$ 840		\$ -	
<b>Construction Subtotal</b>				<b>\$ 788,000</b>	
Design/Permitting	LS	8%		\$ 63,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 55,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 158,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 1,064,000</b>	
<b>Overall Project Total</b>				<b>\$ 1,064,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-22: Wolfe-Evelyn Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84		\$ -	
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336	2,000	\$ 672,000	Loaded cost inclusive of all items not otherwise detailed
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>2,000</b>	<b>\$ 672,000</b>	
Pipeline appurtenances	LS	15%		\$ 101,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	72,000	\$ 90,000	Represents varying paving widths according to pipe diameter
Booster Pump Station	Hp	\$ 5,200	560	\$ 2,912,000	
Storage Tank	gal	\$ 0.80	5,000,000	\$ 4,000,000	
Site Preparation	LS	\$ 300,000	1	\$ 300,000	
<b>Construction Subtotal</b>				<b>\$ 8,075,000</b>	
Design/Permitting	LS	8%		\$ 646,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 565,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 1,615,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 10,901,000</b>	
<b>Overall Project Total</b>				<b>\$ 10,901,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars

**Engineer's Opinion of Probable Cost**  
**Table K-23: Central Alignment**

Item	Units	Unit Cost	Quantity	Total	Notes
6-inch pipeline	LF	\$ 84		\$ -	
8-inch pipeline	LF	\$ 112		\$ -	
10-inch pipeline	LF	\$ 140		\$ -	
12-inch pipeline	LF	\$ 168		\$ -	
16-inch pipeline	LF	\$ 224		\$ -	
18-inch pipeline	LF	\$ 252		\$ -	
20-inch pipeline	LF	\$ 280		\$ -	
24-inch pipeline	LF	\$ 336	6,000	\$ 2,016,000	Loaded cost inclusive of all items not otherwise detailed
30-inch pipeline	LF	\$ 420		\$ -	
36-inch pipeline	LF	\$ 504		\$ -	
42-inch pipeline	LF	\$ 588		\$ -	
<b>Pipeline Subtotal</b>			<b>6,000</b>	<b>\$ 2,016,000</b>	
Pipeline appurtenances	LS	15%		\$ 302,000	Percentage of pipeline subtotal. Includes fittings, valves, blowoffs, ARVs
Street overlay	/in/SF	\$ 1.25	216,000	\$ 270,000	Represents varying paving widths according to pipe diameter
Booster Pump Station	Hp	\$ 5,200	560	\$ 2,912,000	
Storage Tank	gal	\$ 0.80	5,000,000	\$ 4,000,000	
0.5 MG Storage Tank Demolition	LS	\$ 600,000	1	\$ 600,000	
Special Construction (24-inch)	LF	\$ 840	100	\$ 84,000	District Canal Crossing
<b>Construction Subtotal</b>				<b>\$ 10,184,000</b>	
Design/Permitting	LS	8%		\$ 815,000	Percentage of Construction Subtotal
CA/CM	LS	7%		\$ 713,000	Percentage of Construction Subtotal
Contingency	LS	20%		\$ 2,037,000	Percentage of Construction Subtotal
<b>Construction Cost + Soft Costs</b>				<b>\$ 13,749,000</b>	
<b>Overall Project Total</b>				<b>\$ 13,749,000</b>	

**Notes:**

1. All costs rounded to the nearest thousand dollars