

Kern Fan Groundwater Storage Project

RESPONSE TO DEC REVIEW FINDINGS

Exhibit G: Project Construction Cost Summary Sheet

July 1, 2020



Exhibit G
Project Construction Cost Summary Sheet

Date: March 2020
Price Level: December 2018

Kern Fan Groundwater Storage Project							
30% Design Cost Estimate (Class 3)							
BV Canal Alignment - Concrete Lined (Item #3)							
Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Cost	Section Subtotal	
1	Aqueduct Cofferdam Assembly and Installation	EA	1	\$ 185,000.00	\$ 185,000.00		
2	Dewatering	EA	1	\$ 35,000.00	\$ 35,000.00		
3	Aqueduct Cofferdam Disassembly and Removal	EA	1	\$ 65,000.00	\$ 65,000.00		
4	Aqueduct Turnout Excavation	CY	2450	\$ 30.00	\$ 73,500.00		
5	Aqueduct Reinforced Concrete Structure - Floor	CY	45	\$ 800.00	\$ 36,000.00		
6	Aqueduct Reinforced Concrete Structure - Walls	CY	100	\$ 1,200.00	\$ 120,000.00		
7	Aqueduct Reinforced Concrete Structure - Deck/Beam	CY	5	\$ 2,000.00	\$ 10,000.00		
8	Aqueduct Backfill and Compaction	CY	1850	\$ 30.00	\$ 55,500.00		
9	Aqueduct Turnout Steel Embeds	EA	1	\$ 10,000.00	\$ 10,000.00		
10	Aqueduct Turnout Steel Grating	EA	1	\$ 20,000.00	\$ 20,000.00		
11	Aqueduct Turnout Steel Handrailing	EA	1	\$ 20,000.00	\$ 20,000.00		
12	Aqueduct Trashrack	EA	1	\$ 50,000.00	\$ 50,000.00		
13	Aqueduct Turnout Piping - 11' Diameter RCP	LF	2100	\$ 4,000.00	\$ 8,400,000.00		
14	Aqueduct Metering	EA	1	\$ 150,000.00	\$ 150,000.00		
15	Aqueduct Meter Vault	EA	1	\$ 250,000.00	\$ 250,000.00		
16	Aqueduct Slide Gate & Actuator	EA	1	\$ 75,000.00	\$ 75,000.00		
17	Aqueduct Turnout Electrical Panels	EA	1	\$ 170,000.00	\$ 170,000.00		
18	Aqueduct Turnout Electrical Concrete Pad	EA	1	\$ 15,000.00	\$ 15,000.00		
19	Aqueduct Turnout Electrical Service	EA	1	\$ 20,000.00	\$ 20,000.00		
20	Aqueduct Turnout Light Standard	EA	1	\$ 20,000.00	\$ 20,000.00		
21	Aqueduct Turnout PLC Panel & Programming	EA	1	\$ 10,000.00	\$ 10,000.00		
22	Aqueduct Turnout Conduits, Wire, and Grounding	EA	1	\$ 63,000.00	\$ 63,000.00		
23	Electrical Equipment Bollards	EA	1	\$ 2,000.00	\$ 2,000.00		
24	Aqueduct Liner Repair Subgrade Earthwork	EA	1	\$ 11,000.00	\$ 11,000.00		
25	Aqueduct Liner Repair	SF	1500	\$ 6.00	\$ 9,000.00		
26	Levee Road Pavement Restoration	SF	1600	\$ 7.00	\$ 11,200.00	\$ 9,886,200.00	
27	Canal Clearing & Grubbing	AC	195	\$ 1,200.00	\$ 234,000.00		
28	Canal Earthwork-Cut	CY	244,227	\$ 4.50	\$ 1,099,021.50		
29	Canal Earthwork-Fill	CY	716,381	\$ 4.50	\$ 3,223,714.50		
30	Levee Subgrade Preparation	CY	226,189	\$ 4.60	\$ 1,040,469.40		
31	Concrete Canal Lining	SF	2,366,400	\$ 6.00	\$ 14,198,400.00		
32	Canal Drain System Excavation	CY	35150	\$ 8.00	\$ 281,200.00		
33	Canal Drain System Geotextile	SF	457000	\$ 0.30	\$ 137,100.00		
34	Canal Drain System Gravel Rock	CY	8880	\$ 50.00	\$ 444,000.00		
35	Canal Drain System Perforated Piping	LF	56300	\$ 6.31	\$ 355,000.00		
36	Canal Drain System Backfill and Compaction	CY	35150	\$ 8.00	\$ 281,200.00		
37	Canal Ladder Rungs	EA	90	\$ 2,500.00	\$ 225,000.00		
38	Canal Safety Buoy Chains	EA	26	\$ 10,000.00	\$ 260,000.00		
39	Canal Fencing	LF	95,000	\$ 7.50	\$ 712,500.00		
40	Levee Road Aggregate Base Ground Cover	CY	17,000	\$ 50.00	\$ 850,000.00		
41	Ex. Facility Relocations - Power Lines, Irrigation Lines, Ditches, Turnouts, etc.	EA	20	\$ 50,000.00	\$ 1,000,000.00	\$ 24,341,605.40	
42	Outlet Canal Fittings and Appurtenances	EA	4	\$ 50,000.00	\$ 200,000.00		
43	Outlet Canal Siphon Earthwork and Canal Restoration	CY	15000	\$ 30.00	\$ 450,000.00		
44	Aqueduct Turnout Afterbay Structure Floor	CY	60	\$ 800.00	\$ 48,000.00		
45	Aqueduct Turnout Afterbay Structure Walls & Footings	CY	80	\$ 1,200.00	\$ 96,000.00		
46	Aqueduct Turnout Afterbay Earthwork	CY	3800	\$ 30.00	\$ 114,000.00		
47	Aqueduct Turnout Afterbay Steel Handrailing	EA	1	\$ 25,000.00	\$ 25,000.00		
48	Adohr Rd Forebay Structure Floor	CY	60	\$ 800.00	\$ 48,000.00		
49	Adohr Rd Forebay Structure Walls & Footings	CY	80	\$ 1,200.00	\$ 96,000.00		
50	Adohr Rd Siphon Pipe - 10' Diameter RCP	LF	100	\$ 3,500.00	\$ 350,000.00		
51	Adohr Rd Afterbay Structure Floor	CY	60	\$ 800.00	\$ 48,000.00		
52	Adohr Rd Afterbay Structure Walls & Footings	CY	80	\$ 1,200.00	\$ 96,000.00		
53	Adohr Siphon Crossing Earthwork	CY	7200	\$ 30.00	\$ 216,000.00		
54	Adohr Siphon Pavement Repair	SF	7200	\$ 7.00	\$ 50,400.00		
55	Adohr Siphon Crossing Steel Handrailing	EA	2	\$ 25,000.00	\$ 50,000.00		
56	East Side Canal Forebay Structure Floor	CY	60	\$ 800.00	\$ 48,000.00		
57	East Side Canal Forebay Structure Walls & Footings	CY	80	\$ 1,200.00	\$ 96,000.00		
58	East Side Canal Siphon Pipe - 10' Diameter RCP	LF	250	\$ 3,500.00	\$ 875,000.00		
59	East Side Canal Afterbay Structure Floor	CY	60	\$ 800.00	\$ 48,000.00		
60	East Side Canal Afterbay Structure Walls & Footings	CY	80	\$ 1,200.00	\$ 96,000.00		
61	East Side Canal Siphon Crossing Earthwork	CY	7200	\$ 30.00	\$ 216,000.00		
62	East Side Canal Siphon Crossing Steel Handrailing	EA	2	\$ 25,000.00	\$ 50,000.00		
63	Stockdale Hwy Forebay Structure Floor	CY	60	\$ 800.00	\$ 48,000.00		
64	Stockdale Hwy Forebay Structure Walls & Footings	CY	80	\$ 1,200.00	\$ 96,000.00		
65	Stockdale Hwy Cased Crossing - 12' Diameter Casing with 10' Diameter CMLC	LF	150	\$ 6,500.00	\$ 975,000.00		
66	Stockdale Hwy Afterbay Structure Floor	CY	60	\$ 800.00	\$ 48,000.00		
67	Stockdale Hwy Afterbay Structure Walls & Footings	CY	80	\$ 1,200.00	\$ 96,000.00		
68	Stockdale Hwy Crossing Earthwork	CY	7200	\$ 30.00	\$ 216,000.00		
69	Stockdale Hwy Crossing Steel Handrailing	EA	2	\$ 25,000.00	\$ 50,000.00	\$ 4,845,400.00	

