

EPC STORMWATER REVIEW COMMENTS
IN ORANGE BOXES WITH BLACK TEXT

2024 Financial Assurance Estimate Form (with pre-plat construction)

Updated: 10/2023

PROJECT INFORMATION

Grandview Reserve Water Treatment Plant	8/5/2024	PPR-24-30
Project Name	Date	PCD File No.

Description	Quantity	Units	Unit Cost	Total	(with Pre-Plat Construction)	
					% Complete	Remaining

SECTION 1 - GRADING AND EROSION CONTROL (Construction and Permanent BMPs)

Earthwork						
less than 1,000; \$5,300 min	300	CY	\$ 8.00	\$ 5,300.00		\$ 5,300.00
1,000-5,000; \$8,000 min		CY	\$ 6.00	\$ -		\$ -
5,001-20,000; \$30,000 min		CY	\$ 5.00	\$ -		\$ -
20,001-50,000; \$100,000 min		CY	\$ 3.50	\$ -		\$ -
50,001-200,000; \$175,000 min		CY	\$ 2.50	\$ -		\$ -
greater than 200,000; \$500,000 min		CY	\$ 2.00	\$ -		\$ -
Permanent Erosion Control Blanket	392	SY	\$ 9.00	\$ 3,532.00		\$ 3,532.00
Permanent Seeding (inc. noxious weed mgmnt.) & Mulching	1.19	AC	\$ 2,018.00	\$ 2,396.17		\$ 2,396.17
Permanent Pond/BMP (provide engineer's estimate)		EA		\$ -		\$ -
Concrete Washout Basin	1	EA	\$ 1,172.00	\$ 1,172.00		\$ 1,172.00
Inlet Protection	1	EA	\$ 217.00	\$ 217.00		\$ 217.00
Rock Check Dam		EA	\$ 651.00	\$ -		\$ -
Safety Fence		LF	\$ 3.00	\$ -		\$ -
Sediment Basin		EA	\$ 2,294.00	\$ -		\$ -
Sediment Trap		EA	\$ 538.00	\$ -		\$ -
Silt Fence	455	LF	\$ 3.00	\$ 1,365.00		\$ 1,365.00
Slope Drain		LF	\$ 43.00	\$ -		\$ -
Straw Bale		EA	\$ 33.00	\$ -		\$ -
Straw Wattle/Rock Sock		LF	\$ 8.00	\$ -		\$ -
Surface Roughening		AC	\$ 269.00	\$ -		\$ -
Temporary Erosion Control Blanket		SY	\$ 3.00	\$ -		\$ -
Temporary Seeding and Mulching		AC	\$ 1,793.00	\$ -		\$ -
Vehicle Tracking Control	1	EA	\$ 3,085.00	\$ 3,085.00		\$ 3,085.00
[insert items not listed but part of construction plans]				\$ -		\$ -
MAINTENANCE (35% of Construction BMPs)				\$ 1,633.45		\$ 1,633.45
Section 1 Subtotal				\$ 18,700.62		\$ 18,700.62

* - Subject to defect warranty financial assurance. A minimum of 20% shall be retained until final acceptance (MAXIMUM OF 80% COMPLETE ALLOWED)

