

SANITARY DISTRICT NO. 5 OF MARIN COUNTY
2001 Paradise Drive
Tiburon, California 94920

AGENDA

Capital Improvement Program Committee Meeting
Thursday, March 14th, 2024, 9:30 a.m.

I. Roll Call

II. Public Comments

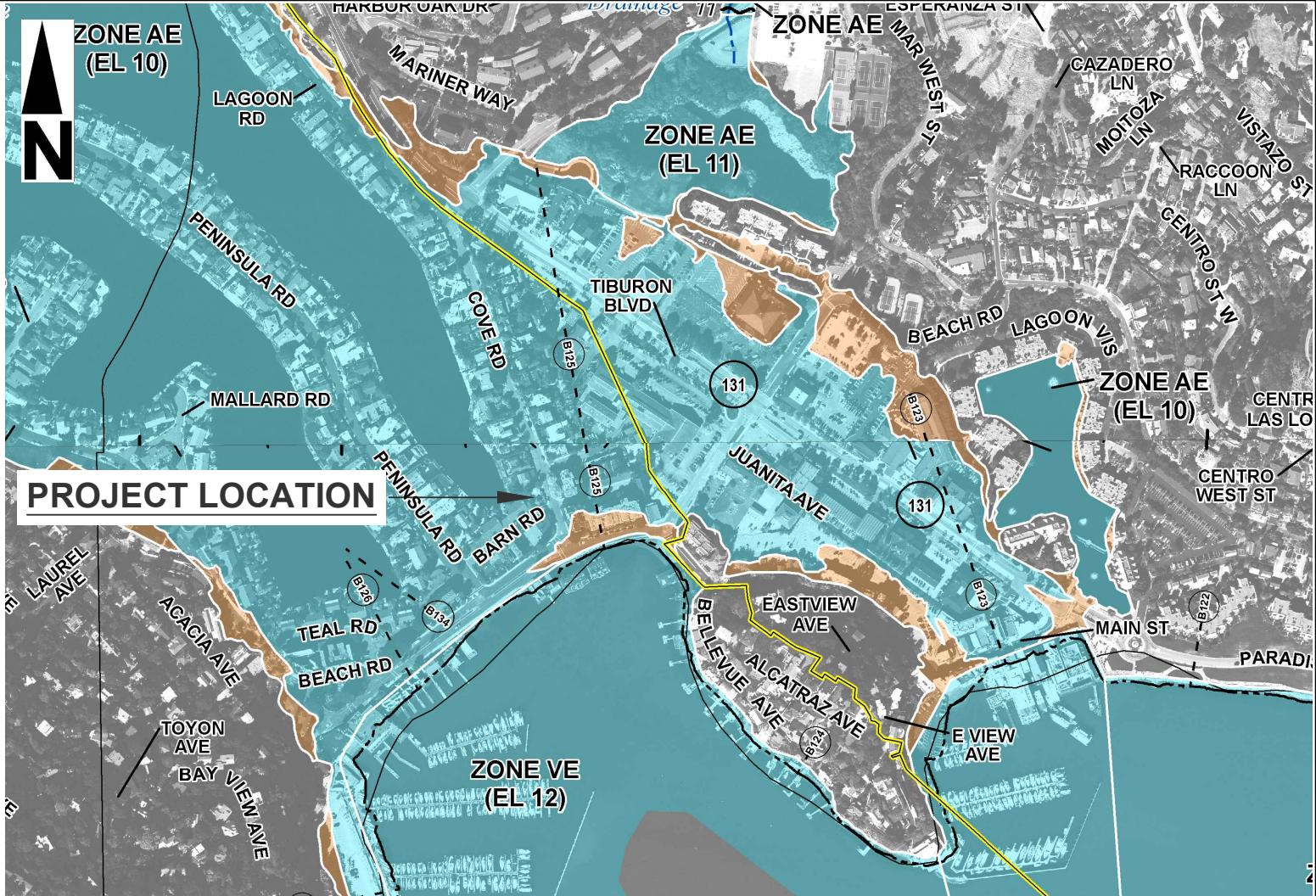
III. New Business

1. Verbal update on Cove Road pump station improvements project.
2. Digester Cleaning & Rehabilitation Improvement Project Update
 - a. Engineers estimate and estimated schedule for bidding and construction.
 - b. Review of construction management proposal
3. Review list of projects for upcoming Fiscal Year
4. Review list of future potential projects that require engineering evaluation.