Exhibit G
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Date: March 2020
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70	Lift Station Excavation	CY	11000	\$	10.00	\$	110,000.00	
71	Lift Station Reinforced Concrete Structure - Floor	CY	320	\$	800.00	\$	256,000.00	
72	Lift Station Reinforced Concrete Structure - Walls	CY	520	\$	1,200.00	\$	624,000.00	
73	Lift Station Reinforced Concrete Structure - Deck	CY	120	\$	2,000.00	\$	240,000.00	
74	Pump Fillets and Center Splitter	EA	8	\$	10,000.00	\$	80,000.00	
75	Lift Station Pumps - 30 cfs	EA	2	\$	130,000.00	\$	260,000.00	
76	Lift Station Pumps - 60 cfs	EA	2	\$	180,000.00	\$	360,000.00	
77	Lift Station Pumps - 80 cfs	EA	4	\$	195,000.00	\$	780,000.00	
78	Lift Station Motors - 100 hp	EA	2	\$	40,000.00	\$	80,000.00	
79	Lift Station Motors - 200 hp	EA	2	\$	60,000.00	\$	120,000.00	
80	Lift Station Motors - 300 hp	EA	4	\$	90,000.00	\$	360,000.00	
81	30" FBE Steel Discharge Piping	LF	300	\$	700.00	\$	210,000.00	
82	6" Air Release Valve	EA	2	\$	7,500.00	\$	15,000.00	
83	30" Dresser Coupling	EA	2	\$	7,500.00	\$	15,000.00	
84	30" Check Valve with Oil Dashpot	EA	2	\$	80,000.00	\$	160,000.00	
85	30" Butterfly Valve	EA	2	\$	35,000.00	\$	70,000.00	
86	Flow Meter	EA	2	\$	35,000.00	\$	70,000.00	
87	Pipe Supports	EA	8	\$	2,500.00	\$	20,000.00	
88	Pipe Excavation and Backfill	LF	200	\$	300.00	\$	60,000.00	
89	Painting System	EA	2	\$	5,000.00	\$	10,000.00	
90	42" FBE Steel Discharge Piping	LF	300	\$	900.00	\$	270,000.00	
91	8" Air Release Valve	EA	2	\$	12,500.00	\$	25,000.00	
92	42" Dresser Coupling	EA	2	\$	12,500.00	\$	25,000.00	
93	42" Check Valve with Oil Dashpot	EA	2	\$	150,000.00	\$	300,000.00	
94	42" Butterfly Valve	EA	2	\$	55,000.00	\$	110,000.00	
95	Flow Meter	EA	2	\$	50,000.00	\$	100,000.00	
96	Pipe Supports	EA	8	\$	3,500.00	\$	28,000.00	
97	Pipe Excavation and Backfill	LF	200	\$	500.00	\$	100,000.00	
98	Painting System	EA	2	\$	5,000.00	\$	10,000.00	
99	48" FBE Steel Discharge Piping	LF	600	\$	950.00	\$	570,000.00	
100	8" Air Release Valve	EA	4	\$	12,500.00	\$	50,000.00	
101	48" Dresser Coupling	EA	4	\$	15,000.00	\$	60,000.00	
102	48" Check Valve with Oil Dashpot	EA	4	\$	200,000.00	\$	800,000.00	
103	48" Butterfly Valve	EA	4	\$	65,000.00	\$	260,000.00	
104	Flow Meter	EA	4	\$	60,000.00	\$	240,000.00	
105	Pipe Supports	EA	16	\$	5,000.00	\$	80,000.00	
106	Pipe Excavation and Backfill	LF	400	\$	700.00	\$	280,000.00	
107	Painting System	EA	4	\$	5,000.00	\$	20,000.00	
108	Lift Station 100 hp VFD's	EA	2	\$	40,000.00	\$	80,000.00	
109	Lift Station 200 hp VFD's	EA	2	\$	60,000.00	\$	120,000.00	
110	Lift Station 300 hp VFD's	EA	4	\$	80,000.00	\$	320,000.00	
111	Lift Station Main Switchboard	EA	1	\$	50,000.00	\$	50,000.00	
112	Lift Station Motor Control Center	EA	1	\$	175,000.00	\$	175,000.00	
113	Lift Station PLC & Programming	EA	1	\$	175,000.00	\$	175,000.00	
114	Lift Station Transformer & Electrical Service	EA	1	\$	30,000.00	\$	30,000.00	
115	Lift Station Site Lighting	EA	4	\$	20,000.00	\$	80,000.00	
116	Lift Station Conduits, Wire, & Grounding	EA	1	\$	500,000.00	\$	500,000.00	
117	Lift Station Electrical Control Building Concrete Foundation	CY	30	\$	1,200.00	\$	36,000.00	
118	Lift Station Electrical Building & Appurtenances	EA	1	\$	200,000.00	\$	200,000.00	
119	Lift Station Backfill & Compaction	CY	6000	\$	10.00	\$	60,000.00	
120	Lift Station Slide Gates	EA	1	\$	55,000.00	\$	55,000.00	
121	Lift Station Trashracks	EA	8	\$	20,000.00	\$	160,000.00	
122	Lift Station Steel Embeds & Ladder Rungs	EA	1	\$	20,000.00	\$	20,000.00	
123	Lift Station Steel Grating	EA	1	\$	50,000.00	\$	50,000.00	
124	Lift Station Steel Handrailing	EA	1	\$	25,000.00	\$	25,000.00	
125	Lift Station Pump Column Pipe Cathodic Protection	EA	1	\$	12,500.00	\$	12,500.00	
126	Lift Station Underground Piping Cathodic Protection	EA	1	\$	12,500.00	\$	12,500.00	
127	Lift Station Bypass Pipeline	LF	200	\$	750.00	\$	150,000.00	
128	Lift Station Ground Cover	CY	900	\$	50.00	\$	45,000.00	\$ 9,584,000.00
129	Lift Station Afterbay Structure Floor	CY	120	\$	800.00	\$	96,000.00	
130	Lift Station Afterbay Structure Walls & Footings	CY	160	\$	1,200.00	\$	192,000.00	
131	Lift Station Afterbay Earthwork	CY	3800	\$	30.00	\$	114,000.00	
132	Lift Station Afterbay Steel Handrailing	EA	1	\$	25,000.00	\$	25,000.00	
133	(2) Farm Road Crossing Forebay Structure Floor	CY	120	\$	800.00	\$	96,000.00	
134	(2) Farm Road Crossing Forebay Structure Walls & Footings	CY	160	\$	1,200.00	\$	192,000.00	
135	(2) Farm Road Crossing Siphon Pipes - 10' Diameter RCP	LF	120	\$	3,500.00	\$	420,000.00	
136	(2) Farm Road Crossing Afterbay Structure Floor	CY	120	\$	800.00	\$	96,000.00	
137	(2) Farm Road Crossing Afterbay Structure Walls & Footings	CY	160	\$	1,200.00	\$	192,000.00	
138	(2) Farm Road Siphon Crossing Earthwork	CY	14400	\$	30.00	\$	432,000.00	
139	(2) Farm Road Siphon Crossing Steel Handrailing	EA	4	\$	25,000.00	\$	100,000.00	
140	I-5 Fwy Forebay Structure Floor	CY	60	\$	800.00	\$	48,000.00	
141	I-5 Fwy Forebay Structure Walls & Footings	CY	80	\$	1,200.00	\$	96,000.00	
142	I-5 Fwy Cased Crossing - 12' Diameter Casing with 10' Diameter CMLC	LF	280	\$	6,500.00	\$	1,820,000.00	
143	I-5 Fwy Afterbay Structure Floor	CY	60	\$	800.00	\$	48,000.00	
144	I-5 Fwy Afterbay Structure Walls & Footings	CY	80	\$	1,200.00	\$	96,000.00	
145	I-5 Fwy Crossing Earthwork	CY	7200	\$	30.00	\$	216,000.00	
146	I-5 Fwy Crossing Steel Handrailing	EA	2	\$	25,000.00	\$	50,000.00	\$ 4,329,000.00