SECTION 2 - PUBLIC IMPROVEMENTS *

ROADWAY IMPROVEMENTS

Construction Traffic Control		LS		\$ -		\$ -
Aggregate Base Course (135 lbs/cf)		Tons	\$ 37.00	\$ -		\$ -
Aggregate Base Course (135 lbs/cf)	85	CY	\$ 66.00	\$ 5,595.33		\$ 5,595.33
Asphalt Pavement (3" thick)		SY	\$ 18.00	\$ -		\$ -
Asphalt Pavement (4" thick)	509	SY	\$ 25.00	\$ 12,716.67		\$ 12,716.67
Asphalt Pavement (6" thick)		SY	\$ 38.00	\$ -		\$ -
Asphalt Pavement (147 lbs/cf) _" thick		Tons	\$ 114.00	\$ -		\$ -
Raised Median, Paved		SF	\$ 11.00	\$ -		\$ -
Regulatory Sign/Advisory Sign		EA	\$ 392.00	\$ -		\$ -
Guide/Street Name Sign		EA		\$ -		\$ -
Epoxy Pavement Marking		SF	\$ 17.00	\$ -		\$ -
Thermoplastic Pavement Marking		SF	\$ 30.00	\$ -		\$ -
Barricade - Type 3		EA	\$ 259.00	\$ -		\$ -
Delineator - Type I		EA	\$ 31.00	\$ -		\$ -
Curb and Gutter, Type A (6" Vertical)		LF	\$ 38.00	\$ -		\$ -
Curb and Gutter, Type B (Median)		LF	\$ 38.00	\$ -		\$ -
Curb and Gutter, Type C (Ramp)		LF	\$ 38.00	\$ -		\$ -
4" Sidewalk (common areas only)		SY	\$ 62.00	\$ -		\$ -
5" Sidewalk		SY	\$ 77.00	\$ -		\$ -
6" Sidewalk		SY	\$ 94.00	\$ -		\$ -
8" Sidewalk		SY	\$ 125.00	\$ -		\$ -
Pedestrian Ramp		EA	\$ 1,496.00	\$ -		\$ -
Cross Pan, local (8" thick, 6' wide to include return)		LF	\$ 79.00	\$ -		\$ -
Cross Pan, collector (9" thick, 8' wide to include return)		LF	\$ 119.00	\$ -		\$ -
Curb Opening with Drainage Chase		EA	\$ 1,926.00	\$ -		\$ -
Guardrail Type 3 (W-Beam)		LF	\$ 65.00	\$ -		\$ -
Guardrail Type 7 (Concrete)		LF	\$ 94.00	\$ -		\$ -
Guardrail End Anchorage		EA	\$ 2,731.00	\$ -		\$ -
Guardrail Impact Attenuator		EA	\$ 4,902.00	\$ -		\$ -
Sound Barrier Fence (CMU block, 6' high)		LF	\$ 102.00	\$ -		\$ -
Sound Barrier Fence (panels, 6' high)		LF	\$ 104.00	\$ -		\$ -
Electrical Conduit, Size =		LF	\$ 22.00	\$ -		\$ -
Traffic Signal, (provide engineer's estimate)		EA		\$ -		\$ -