IV. Adjournment

*This Committee may be attended by Board Members who do not serve on this committee. In the event that a quorum of the entire Board is present, this Committee shall act as a Committee of the Whole. In either case, any item acted upon by the Committee or the Committee of the Whole will require consideration and action by the full Board of Directors as a prerequisite to its legal enactment. **Accessible public meetings**: Any member of the public who needs accommodations should email the Office Manager, at rdohrmann@sani5.org, who will use her best efforts to provide as much accessibility as possible while also maintaining public safety.*

Printed: October 16, 2023 1:56 PM
 P:_Projects\8999 SD5 Cove Rd PS Imp\CAD\survey\8999 FEMA firmette.dwg

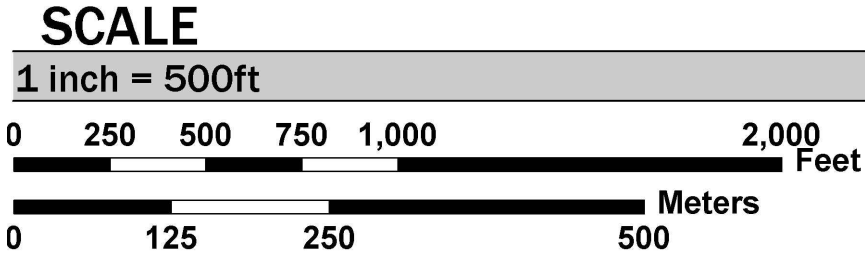


FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR ZONE DESCRIPTIONS AND INDEX MAP
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
[HTTP://MSC.FEMA.GOV](http://MSC.FEMA.GOV)



Map Projection:
 Universal Transverse Mercator Zone 10N; North American Datum 1983;
 Western Hemisphere; Vertical Datum: North American Vertical Datum of 1988

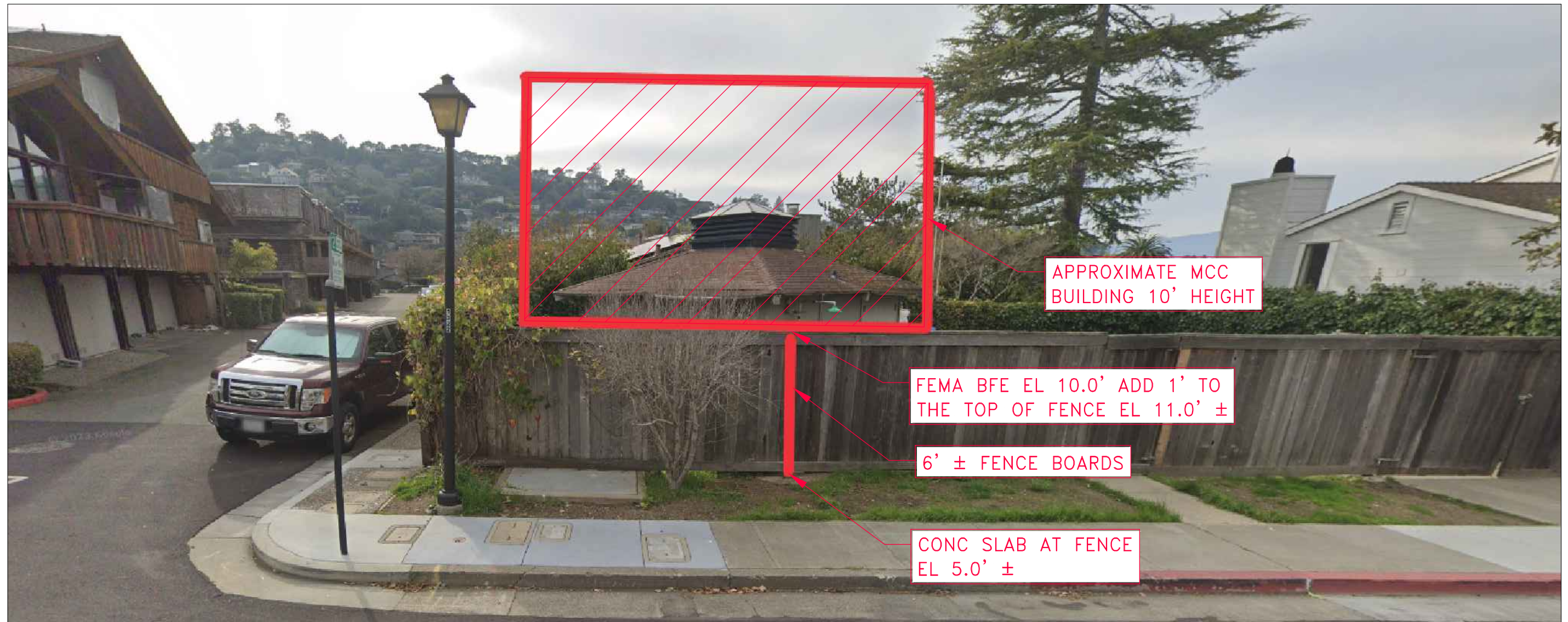


MARIN COUNTY, CALIFORNIA
 and Incorporated Areas
 PANEL 527 OF 531



Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
BELVEDERE, CITY OF	060429	0527	E
MARIN COUNTY	060173	0527	E
TIBURON, TOWN OF	060430	0527	E



COVE ROAD PUMP STATION
MCC BUILDING APPROXIMATE HEIGHT SKETCH



Marin San - Digester Cleaning and Rehabilitation, 100%

March 7, 2024

Basis of Estimate

This estimate utilizes the following financial data for all pricing included. The direct costs and indirect cost percentages are based on experience, current market conditions, and historical data.