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147	Lift Station Excavation	CY	11000	\$	10.00	\$	110,000.00	
148	Lift Station Reinforced Concrete Structure - Floor	CY	320	\$	800.00	\$	256,000.00	
149	Lift Station Reinforced Concrete Structure - Walls	CY	520	\$	1,200.00	\$	624,000.00	
150	Lift Station Reinforced Concrete Structure - Deck	CY	120	\$	2,000.00	\$	240,000.00	
151	Pump Fillets and Center Splitter	EA	8	\$	10,000.00	\$	80,000.00	
152	Lift Station Pumps - 30 cfs	EA	2	\$	130,000.00	\$	260,000.00	
153	Lift Station Pumps - 60 cfs	EA	2	\$	180,000.00	\$	360,000.00	
154	Lift Station Pumps - 80 cfs	EA	4	\$	195,000.00	\$	780,000.00	
155	Lift Station Motors - 100 hp	EA	2	\$	40,000.00	\$	80,000.00	
156	Lift Station Motors - 200 hp	EA	2	\$	60,000.00	\$	120,000.00	
157	Lift Station Motors - 300 hp	EA	4	\$	90,000.00	\$	360,000.00	
158	30" FBE Steel Discharge Piping	LF	300	\$	700.00	\$	210,000.00	
159	6" Air Release Valve	EA	2	\$	7,500.00	\$	15,000.00	
160	30" Dresser Coupling	EA	2	\$	7,500.00	\$	15,000.00	
161	30" Check Valve with Oil Dashpot	EA	2	\$	80,000.00	\$	160,000.00	
162	30" Butterfly Valve	EA	2	\$	35,000.00	\$	70,000.00	
163	Flow Meter	EA	2	\$	35,000.00	\$	70,000.00	
164	Pipe Supports	EA	8	\$	2,500.00	\$	20,000.00	
165	Pipe Excavation and Backfill	LF	200	\$	300.00	\$	60,000.00	
166	Painting System	EA	2	\$	5,000.00	\$	10,000.00	
167	42" FBE Steel Discharge Piping	LF	300	\$	900.00	\$	270,000.00	
168	8" Air Release Valve	EA	2	\$	12,500.00	\$	25,000.00	
169	42" Dresser Coupling	EA	2	\$	12,500.00	\$	25,000.00	
170	42" Check Valve with Oil Dashpot	EA	2	\$	150,000.00	\$	300,000.00	
171	42" Butterfly Valve	EA	2	\$	55,000.00	\$	110,000.00	
172	Flow Meter	EA	2	\$	50,000.00	\$	100,000.00	
173	Pipe Supports	EA	8	\$	3,500.00	\$	28,000.00	
174	Pipe Excavation and Backfill	LF	200	\$	500.00	\$	100,000.00	
175	Painting System	EA	2	\$	5,000.00	\$	10,000.00	
176	48" FBE Steel Discharge Piping	LF	600	\$	950.00	\$	570,000.00	
177	8" Air Release Valve	EA	4	\$	12,500.00	\$	50,000.00	
178	48" Dresser Coupling	EA	4	\$	15,000.00	\$	60,000.00	
179	48" Check Valve with Oil Dashpot	EA	4	\$	200,000.00	\$	800,000.00	
180	48" Butterfly Valve	EA	4	\$	65,000.00	\$	260,000.00	
181	Flow Meter	EA	4	\$	60,000.00	\$	240,000.00	
182	Pipe Supports	EA	16	\$	5,000.00	\$	80,000.00	
183	Pipe Excavation and Backfill	LF	400	\$	700.00	\$	280,000.00	
184	Painting System	EA	4	\$	5,000.00	\$	20,000.00	
185	Lift Station 100 hp VFD's	EA	2	\$	40,000.00	\$	80,000.00	
186	Lift Station 200 hp VFD's	EA	2	\$	60,000.00	\$	120,000.00	
187	Lift Station 300 hp VFD's	EA	4	\$	80,000.00	\$	320,000.00	
188	Lift Station Main Switchboard	EA	1	\$	50,000.00	\$	50,000.00	
189	Lift Station Motor Control Center	EA	1	\$	175,000.00	\$	175,000.00	
190	Lift Station PLC & Programming	EA	1	\$	175,000.00	\$	175,000.00	
191	Lift Station Transformer & Electrical Service	EA	1	\$	30,000.00	\$	30,000.00	
192	Lift Station Site Lighting	EA	4	\$	20,000.00	\$	80,000.00	
193	Lift Station Conduits, Wire, & Grounding	EA	1	\$	500,000.00	\$	500,000.00	
194	Lift Station Electrical Control Building Concrete Foundation	CY	30	\$	1,200.00	\$	36,000.00	
195	Lift Station Electrical Building & Appurtenances	EA	1	\$	200,000.00	\$	200,000.00	
196	Lift Station Backfill & Compaction	CY	6000	\$	10.00	\$	60,000.00	
197	Lift Station Slide Gates	EA	1	\$	55,000.00	\$	55,000.00	
198	Lift Station Trashracks	EA	8	\$	20,000.00	\$	160,000.00	
199	Lift Station Steel Embeds & Ladder Rungs	EA	1	\$	20,000.00	\$	20,000.00	
200	Lift Station Steel Grating	EA	1	\$	50,000.00	\$	50,000.00	
201	Lift Station Steel Handrailing	EA	1	\$	25,000.00	\$	25,000.00	
202	Lift Station Pump Column Pipe Cathodic Protection	EA	1	\$	12,500.00	\$	12,500.00	
203	Lift Station Underground Piping Cathodic Protection	EA	1	\$	12,500.00	\$	12,500.00	
204	Lift Station Bypass Pipeline	LF	200	\$	750.00	\$	150,000.00	
205	Lift Station Ground Cover	CY	900	\$	50.00	\$	45,000.00	\$ 9,584,000.00
206	Lift Station Afterbay Structure Floor	CY	120	\$	800.00	\$	96,000.00	
207	Lift Station Afterbay Structure Walls & Footings	CY	160	\$	1,200.00	\$	192,000.00	
208	Lift Station Afterbay Earthwork	CY	3800	\$	30.00	\$	114,000.00	
209	Lift Station Afterbay Steel Handrailing	EA	1	\$	25,000.00	\$	25,000.00	
210	(2) Farm Road Crossing Forebay Structure Floor	CY	120	\$	800.00	\$	96,000.00	
211	(2) Farm Road Crossing Forebay Structure Walls & Footings	CY	160	\$	1,200.00	\$	192,000.00	
212	(2) Farm Road Crossing Siphon Pipes - 10' Diameter RCP	LF	120	\$	3,500.00	\$	420,000.00	
213	(2) Farm Road Crossing Afterbay Structure Floor	CY	120	\$	800.00	\$	96,000.00	
214	(2) Farm Road Crossing Afterbay Structure Walls & Footings	CY	160	\$	1,200.00	\$	192,000.00	
215	(2) Farm Road Siphon Crossing Earthwork	CY	14400	\$	30.00	\$	432,000.00	
216	(2) Farm Road Siphon Crossing Steel Handrailing	EA	4	\$	25,000.00	\$	100,000.00	\$ 1,955,000.00
217	(2) Phase II 640 Acres Turnout Structure Excavation	CY	3200	\$	30.00	\$	96,000.00	
218	(2) Phase II 640 Acres Turnout Reinforced Concrete Structure - Floor	CY	50	\$	800.00	\$	40,000.00	
219	(2) Phase II 640 Acres Turnout Reinforced Concrete Structure - Walls	CY	90	\$	1,200.00	\$	108,000.00	
220	(2) Phase II 640 Acres Turnout Reinforced Concrete Structure - Deck	CY	10	\$	2,000.00	\$	20,000.00	
221	(2) Phase II 640 Acres Structure Backfill & Compaction	CY	2800	\$	30.00	\$	84,000.00	
222	(2) Phase II 640 Acres Turnout Reinforced Concrete Cutoff Wall	EA	4	\$	20,000.00	\$	80,000.00	
223	(2) Phase II 640 Acres Turnout Steel Embeds & Ladder Rungs	EA	2	\$	20,000.00	\$	40,000.00	
224	(2) Phase II 640 Acres Turnout Steel Grating	EA	2	\$	20,000.00	\$	40,000.00	
225	(2) Phase II 640 Acres Turnout Steel Handrailing	EA	2	\$	10,000.00	\$	20,000.00	
226	(2) Phase II 640 Acres Metering	EA	2	\$	35,000.00	\$	70,000.00	
227	(2) Phase II 640 Acres Meter Vault	EA	2	\$	150,000.00	\$	300,000.00	
228	(2) Phase II 640 Acres Piping	LF	300	\$	700.00	\$	210,000.00	
229	(2) Phase II 640 Acres Turnout Slide Gate	EA	2	\$	55,000.00	\$	110,000.00	
230	(2) Phase II 640 Acres Turnout Electrical Panels	EA	2	\$	170,000.00	\$	340,000.00	
231	(2) Phase II 640 Acres Turnout Electrical Concrete Pad	CY	30	\$	1,000.00	\$	30,000.00	
232	(2) Phase II 640 Acres Turnout Electrical Service	EA	2	\$	20,000.00	\$	40,000.00	
233	(2) Phase II 640 Acres Turnout Light Standard	EA	2	\$	20,000.00	\$	40,000.00	
234	(2) Phase II 640 Acres Turnout PLC Panel & Programming	EA	2	\$	10,000.00	\$	20,000.00	
235	(2) Phase II 640 Acres Turnout Conduits, Wire, and Grounding	EA	2	\$	63,000.00	\$	126,000.00	
236	(2) Phase II 640 Acres Turnout Electrical Equipment Bollards	EA	2	\$	2,000.00	\$	4,000.00	
237	(2) Phase II 640 Acres Outlet Structure - Excavation	CY	2000	\$	30.00	\$	60,000.00	
238	(2) Phase II 640 Acres Outlet Structure Rip-Rap	CY	1000	\$	130.00	\$	130,000.00	\$ 2,008,000.00