A	B	C	D	E	F	G	H	I	J	K
3	PROJECT INFORMATION									
4	Grandview Reserve Water Treatment Plant			8/5/2024						
5	Project Name			Date			PCD File No.			
6										
7										
8	Description	Quantity	Units	Unit Cost		Total	(with Pre-Plat Construction)		% Complete	Remaining
75					=	\$ -				\$ -
76	<i>[insert items not listed but part of construction plans]</i>				=	\$ -				\$ -
77	STORM DRAIN IMPROVEMENTS									
79	Concrete Box Culvert (M Standard), Size (W x H)		LF		=	\$ -				\$ -
80	18" Reinforced Concrete Pipe		LF	\$ 82.00	=	\$ -				\$ -
81	24" Reinforced Concrete Pipe		LF	\$ 98.00	=	\$ -				\$ -
82	30" Reinforced Concrete Pipe		LF	\$ 123.00	=	\$ -				\$ -
83	36" Reinforced Concrete Pipe		LF	\$ 151.00	=	\$ -				\$ -
84	42" Reinforced Concrete Pipe		LF	\$ 201.00	=	\$ -				\$ -
85	48" Reinforced Concrete Pipe		LF	\$ 245.00	=	\$ -				\$ -
86	54" Reinforced Concrete Pipe		LF	\$ 320.00	=	\$ -				\$ -
87	60" Reinforced Concrete Pipe		LF	\$ 374.00	=	\$ -				\$ -
88	66" Reinforced Concrete Pipe		LF	\$ 433.00	=	\$ -				\$ -
89	72" Reinforced Concrete Pipe		LF	\$ 495.00	=	\$ -				\$ -
90	18" Corrugated Steel Pipe		LF	\$ 105.00	=	\$ -				\$ -
91	24" Corrugated Steel Pipe		LF	\$ 121.00	=	\$ -				\$ -
92	30" Corrugated Steel Pipe		LF	\$ 154.00	=	\$ -				\$ -
93	36" Corrugated Steel Pipe		LF	\$ 184.00	=	\$ -				\$ -
94	42" Corrugated Steel Pipe		LF	\$ 212.00	=	\$ -				\$ -
95	48" Corrugated Steel Pipe		LF	\$ 223.00	=	\$ -				\$ -
96	54" Corrugated Steel Pipe		LF	\$ 327.00	=	\$ -				\$ -
97	60" Corrugated Steel Pipe		LF	\$ 353.00	=	\$ -				\$ -
98	66" Corrugated Steel Pipe		LF	\$ 427.00	=	\$ -				\$ -
99	72" Corrugated Steel Pipe		LF	\$ 502.00	=	\$ -				\$ -
100	78" Corrugated Steel Pipe		LF	\$ 578.00	=	\$ -				\$ -
101	84" Corrugated Steel Pipe		LF	\$ 691.00	=	\$ -				\$ -
102	Flared End Section (FES) RCP Size = <i>(unit cost = 6x pipe unit cost)</i>		EA		=	\$ -				\$ -
103	Flared End Section (FES) CSP Size = <i>(unit cost = 6x pipe unit cost)</i>		EA		=	\$ -				\$ -
104	End Treatment- Headwall		EA		=	\$ -				\$ -
105	End Treatment- Wingwall		EA		=	\$ -				\$ -
106	End Treatment - Cutoff Wall		EA		=	\$ -				\$ -
107	Curb Inlet (Type R) L=5', Depth < 5'		EA	\$ 7,212.00	=	\$ -				\$ -
108	Curb Inlet (Type R) L=5', 5' ≤ Depth < 10'		EA	\$ 9,377.00	=	\$ -				\$ -
109	Curb Inlet (Type R) L =5', 10' ≤ Depth < 15'		EA	\$ 10,859.00	=	\$ -				\$ -
110	Curb Inlet (Type R) L =10', Depth < 5'		EA	\$ 9,925.00	=	\$ -				\$ -
111	Curb Inlet (Type R) L =10', 5' ≤ Depth < 10'		EA	\$ 10,230.00	=	\$ -				\$ -
112	Curb Inlet (Type R) L =10', 10' ≤ Depth < 15'		EA	\$ 12,805.00	=	\$ -				\$ -
113	Curb Inlet (Type R) L =15', Depth < 5'		EA	\$ 12,907.00	=	\$ -				\$ -
114	Curb Inlet (Type R) L =15', 5' ≤ Depth < 10'		EA	\$ 13,835.00	=	\$ -				\$ -
115	Curb Inlet (Type R) L =15', 10' ≤ Depth < 15'		EA	\$ 15,130.00	=	\$ -				\$ -
116	Curb Inlet (Type R) L =20', Depth < 5'		EA	\$ 13,755.00	=	\$ -				\$ -
117	Curb Inlet (Type R) L =20', 5' ≤ Depth < 10'		EA	\$ 15,181.00	=	\$ -				\$ -
118	Grated Inlet (Type C), Depth < 5'		EA	\$ 6,037.00	=	\$ -				\$ -
119	Grated Inlet (Type D), Depth < 5'		EA	\$ 7,458.00	=	\$ -				\$ -
120	Storm Sewer Manhole, Box Base		EA	\$ 15,130.00	=	\$ -				\$ -
121	Storm Sewer Manhole, Slab Base		EA	\$ 8,322.00	=	\$ -				\$ -
122	Geotextile (Erosion Control)		SY	\$ 9.00	=	\$ -				\$ -
123	Rip Rap, d50 size from 6" to 24"		Tons	\$ 104.00	=	\$ -				\$ -
124	Rip Rap, Grouted		Tons	\$ 124.00	=	\$ -				\$ -
125	Drainage Channel Construction, Size (W x H)		LF		=	\$ -				\$ -
126	Drainage Channel Lining, Concrete		CY	\$ 741.00	=	\$ -				\$ -
127	Drainage Channel Lining, Rip Rap		CY	\$ 145.00	=	\$ -				\$ -
128	Drainage Channel Lining, Grass		AC	\$ 1,911.00	=	\$ -				\$ -
129	Drainage Channel Lining, Other Stabilization				=	\$ -				\$ -
130	6" HDPE Pipe	20	LF	\$ 25.00	=	\$ 500.00				\$ 500.00
131	<i>[insert items not listed but part of construction plans]</i>				=	\$ -				\$ -
132						Section 2 Subtotal	= \$ 18,812.00			\$ 18,812.00