Exhibit G
Project Construction Cost Summary Sheet

Date: March 2020
Price Level: December 2018

239	Lift Station Excavation	CY	11000	\$	10.00	\$	110,000.00	
240	Lift Station Reinforced Concrete Structure - Floor	CY	320	\$	800.00	\$	256,000.00	
241	Lift Station Reinforced Concrete Structure - Walls	CY	520	\$	1,200.00	\$	624,000.00	
242	Lift Station Reinforced Concrete Structure - Deck	CY	120	\$	2,000.00	\$	240,000.00	
243	Pump Fillets and Center Splitter	EA	8	\$	10,000.00	\$	80,000.00	
244	Lift Station Pumps - 30 cfs	EA	2	\$	130,000.00	\$	260,000.00	
245	Lift Station Pumps - 60 cfs	EA	2	\$	180,000.00	\$	360,000.00	
246	Lift Station Pumps - 80 cfs	EA	4	\$	195,000.00	\$	780,000.00	
247	Lift Station Motors - 100 hp	EA	2	\$	40,000.00	\$	80,000.00	
248	Lift Station Motors - 200 hp	EA	2	\$	60,000.00	\$	120,000.00	
249	Lift Station Motors - 300 hp	EA	4	\$	90,000.00	\$	360,000.00	
250	30" FBE Steel Discharge Piping	LF	300	\$	700.00	\$	210,000.00	
251	6" Air Release Valve	EA	2	\$	7,500.00	\$	15,000.00	
252	30" Dresser Coupling	EA	2	\$	7,500.00	\$	15,000.00	
253	30" Check Valve with Oil Dashpot	EA	2	\$	80,000.00	\$	160,000.00	
254	30" Butterfly Valve	EA	2	\$	35,000.00	\$	70,000.00	
255	Flow Meter	EA	2	\$	35,000.00	\$	70,000.00	
256	Pipe Supports	EA	8	\$	2,500.00	\$	20,000.00	
257	Pipe Excavation and Backfill	LF	200	\$	300.00	\$	60,000.00	
258	Painting System	EA	2	\$	5,000.00	\$	10,000.00	
259	42" FBE Steel Discharge Piping	LF	300	\$	900.00	\$	270,000.00	
260	8" Air Release Valve	EA	2	\$	12,500.00	\$	25,000.00	
261	42" Dresser Coupling	EA	2	\$	12,500.00	\$	25,000.00	
262	42" Check Valve with Oil Dashpot	EA	2	\$	150,000.00	\$	300,000.00	
263	42" Butterfly Valve	EA	2	\$	55,000.00	\$	110,000.00	
264	Flow Meter	EA	2	\$	50,000.00	\$	100,000.00	
265	Pipe Supports	EA	8	\$	3,500.00	\$	28,000.00	
266	Pipe Excavation and Backfill	LF	200	\$	500.00	\$	100,000.00	
267	Painting System	EA	2	\$	5,000.00	\$	10,000.00	
268	48" FBE Steel Discharge Piping	LF	600	\$	950.00	\$	570,000.00	
269	8" Air Release Valve	EA	4	\$	12,500.00	\$	50,000.00	
270	48" Dresser Coupling	EA	4	\$	15,000.00	\$	60,000.00	
271	48" Check Valve with Oil Dashpot	EA	4	\$	200,000.00	\$	800,000.00	
272	48" Butterfly Valve	EA	4	\$	65,000.00	\$	260,000.00	
273	Flow Meter	EA	4	\$	60,000.00	\$	240,000.00	
274	Pipe Supports	EA	16	\$	5,000.00	\$	80,000.00	
275	Pipe Excavation and Backfill	LF	400	\$	700.00	\$	280,000.00	
276	Painting System	EA	4	\$	5,000.00	\$	20,000.00	
277	Lift Station 100 hp VFD's	EA	2	\$	40,000.00	\$	80,000.00	
278	Lift Station 200 hp VFD's	EA	2	\$	60,000.00	\$	120,000.00	
279	Lift Station 300 hp VFD's	EA	4	\$	80,000.00	\$	320,000.00	
280	Lift Station Main Switchboard	EA	1	\$	50,000.00	\$	50,000.00	
281	Lift Station Motor Control Center	EA	1	\$	175,000.00	\$	175,000.00	
282	Lift Station PLC & Programming	EA	1	\$	175,000.00	\$	175,000.00	
283	Lift Station Transformer & Electrical Service	EA	1	\$	30,000.00	\$	30,000.00	
284	Lift Station Site Lighting	EA	4	\$	20,000.00	\$	80,000.00	
285	Lift Station Conduits, Wire, & Grounding	EA	1	\$	500,000.00	\$	500,000.00	
286	Lift Station Electrical Control Building Concrete Foundation	CY	30	\$	1,200.00	\$	36,000.00	
287	Lift Station Electrical Building & Appurtenances	EA	1	\$	200,000.00	\$	200,000.00	
288	Lift Station Backfill & Compaction	CY	6000	\$	10.00	\$	60,000.00	
289	Lift Station Slide Gates	EA	1	\$	55,000.00	\$	55,000.00	
290	Lift Station Trashracks	EA	8	\$	20,000.00	\$	160,000.00	
291	Lift Station Steel Embeds & Ladder Rungs	EA	1	\$	20,000.00	\$	20,000.00	
292	Lift Station Steel Grating	EA	1	\$	50,000.00	\$	50,000.00	
293	Lift Station Steel Handrailing	EA	1	\$	25,000.00	\$	25,000.00	
294	Lift Station Pump Column Pipe Cathodic Protection	EA	1	\$	12,500.00	\$	12,500.00	
295	Lift Station Underground Piping Cathodic Protection	EA	1	\$	12,500.00	\$	12,500.00	
296	Lift Station Bypass Pipeline	LF	200	\$	750.00	\$	150,000.00	
297	Lift Station Ground Cover	CY	900	\$	50.00	\$	45,000.00	\$ 9,584,000.00
298	Lift Station Afterbay Structure Floor	CY	120	\$	800.00	\$	96,000.00	
299	Lift Station Afterbay Structure Walls & Footings	CY	160	\$	1,200.00	\$	192,000.00	
300	Lift Station Afterbay Earthwork	CY	3800	\$	30.00	\$	114,000.00	
301	Lift Station Afterbay Steel Handrailing	EA	1	\$	25,000.00	\$	25,000.00	
302	Farm Road Crossing Forebay Structure Floor	CY	60	\$	800.00	\$	48,000.00	
303	Farm Road Crossing Forebay Structure Walls & Footings	CY	80	\$	1,200.00	\$	96,000.00	
304	Farm Road Crossing Siphon Pipe - 10' Diameter RCP	LF	60	\$	3,500.00	\$	210,000.00	
305	Farm Road Crossing Afterbay Structure Floor	CY	60	\$	800.00	\$	48,000.00	
306	Farm Road Crossing Afterbay Structure Walls & Footings	CY	80	\$	1,200.00	\$	96,000.00	
307	Farm Road Siphon Crossing Earthwork	CY	7200	\$	30.00	\$	216,000.00	
308	Farm Road Siphon Crossing Steel Handrailing	EA	2	\$	25,000.00	\$	50,000.00	
309	Spillway Reinforced Concrete	CY	150	\$	800.00	\$	120,000.00	
310	Spillway Rip-Rap	CY	375	\$	130.00	\$	48,750.00	\$ 1,359,750.00
311	West Basins Turnout Structure Excavation	CY	1300	\$	30.00	\$	39,000.00	
312	West Basins Turnout Reinforced Concrete Structure - Floor	CY	45	\$	800.00	\$	36,000.00	
313	West Basins Turnout Reinforced Concrete Structure - Walls	CY	85	\$	1,200.00	\$	102,000.00	
314	West Basins Turnout Reinforced Concrete Structure - Deck	CY	20	\$	2,000.00	\$	40,000.00	
315	West Basins Structure Backfill & Compaction	CY	700	\$	30.00	\$	21,000.00	
316	West Basins Reinforced Concrete Cutoff Walls	EA	1	\$	25,000.00	\$	25,000.00	
317	West Basins Turnout Steel Embeds & Ladder Rungs	EA	1	\$	20,000.00	\$	20,000.00	
318	West Basins Turnout Steel Grating	EA	1	\$	50,000.00	\$	50,000.00	
319	West Basins Turnout Steel Handrailing	EA	1	\$	50,000.00	\$	50,000.00	
320	West Basins Metering	EA	4	\$	35,000.00	\$	140,000.00	
321	West Basins Metering Vault	EA	4	\$	100,000.00	\$	400,000.00	
322	West Basins Piping	LF	800	\$	400.00	\$	320,000.00	
323	West Basins Turnout Slide Gate	EA	4	\$	55,000.00	\$	220,000.00	
324	West Basins Turnout Electrical Panels	EA	1	\$	170,000.00	\$	170,000.00	
325	West Basins Turnout Electrical Concrete Pad	CY	15	\$	1,000.00	\$	15,000.00	
326	West Basins Turnout Electrical Service	EA	1	\$	20,000.00	\$	20,000.00	
327	West Basins Turnout Light Standard	EA	1	\$	20,000.00	\$	20,000.00	
328	West Basins Turnout PLC Panel & Programming	EA	1	\$	10,000.00	\$	10,000.00	
329	West Basins Turnout Conduits, Wire, and Grounding	EA	1	\$	63,000.00	\$	63,000.00	
330	West Basins Turnout Electrical Equipment Bollards	EA	1	\$	2,000.00	\$	2,000.00	
331	West Basins Outlet Structure - Floor	CY	60	\$	800.00	\$	48,000.00	
332	West Basins Outlet Structure - Walls	CY	60	\$	1,200.00	\$	72,000.00	
333	West Basins Outlet Structure Rip-Rap	CY	300	\$	130.00	\$	39,000.00	
334	West Basins Outlet Structure Concrete Lining	SF	15000	\$	6.00	\$	90,000.00	\$ 2,012,000.00