* - Subject to defect warranty financial assurance. A minimum of 20% shall be retained until final acceptance (MAXIMUM OF 80% COMPLETE ALLOWED)

	B	C	D	E	F	G	H	I	J	K
3	PROJECT INFORMATION									
4	Grandview Reserve Water Treatment Plant			8/5/2024						
5	Project Name			Date			PCD File No.			
6										
7										
8	Description	Quantity	Units	Unit Cost		Total	(with Pre-Plat Construction)			
133	SECTION 3 - COMMON DEVELOPMENT IMPROVEMENTS (Private or District and NOT Maintained by EPC)**									
134	ROADWAY IMPROVEMENTS									
136					=	\$ -			\$ -	
137					=	\$ -			\$ -	
138					=	\$ -			\$ -	
139					=	\$ -			\$ -	
140					=	\$ -			\$ -	
141					=	\$ -			\$ -	
142	STORM DRAIN IMPROVEMENTS (Exception: Permanent Pond/BMP shall be itemized under Section 1)									
143					=	\$ -			\$ -	
144					=	\$ -			\$ -	
145					=	\$ -			\$ -	
146					=	\$ -			\$ -	
147					=	\$ -			\$ -	
148					=	\$ -			\$ -	
149	WATER SYSTEM IMPROVEMENTS									
150	Water Main Pipe (PVC), Size 8"		LF	\$ 84.00	=	\$ -			\$ -	
151	Water Main Pipe (Ductile Iron), Size 8"		LF	\$ 98.00	=	\$ -			\$ -	
152	Gate Valves, 8"		EA	\$ 2,418.00	=	\$ -			\$ -	
153	Fire Hydrant Assembly, w/ all valves		EA	\$ 8,584.00	=	\$ -			\$ -	
154	Water Service Line Installation, inc. tap and valves		EA	\$ 1,723.00	=	\$ -			\$ -	
155	Fire Cistern Installation, complete		EA		=	\$ -			\$ -	
156	Water Main Pipe (PVC), Size 10"	901	LF	\$ 105.00	=	\$ 94,605.00			\$ 94,605.00	
157	Water Main Pipe (PVC), Size 4"	50	LF	\$ 42.00	=	\$ 2,100.00			\$ 2,100.00	
158	Water Main Pipe (PVC), Size 3"	65	LF	\$ 32.00	=	\$ 2,080.00			\$ 2,080.00	
159	Water Main Pipe (PVC), Size 2"	52	LF	\$ 21.00	=	\$ 1,092.00			\$ 1,092.00	
160					=	\$ -			\$ -	
161					=	\$ -			\$ -	
162	SANITARY SEWER IMPROVEMENTS									
163	Sewer Main Pipe (PVC), Size 8"		LF	\$ 84.00	=	\$ -			\$ -	
164	Sanitary Sewer Manhole, Depth < 15 feet		EA	\$ 5,708.00	=	\$ -			\$ -	
165	Sanitary Service Line Installation, complete		EA	\$ 1,825.00	=	\$ -			\$ -	
166	Sanitary Sewer Lift Station, complete		EA	\$ 7,465,000.00	=	\$ -			\$ -	
167	Sewer Main Pipe (PVC), Size 18"		LF	\$ 150.00	=	\$ -			\$ -	
168	Sewer Main Pipe (PVC), Size 14"		LF	\$ 123.00	=	\$ -			\$ -	
169	Sewer Main Pipe (PVC), Size 6"	112	LF	\$ 63.00	=	\$ 7,056.00			\$ 7,056.00	
170	Sewer Main Pipe (PVC), Size 4"	69	LF	\$ 42.00	=	\$ 2,898.00			\$ 2,898.00	
171					=	\$ -			\$ -	
172					=	\$ -			\$ -	
173	LANDSCAPING IMPROVEMENTS (For subdivision specific condition of approval, or PUD)									
174			EA		=	\$ -			\$ -	
175			EA		=	\$ -			\$ -	
176			EA		=	\$ -			\$ -	
177			EA		=	\$ -			\$ -	
178			EA		=	\$ -			\$ -	
179	** - Section 3 is not subject to defect warranty requirements									
	Section 3 Subtotal					=	\$ 109,831.00		\$ 109,831.00	