Exhibit G
Project Construction Cost Summary Sheet

Date: March 2020
Price Level: December 2018

335	Phase I 640 Acres Clearing & Grubbing	AC	320	\$	1,200.00	\$	384,000.00	
336	Phase I 640 Acres Levee Over-Excavation and Re-Compaction	CY	235000	\$	4.60	\$	1,081,000.00	
337	Phase I 640 Acres Levee Keyway	CY	50000	\$	4.70	\$	235,000.00	
338	Phase I 640 Acres Levee Embankment Fill	CY	315000	\$	4.20	\$	1,323,000.00	
339	Phase I 640 Acres Structure Headwalls	EA	10	\$	30,000.00	\$	300,000.00	
340	Phase I 640 Acres Structure Miscellaneous Steel & Weir Boards	EA	10	\$	10,000.00	\$	100,000.00	
341	Phase I 640 Acres Interbasin Structure Piping	LF	750	\$	650.00	\$	487,500.00	
342	Phase I 640 Acres Interbasin Structure Rip-Rap	EA	10	\$	55,000.00	\$	550,000.00	
343	Phase I 640 Acres Interbasin Structure Cutoff Walls	EA	20	\$	15,000.00	\$	300,000.00	
344	Phase I 640 Acres Site Fencing and Gates	LF	21120	\$	7.50	\$	158,400.00	\$ 4,918,900.00
345	Goose Lake Channel Turnout Structure Excavation	CY	1100	\$	30.00	\$	33,000.00	
346	Goose Lake Channel Turnout Reinforced Concrete Structure - Floor	CY	90	\$	800.00	\$	72,000.00	
347	Goose Lake Channel Turnout Reinforced Concrete Structure - Walls	CY	90	\$	1,200.00	\$	108,000.00	
348	Goose Lake Channel Turnout Reinforced Concrete Structure - Deck	CY	50	\$	2,000.00	\$	100,000.00	
349	Goose Lake Channel Turnout Backfill & Compaction	CY	500	\$	30.00	\$	15,000.00	
350	Goose Lake Channel Turnout Trashracks	EA	4	\$	20,000.00	\$	80,000.00	
351	Goose Lake Channel Turnout Steel Embeds & Ladder Rungs	EA	1	\$	10,000.00	\$	10,000.00	
352	Goose Lake Channel Turnout Steel Grating	EA	1	\$	20,000.00	\$	20,000.00	
353	Goose Lake Channel Turnout Steel Handrailing	EA	1	\$	20,000.00	\$	20,000.00	
354	Goose Lake Channel Lift Station Pumps - 60 cfs	EA	4	\$	180,000.00	\$	720,000.00	
355	Goose Lake Channel Lift Station Motors - 200 hp	EA	4	\$	60,000.00	\$	240,000.00	
356	Goose Lake Channel Lift Station 48" FBE Lined and Coated Steel Pipe	LF	80	\$	950.00	\$	76,000.00	
357	Goose Lake Channel Lift Station 48"x36" FBE Lined and Coated Steel Inverter	EA	4	\$	10,000.00	\$	40,000.00	
358	Goose Lake Channel Lift Station 48" Dresser Coupling	EA	4	\$	15,000.00	\$	60,000.00	
359	Goose Lake Channel Lift Station 48" Check Valve	EA	4	\$	200,000.00	\$	800,000.00	
360	Goose Lake Channel Lift Station 48" Butterfly Valve	EA	4	\$	65,000.00	\$	260,000.00	
361	Goose Lake Channel Lift Station Pipe Support	EA	8	\$	3,500.00	\$	28,000.00	
362	Goose Lake Channel Lift Station 8" Air Release Valve	EA	8	\$	12,500.00	\$	100,000.00	
363	Goose Lake Channel Metering	EA	1	\$	90,000.00	\$	90,000.00	
364	Goose Lake Channel Meter Vault	EA	1	\$	150,000.00	\$	150,000.00	
365	Goose Lake Channel Turnout Slide Gate	EA	1	\$	37,500.00	\$	37,500.00	
366	Goose Lake Channel Turnout Main Switchboard	EA	1	\$	40,000.00	\$	40,000.00	
367	Goose Lake Channel Turnout Motor Control Center	EA	1	\$	150,000.00	\$	150,000.00	
368	Goose Lake Channel Turnout PLC & Programming	EA	1	\$	25,000.00	\$	25,000.00	
369	Goose Lake Channel Turnout Transformer & Electrical Service	EA	1	\$	30,000.00	\$	30,000.00	
370	Goose Lake Channel Turnout Site Lighting	EA	2	\$	20,000.00	\$	40,000.00	
371	Goose Lake Channel Turnout Conduits, Wire, & Grounding	EA	1	\$	85,000.00	\$	85,000.00	
372	Goose Lake Channel Turnout Electrical Concrete Foundation	EA	1	\$	10,000.00	\$	10,000.00	
373	Goose Lake Channel Electrical Shade Structure	EA	1	\$	40,000.00	\$	40,000.00	
374	Goose Lake Channel 96" Pipe Outlet	LF	200	\$	1,750.00	\$	350,000.00	
375	Goose Lake Channel Turnout Outlet Structure Excavation	CY	750	\$	30.00	\$	22,500.00	
376	Goose Lake Channel Turnout Outlet Structure Concrete Structure - Floor	CY	40	\$	800.00	\$	32,000.00	
377	Goose Lake Channel Turnout Outlet Structure Concrete Structure - Walls	CY	60	\$	1,200.00	\$	72,000.00	
378	Goose Lake Channel Turnout Outlet Structure Backfill & Compaction	CY	600	\$	30.00	\$	18,000.00	
379	Goose Lake Channel Turnout Outlet Structure Steel Grating	EA	1	\$	10,000.00	\$	10,000.00	
380	Goose Lake Channel Turnout Outlet Structure Steel Handrailing	EA	1	\$	10,000.00	\$	10,000.00	
381	Goose Lake Channel Turnout Pipe Cutoff Wall	EA	1	\$	15,500.00	\$	15,500.00	
382	Goose Lake Channel Outlet Rip-Rap	CY	1000	\$	50.00	\$	50,000.00	
383	Goose Lake Channel Check Structure - Earthwork	CY	200	\$	30.00	\$	6,000.00	
384	Goose Lake Channel Check Structure - Reinforced Concrete - Floor	CY	75	\$	800.00	\$	60,000.00	
385	Goose Lake Channel Check Structure - Reinforced Concrete - Walls	CY	21	\$	1,200.00	\$	25,200.00	
386	Goose Lake Channel Check Structure - Steel Embeds	EA	1	\$	15,000.00	\$	15,000.00	
387	Goose Lake Channel Check Structure - Steel Frame	EA	1	\$	15,000.00	\$	15,000.00	
388	Goose Lake Channel Check Structure - Steel Grating	EA	1	\$	10,000.00	\$	10,000.00	
389	Goose Lake Channel Check Structure - Steel Handrailing	EA	1	\$	10,000.00	\$	10,000.00	
390	Goose Lake Channel Concrete Lining	SF	2000	\$	6.00	\$	12,000.00	
391	Goose Lake Channel Check Structure - Rip-Rap	CY	1500	\$	130.00	\$	195,000.00	
392	Goose Lake Channel Check Structure - Weir Boards	EA	120	\$	50.00	\$	6,000.00	\$ 4,413,700.00

Exhibit G
Project Construction Cost Summary Sheet

Date: March 2020
Price Level: December 2018

	Phase I 640 Acres Well Drilling, Construction, & Development	EA	6	\$	1,160,341.00		\$	6,962,046.00
393	Mobilization	EA	1	\$	10,000.00	\$		10,000.00
394	Demobilization	EA	1	\$	10,000.00	\$		10,000.00
395	Final Cleanup	EA	1	\$	5,000.00	\$		5,000.00
396	Transport and dispose of drill cuttings offsite	EA	1	\$	10,000.00	\$		10,000.00
397	Three 20,000-gallon temporary water storage tanks and discharge piping	EA	1	\$	10,000.00	\$		10,000.00
398	Drill 54-inch minimum diameter surface casing/sanitary seal borehole	LF	50	\$	620.00	\$		31,000.00
399	Drill 17.5-inch minimum diameter pilot borehole from 50 ft to 970 ft bgs	LF	920	\$	110.00	\$		101,200.00
400	Drill 17.5-inch minimum diameter pilot borehole from 970 ft to 1,400 ft bgs	LF	430	\$	110.00	\$		47,300.00
401	Conduct downhole geophysical surveys and alignment/deviation survey	EA	1	\$	15,000.00	\$		15,000.00
402	Conduct isolated aquifer zone test	EA	3	\$	25,000.00	\$		75,000.00
403	Conduct deep isolated aquifer zone test below 800 ft bgs	EA	3	\$	35,000.00	\$		105,000.00
404	Enlarge pilot borehole to 36-inch diameter from 50 ft to 330 ft bgs	LF	280	\$	110.00	\$		30,800.00
405	Enlarge pilot borehole to 32-inch diameter from 330 ft to 970 ft bgs	LF	660	\$	110.00	\$		72,600.00
406	Conduct alignment/deviation tests in enlarged borehole	EA	1	\$	5,500.00	\$		5,500.00
407	Conduct a caliper survey of enlarged borehole	EA	1	\$	5,500.00	\$		5,500.00
408	Furnish and install 20-inch I.D. by 5/16-inch wall HSLA steel blank well casing	LF	424	\$	220.00	\$		93,280.00
409	Furnish and install HSLA steel blank well casing with reinforced "Bull Nose"	EA	1	\$	5,000.00	\$		5,000.00
410	Furnish and install 20-inch by 5/16-inch wall Ful Flo louvered, HSLA steel well screen	LF	510	\$	320.00	\$		163,200.00
411	Furnish and install 3-inch I.D. schedule 40 mild steel sounding/camera access tube	LF	329	\$	46.00	\$		15,134.00
412	Furnish and install 3-inch I.D. schedule 40 mild steel gravel feed tube	LF	319	\$	38.00	\$		12,122.00
413	Furnish and install gravel pack in borehole annulus	LF	665	\$	225.00	\$		149,625.00
414	Furnish and install 10.3-sack sand-cement grout upper annular seal	LF	305	\$	170.00	\$		51,850.00
415	Perform initial well development	HRS	108	\$	275.00	\$		29,700.00
416	Provide chlorine solution for chemical development of the well	GAL	255	\$	26.00	\$		6,630.00
417	Provide polymer dispersant for chemical development of the well	GAL	40	\$	110.00	\$		4,400.00
418	Mobilize, install, and demobilize test pumping equipment in newly completed wells	EA	1	\$	25,000.00	\$		25,000.00
419	Conduct final development by pumping and surging	HRS	60	\$	500.00	\$		30,000.00
420	Conduct step-drawdown pumping test in newly completed wells	HRS	8	\$	500.00	\$		4,000.00
421	Conduct constant-rate pumping test in newly completed wells	HRS	28	\$	500.00	\$		14,000.00
422	Conduct a dynamic flow meter survey	EA	1	\$	10,000.00	\$		10,000.00
423	Conduct a color video camera survey	EA	1	\$	2,500.00	\$		2,500.00
424	Conduct well alignment/deviation test in newly completed wells	EA	1	\$	5,000.00	\$		5,000.00
425	Conduct final well disinfection in newly completed wells	EA	1	\$	5,000.00	\$		5,000.00
	Phase I 640 Acre Well Equipping and Site Development	EA	6	\$	1,315,500.00		\$	7,893,000.00
426	Mobilization	EA	1	\$	25,000.00	\$		25,000.00
427	Demobilization	EA	1	\$	25,000.00	\$		25,000.00
428	Final Cleanup	EA	1	\$	10,000.00	\$		10,000.00
429	Water Supply	EA	1	\$	15,000.00	\$		15,000.00
430	Environmental Mitigation	EA	1	\$	20,000.00	\$		20,000.00
431	Construct well site earthwork	CY	2400	\$	10.00	\$		24,000.00
432	Furnish and install well concrete foundation	CY	20	\$	1,200.00	\$		24,000.00
433	Furnish and install electrical concrete foundation	CY	15	\$	1,200.00	\$		18,000.00
434	Furnish and install discharge pipe concrete pad	CY	5	\$	1,200.00	\$		6,000.00
435	Furnish and install transformer pad	EA	1	\$	10,000.00	\$		10,000.00
436	Furnish and install 12" FBE Steel Well Discharge Piping	LF	45	\$	300.00	\$		13,500.00
437	Furnish and install Deep Well Air Release Valve	EA	1	\$	3,500.00	\$		3,500.00
438	Furnish and install 12" Dresser Coupling	EA	1	\$	2,000.00	\$		2,000.00
439	Furnish and install 12" Check Valve	EA	1	\$	3,500.00	\$		3,500.00
440	Furnish and install 12" Flow Meter	EA	1	\$	8,500.00	\$		8,500.00
441	Furnish and install 12" FBE Steel Tee	EA	1	\$	2,500.00	\$		2,500.00
442	Furnish and install 12" Butterfly Valve	EA	1	\$	3,500.00	\$		3,500.00
443	Furnish and install 2" Air Release Valve	EA	1	\$	2,500.00	\$		2,500.00
444	Furnish and install Pressure Gauges	EA	2	\$	500.00	\$		1,000.00
445	Furnish and install Pipe Supports	EA	3	\$	1,000.00	\$		3,000.00
446	Furnish and install vertical turbine well pump assembly	EA	1	\$	180,000.00	\$		180,000.00
447	Furnish and install vertical turbine well motor	EA	1	\$	75,000.00	\$		75,000.00
448	Furnish and install well enclosures and appurtenances	EA	1	\$	20,000.00	\$		20,000.00
449	Furnish and install electrical Main Switchboard	EA	1	\$	50,000.00	\$		50,000.00
450	Furnish and install electrical Motor Control Center	EA	1	\$	200,000.00	\$		200,000.00
451	Furnish and install Electrical Service and Transformer	EA	1	\$	25,000.00	\$		25,000.00
452	Furnish and install Site Lighting	EA	2	\$	20,000.00	\$		40,000.00
453	Furnish and install Multi-Lin	EA	1	\$	10,000.00	\$		10,000.00
454	Furnish and install Mission Unit Controller and HMI	EA	1	\$	10,000.00	\$		10,000.00
455	Furnish and install Electrical Instrumentation	EA	1	\$	25,000.00	\$		25,000.00
456	Furnish and install Electrical Conduit, Wires, and Grounding	EA	1	\$	150,000.00	\$		150,000.00
457	Furnish and install pre-fabricated metal canopy	EA	1	\$	70,000.00	\$		70,000.00
458	Furnish and install site ground cover	CY	200	\$	50.00	\$		10,000.00
459	Furnish and install site fencing	LF	400	\$	50.00	\$		20,000.00
460	Furnish and install site painting	EA	1	\$	10,000.00	\$		10,000.00
461	Furnish and install VFD's	EA	1	\$	200,000.00	\$		200,000.00
462	Phase I 640 Acres Well Recovery Pipeline - 12" PVC	LF	4700	\$	65.00	\$		305,500.00
463	Phase I 640 Acres Well Recovery Pipeline - 18" PVC	LF	2600	\$	120.00	\$		312,000.00
464	Phase I 640 Acres Well Recovery Pipeline - 24" PVC	LF	4710	\$	175.00	\$		824,250.00
465	Phase I 640 Acres Well Recovery Pipeline - 30" PVC	LF	1500	\$	225.00	\$		337,500.00
							\$	1,779,250.00
466	RRB Intake Canal Interconnection Excavation	CY	300	\$	30.00	\$		9,000.00
467	RRB Intake Canal Interconnection Reinforced Concrete Structure - Floor	CY	5	\$	800.00	\$		4,000.00
468	RRB Intake Canal Interconnection Reinforced Concrete Structure - Walls	CY	10	\$	1,200.00	\$		12,000.00
469	RRB Intake Canal Interconnection Backfill & Compaction	CY	280	\$	30.00	\$		8,400.00
470	RRB Intake Canal Interconnection Steel Handrailing	EA	1	\$	10,000.00	\$		10,000.00
471	RRB Intake Canal Interconnection Butterfly Valve & Appurtenances	EA	1	\$	50,000.00	\$		50,000.00
472	RRB Intake Canal Interconnection Concrete Lining	SF	700	\$	6.00	\$		4,200.00
473	RRB Intake Canal Interconnection HDPE Liner Repair	EA	2	\$	2,500.00	\$		5,000.00
							\$	102,600.00
474	Phase II 640 Acres Clearing & Grubbing	AC	320	\$	1,200.00	\$		384,000.00
475	Phase II 640 Acres Levee Over-Excavation and Re-Compaction	CY	235000	\$	4.60	\$		1,081,000.00
476	Phase II 640 Acres Levee Keyway	CY	50000	\$	4.70	\$		235,000.00
477	Phase II 640 Acres Levee Embankment Fill	CY	350000	\$	4.20	\$		1,470,000.00
478	Phase II 640 Acres Structure Headwalls	EA	8	\$	30,000.00	\$		240,000.00
479	Phase II 640 Acres Structure Miscellaneous Steel & Weir Boards	EA	8	\$	10,000.00	\$		80,000.00
480	Phase II 640 Acres Interbasin Structure Piping	LF	600	\$	650.00	\$		390,000.00
481	Phase II 640 Acres Interbasin Structure Rip-Rap	EA	8	\$	55,000.00	\$		440,000.00
482	Phase II 640 Acres Interbasin Structure Cutoff Walls	EA	16	\$	15,000.00	\$		240,000.00
483	Phase II 640 Acres Site Fencing and Gates	LF	21120	\$	7.50	\$		158,400.00
							\$	4,718,400.00