Verify quantities of water lines. Plans did not show any 2" lines

Include bends in estimate

	A	B	C	D	E	F	G	H	I	J	K	
3		PROJECT INFORMATION										
4		Grandview Reserve Water Treatment Plant			8/5/2024							
5		Project Name			Date			PCD File No.				
6												
7												
8		Description	Quantity	Units	Unit Cost		Total	(with Pre-Plat Construction)				
180								% Complete	Remaining			
181		AS-BUILT PLANS (Public Improvements inc. Permanent WQCV BMPs)				=	\$ -		\$ -			
182		POND/BMP CERTIFICATION (inc. elevations and volume calculations)		LS		=	\$ -		\$ -			
183		Total Construction Financial Assurance \$ 147,343.62										
184		(Sum of all section subtotals plus as-builts and pond/BMP certification)										
185		Total Remaining Construction Financial Assurance (with Pre-Plat Construction) \$ 147,343.62										
186		(Sum of all section totals less credit for items complete plus as-builts and pond/BMP certification)										
187		Total Defect Warranty Financial Assurance \$ 6,008.03										
188		(20% of all items identified as (*). To be collateralized at time of preliminary acceptance)										
189												
190												
191												
192												
193												
194												
195		Approvals										
196		I hereby certify that this is an accurate and complete estimate of costs for the work as shown on the Grading and Erosion Control Plan and Construction Drawings associated with the Project.										
197												
198												
199												
200												
201												
202												
203		_____ Engineer (P.E. Seal Required)										
204												
205												
206												
207		_____ Approved by Owner / Applicant					_____ Date					
208												
209												
210												
211		_____ Approved by El Paso County Engineer / ECM Administrator					_____ Date					
212												

Financial Assurance – Assumptions

Water Treatment Plant

The following assumptions were made to estimate the cost of specific materials for the financial assurance form:

- Earthwork based on minimal site grading, mainly for the treatment tank. (Section 1, Row 12)
- Asphalt Pavement and Aggregate Base Course:
 - Pavement thickness was assumed to be 4” thick (Section 2, Row 46)
 - Base Course was assumed to be 6” thick based on minimum standards in El Paso County Criteria (Section 2, Row 44)
- 6-in HDPE pipe listed for stormwater drain in southeast corner of project site. Cost estimated at \$25/LF with construction cost considered. (Section 2, Row 130)
- The 2024 Financial Assurance Form has 8” Water Main Pipe (PVC) listed as \$84/LF. Therefore, it was assumed that PVC pipes cost increased by approximately \$10.50 per inch of diameter. The following assumptions were made:
 - Water Main Pipe (PVC), Size 2” - \$21/LF (Section 3, Row 159)
 - Water Main Pipe (PVC), Size 3” - \$32/LF (Section 3, Row 158)
 - Water Main Pipe (PVC), Size 4” - \$42/LF (Section 3, Row 157)
 - Water Main Pipe (PVC), Size 10” - \$105/LF (Section 3, Row 156)
 - Sewer Main Pipe (PVC), Size 4” - \$42/LF (Section 3, Row 170)
 - Sewer Main Pipe (PVC), Size 6” - \$63/LF (Section 3, Row 169)