**Exhibit G
Project Construction Cost Summary Sheet**

Date: March 2020
Price Level: December 2018

Phase II 640 Acres Well Drilling, Construction, & Development		EA	6	\$	1,160,341.00		\$	6,962,046.00
484	Mobilization	EA	1	\$	10,000.00	\$		10,000.00
485	Demobilization	EA	1	\$	10,000.00	\$		10,000.00
486	Final Cleanup	EA	1	\$	5,000.00	\$		5,000.00
487	Transport and dispose of drill cuttings offsite	EA	1	\$	10,000.00	\$		10,000.00
488	Three 20,000-gallon temporary water storage tanks and discharge piping	EA	1	\$	10,000.00	\$		10,000.00
489	Drill 54-inch minimum diameter surface casing/sanitary seal borehole	LF	50	\$	620.00	\$		31,000.00
490	Drill 17.5-inch minimum diameter pilot borehole from 50 ft to 970 ft bgs	LF	920	\$	110.00	\$		101,200.00
491	Drill 17.5-inch minimum diameter pilot borehole from 970 ft to 1,400 ft bgs	LF	430	\$	110.00	\$		47,300.00
492	Conduct downhole geophysical surveys and alignment/deviation survey	EA	1	\$	15,000.00	\$		15,000.00
493	Conduct isolated aquifer zone test	EA	3	\$	25,000.00	\$		75,000.00
494	Conduct deep isolated aquifer zone test below 800 ft bgs	EA	3	\$	35,000.00	\$		105,000.00
495	Enlarge pilot borehole to 36-inch diameter from 50 ft to 330 ft bgs	LF	280	\$	110.00	\$		30,800.00
496	Enlarge pilot borehole to 32-inch diameter from 330 ft to 970 ft bgs	LF	660	\$	110.00	\$		72,600.00
497	Conduct alignment/deviation tests in enlarged borehole	EA	1	\$	5,500.00	\$		5,500.00
498	Conduct a caliper survey of enlarged borehole	EA	1	\$	5,500.00	\$		5,500.00
499	Furnish and install 20-inch I.D. by 5/16-inch wall HSLA steel blank well casing	LF	424	\$	220.00	\$		93,280.00
500	Furnish and install HSLA steel blank well casing with reinforced "Bull Nose"	EA	1	\$	5,000.00	\$		5,000.00
501	Furnish and install 20-inch by 5/16-inch wall Ful Flo louvered, HSLA steel well screen	LF	510	\$	320.00	\$		163,200.00
502	Furnish and install 3-inch I.D. schedule 40 mild steel sounding/camera access tube	LF	329	\$	46.00	\$		15,134.00
503	Furnish and install 3-inch I.D. schedule 40 mild steel gravel feed tube	LF	319	\$	38.00	\$		12,122.00
504	Furnish and install gravel pack in borehole annulus	LF	665	\$	225.00	\$		149,625.00
505	Furnish and install 10.3-sack sand-cement grout upper annular seal	LF	305	\$	170.00	\$		51,850.00
506	Perform initial well development	HRS	108	\$	275.00	\$		29,700.00
507	Provide chlorine solution for chemical development of the well	GAL	255	\$	26.00	\$		6,630.00
508	Provide polymer dispersant for chemical development of the well	GAL	40	\$	110.00	\$		4,400.00
509	Mobilize, install, and demobilize test pumping equipment in newly completed wells	EA	1	\$	25,000.00	\$		25,000.00
510	Conduct final development by pumping and surging	HRS	60	\$	500.00	\$		30,000.00
511	Conduct step-drawdown pumping test in newly completed wells	HRS	8	\$	500.00	\$		4,000.00
512	Conduct constant-rate pumping test in newly completed wells	HRS	28	\$	500.00	\$		14,000.00
513	Conduct a dynamic flow meter survey	EA	1	\$	10,000.00	\$		10,000.00
514	Conduct a color video camera survey	EA	1	\$	2,500.00	\$		2,500.00
515	Conduct well alignment/deviation test in newly completed wells	EA	1	\$	5,000.00	\$		5,000.00
516	Conduct final well disinfection in newly completed wells	EA	1	\$	5,000.00	\$		5,000.00
Phase II 640 Acres Well Equipping and Site Development		EA	6	\$	1,315,500.00		\$	7,893,000.00
517	Mobilization	EA	1	\$	25,000.00	\$		25,000.00
518	Demobilization	EA	1	\$	25,000.00	\$		25,000.00
519	Final Cleanup	EA	1	\$	10,000.00	\$		10,000.00
520	Water Supply	EA	1	\$	15,000.00	\$		15,000.00
521	Environmental Mitigation	EA	1	\$	20,000.00	\$		20,000.00
522	Construct well site earthwork	CY	2400	\$	10.00	\$		24,000.00
523	Furnish and install well concrete foundation	CY	20	\$	1,200.00	\$		24,000.00
524	Furnish and install electrical concrete foundation	CY	15	\$	1,200.00	\$		18,000.00
525	Furnish and install discharge pipe concrete pad	CY	5	\$	1,200.00	\$		6,000.00
526	Furnish and install transformer pad	EA	1	\$	10,000.00	\$		10,000.00
527	Furnish and install 12" FBE Steel Well Discharge Piping	LF	45	\$	300.00	\$		13,500.00
528	Furnish and install Deep Well Air Release Valve	EA	1	\$	3,500.00	\$		3,500.00
529	Furnish and install 12" Dresser Coupling	EA	1	\$	2,000.00	\$		2,000.00
530	Furnish and install 12" Check Valve	EA	1	\$	3,500.00	\$		3,500.00
531	Furnish and install 12" Flow Meter	EA	1	\$	8,500.00	\$		8,500.00
532	Furnish and install 12" FBE Steel Tee	EA	1	\$	2,500.00	\$		2,500.00
533	Furnish and install 12" Butterfly Valve	EA	1	\$	3,500.00	\$		3,500.00
534	Furnish and install 2" Air Release Valve	EA	1	\$	2,500.00	\$		2,500.00
535	Furnish and install Pressure Gauges	EA	2	\$	500.00	\$		1,000.00
536	Furnish and install Pipe Supports	EA	3	\$	1,000.00	\$		3,000.00
537	Furnish and install vertical turbine well pump assembly	EA	1	\$	180,000.00	\$		180,000.00
538	Furnish and install vertical turbine well motor	EA	1	\$	75,000.00	\$		75,000.00
539	Furnish and install well enclosures and appurtenances	EA	1	\$	20,000.00	\$		20,000.00
540	Furnish and install electrical Main Switchboard	EA	1	\$	50,000.00	\$		50,000.00
541	Furnish and install electrical Motor Control Center	EA	1	\$	200,000.00	\$		200,000.00
542	Furnish and install Electrical Service and Transformer	EA	1	\$	25,000.00	\$		25,000.00
543	Furnish and install Site Lighting	EA	2	\$	20,000.00	\$		40,000.00
544	Furnish and install Multi-Lin	EA	1	\$	10,000.00	\$		10,000.00
545	Furnish and install Mission Unit Controller and HMI	EA	1	\$	10,000.00	\$		10,000.00
546	Furnish and install Electrical Instrumentation	EA	1	\$	25,000.00	\$		25,000.00
547	Furnish and install Electrical Conduit, Wires, and Grounding	EA	1	\$	150,000.00	\$		150,000.00
548	Furnish and install pre-fabricated metal canopy	EA	1	\$	70,000.00	\$		70,000.00
549	Furnish and install site ground cover	CY	200	\$	50.00	\$		10,000.00
550	Furnish and install site fencing	LF	400	\$	50.00	\$		20,000.00
551	Furnish and install site painting	EA	1	\$	10,000.00	\$		10,000.00
552	Furnish and install VFD's	EA	1	\$	200,000.00	\$		200,000.00
553	Phase II 640 Acres Well Recovery Pipeline - 12" PVC	LF	6340	\$	65.00	\$		412,100.00
554	Phase II 640 Acres Well Recovery Pipeline - 18" PVC	LF	340	\$	120.00	\$		40,800.00
555	Phase II 640 Acres Canal Turn-In Facilities	EA	4	\$	50,000.00	\$		200,000.00
							\$	652,900.00
556	Aqueduct Lift Station Structure Excavation	CY	1750	\$	30.00	\$		52,500.00
557	Aqueduct Lift Station Reinforced Concrete Structure - Floor	CY	45	\$	800.00	\$		36,000.00
558	Aqueduct Lift Station Reinforced Concrete Structure - Walls	CY	90	\$	1,200.00	\$		108,000.00
559	Aqueduct Lift Station Reinforced Concrete Structure - Deck	CY	25	\$	2,000.00	\$		50,000.00
560	Aqueduct Lift Station Backfill & Compaction	CY	1200	\$	30.00	\$		36,000.00
561	Aqueduct Lift Station Trashracks	EA	3	\$	20,000.00	\$		60,000.00
562	Aqueduct Lift Station Steel Embeds & Ladder Rungs	EA	1	\$	10,000.00	\$		10,000.00
563	Aqueduct Lift Station Steel Grating	EA	1	\$	20,000.00	\$		20,000.00
564	Aqueduct Lift Station Steel Handrailing	EA	1	\$	20,000.00	\$		20,000.00
565	Aqueduct Lift Station Pumps - 30 cfs	EA	3	\$	130,000.00	\$		390,000.00
566	Aqueduct Lift Station Motors - 150 hp	EA	3	\$	50,000.00	\$		150,000.00
567	Aqueduct Lift Station 30" FBE Lined and Coated Steel Pipe	LF	90	\$	700.00	\$		63,000.00
568	Aqueduct Lift Station 36"x30" FBE Lined and Coated Steel Inverter	EA	3	\$	7,500.00	\$		22,500.00
569	Aqueduct Lift Station 30" Dresser Coupling	EA	3	\$	7,500.00	\$		22,500.00
570	Aqueduct Lift Station 30" Check Valve	EA	3	\$	80,000.00	\$		240,000.00
571	Aqueduct Lift Station 30" Butterfly Valve	EA	3	\$	35,000.00	\$		105,000.00
572	Aqueduct Lift Station Pipe Support	EA	9	\$	2,500.00	\$		22,500.00
573	Aqueduct Lift Station 6" Air Release Valve	EA	6	\$	7,500.00	\$		45,000.00
574	Aqueduct Turnout Afterbay Slide Gate	EA	1	\$	75,000.00	\$		75,000.00
575	Aqueduct Lift Station Main Switchboard	EA	1	\$	40,000.00	\$		40,000.00
576	Aqueduct Lift Station Motor Control Center	EA	1	\$	150,000.00	\$		150,000.00
577	Aqueduct Lift Station PLC & Programming	EA	1	\$	25,000.00	\$		25,000.00
578	Aqueduct Lift Station Transformer & Electrical Service	EA	1	\$	30,000.00	\$		30,000.00
579	Aqueduct Lift Station Site Lighting	EA	1	\$	20,000.00	\$		20,000.00
580	Aqueduct Lift Station Conduits, Wire, & Grounding	EA	1	\$	85,000.00	\$		85,000.00
581	Aqueduct Lift Station Electrical Concrete Foundation	EA	1	\$	10,000.00	\$		10,000.00
582	Aqueduct Lift Station Electrical Shade Structure	EA	1	\$	40,000.00	\$		40,000.00
583	Aqueduct Lift Station 48" Pipe	LF	220	\$	400.00	\$		88,000.00
584	Aqueduct Lift Station 48" Butterfly Valve	EA	1	\$	65,000.00	\$		65,000.00
							\$	2,081,000.00

Exhibit G
Project Construction Cost Summary Sheet

Date: March 2020
 Price Level: December 2018

585	SCADA System Hardware	EA	1	\$	75,000.00	\$	75,000.00		
586	SCADA System Software	EA	1	\$	75,000.00	\$	75,000.00		
587	SCADA System Programming and Screens	EA	1	\$	150,000.00	\$	150,000.00	\$ 300,000.00	
Subtotal:							\$	128,165,797.40	
	Mobilization:		1.4%			\$	1,820,000.00		
Subtotal with Mobilization:							\$	129,985,797.40	
	Contract Cost Allowances (Sum of):		2.3%			\$	3,014,203.00		
	Design Contingencies, 2% (+/-)								
	APS (+/-). Type of Procurement: Request for Proposal, Competitive Bid								
Contract Cost:							\$	133,000,000.00	
	Construction Contingencies:		20.3%			\$	27,000,000.00		
Field Cost:							\$	160,000,000.00	
	Project Management					\$	6,500,000.00		
	Engineering & Design					\$	6,900,000.00		
	Environmental					\$	600,000.00		
	Permitting					\$	600,000.00		
	Labor Compliance					\$	500,000.00		
	PG&E Electrical Service					\$	1,500,000.00		
	Bid Advertisement & Legal					\$	250,000.00		
	Project Surveying					\$	1,600,000.00		
	Construction Management & Inspection					\$	7,800,000.00		
	HCP Fees					\$	3,200,000.00		
	Land Acquisition and Rights of Way					\$	37,000,000.00		
Subtotal Non-Contract Costs excluding Land Acquisition and Rights of Way:							\$	29,000,000.00	
Subtotal Non-Contract Cost:							\$	66,000,000.00	
Construction Cost (Unit Price Level Dec 2018) excluding Land Acquisition and Rights of Way:							\$	189,000,000.00	
Construction Cost (Unit Price Level Dec 2018)							\$	226,000,000.00	
	Escalation to end of Project Bidding Phases, from Unit Price Level (Dec 2018) to Bids (Dec 2023)					\$	20,000,000.00		
			2.0%	per year for	5 years				
Construction Cost (with Escalation to end of Bid Phases, Price Level Dec 2023)							\$	246,000,000.00	

QUANTITIES			PRICES	
BY	CHECKED		BY	CHECKED
DATE PREPARED	PEER REVIEW / DATE		DATE PREPARED	PEER REVIEW / DATE