Scope of Work

This project is in the City of Belvedere Tiburon, California for the Sanitary District of Marin County. The estimate includes demolition and replacement of process pipe equipment demo, piping demo, and concrete demo. The estimate also includes mobilization/demobilization, Digester exterior rehabilitation, digester sequencing for cleaning, concrete work, etc. The estimate is based on 100% design dated February 2024.

Cost Summary

Summary of Opinion of Probable Construction Cost		
High Range		Low Range
+15%	Construction Costs	-10%
\$ 3,315,000	\$ 2,882,000	\$ 2,594,000

Process Equipment:

- n/a

Estimate Classification:

Class 1 This estimate is prepared to confirm the control baseline for the project. Typically, engineering is from 80 to 100 percent complete and comprises virtually all engineering and design documentation of the project, including complete project execution and commissioning plans. This estimate becomes the final control baseline of the project. Examples of methods used include the highest degree of deterministic estimating, with very detailed quantity takeoffs for all of the facility processes and or systems of the project. This type of estimate usually becomes the bid check estimate and requires the most effort to create. The expected accuracy ranges for this class estimate are -3 to -10 percent on the low side and +3 to +15 percent on the high side.

Direct Cost Methodology

- A combination of HDR database pricing, similar project costs, and historical data were used to establish direct costs.
- Labor rates include all burden and fringes.
- Labor rates are Union.
- All labor is done on normal 8-hour days, 5 days a week Monday through Friday.
- Fluctuations in labor, material, and equipment rental pricing have yet to be adjusted due to market stability. Single mobilization.



Indirect Cost Methodology

- General Contractor Mobilization & Demobilization – (4%)
- General Contractor Home Office Overhead – (4%)
- General Contractor Field General Conditions – (25%)
- Sales Tax – (8.625%)
- General Contractor Fee/Profit – (10%)
- Design contingency – (0%)
- General Contractor Bonds & Insurance – (2.5%)
- Escalation Factor (2.44%) – Material, Labor, Construction Equipment, and Fuel
- Market Volatility Adjustment Factor (10%) – Supply-chain issues, Price Volatility, Transportation Issues, Labor Shortages, Premiums on Labor to Keep and Retain Craft Labor, Russian Invasion of Ukraine, Longer Lead Times Than Normal, and Covid Mandates.

Allowances:

- n/a

Quotes:

- Muffin Monster Sludge Grinder 10k series - \$15,738

Assumptions:

- This work will be completed uninterrupted, only one mobilization and demobilization per construction stage for the Prime Contractor and sub-contractor.
- This project will be worked on a standard work week.
- Project to be competitively bid, with a minimum of 3 bidders.
- All regulatory approvals will be obtained by others prior to mobilization.
- Subcontractors and trade labor can be procured locally or within a radius that does not require per diem upcharges.
- Location provides for sufficient lay-down and staging area.
- All procurement by the general contractor and its subcontractor's.
- Any/all environmental impact studies and associated permitting will be completed by others prior to mobilization.
- Water and Power for construction activities is available on site at no cost to the contractor.
- Contractor provides generator and fuel for duration of temporary dewatering facility operation.
- Landfill for disposal of non-contaminated construction debris is within 10-mile round trip of the project site.
- Remove Approximately 33,000 GAL of Sludge x 7 Days (2 EA) – 14 Days
- Truck/Dewater Remaining Sludge Off Site From 23.5' Elevation x 40,000 GAL – 10 Days
- Clean Floor & Walls of Two Digesters – 20 Days
- Contractor to Remove Finished Digester Cover (2 EA) – 8 Days
- Water Test (2 EA) Digesters – 10 Days
- Test Mixing & Heating Functions (2 EA) – 80 Hours



Exclusions:

- Cost associated with accelerated schedules.
- All permits, regulatory fees, environmental fees or requirements and acquisition of such.
- Off-site storage facilities.
- Extended warranty costs.
- Extreme weather conditions that would affect working days/lost productivity.
- Cost increases related to recently imposed tariffs.
- Cost/work associated with hazardous and/or contaminated materials.
- Costs associated with endangered species mitigation.
- Cost associated with change orders during construction.
- Non-Construction Costs.
- Owner Costs.
- Rock excavation, crushing or removal from the project site.
- 24-hour security.
- Gate access equipment or power and communication to a gate location directed on site.
- Cost associated with temporary construction power for work activities within the building or a construction compound.
- Spare Parts.

Reports (Sage/Timberline):

1. Rollup – Highest summary of costs, including contractor markups. This is typically by facility name or element of work.
2. Work Activity – Organized by CSI Division of Work. Includes a unique description of the work including dimensions, locations, quantities, and other useful information. This report includes contractor markups.
3. Detail Report With Markups – A detailed report that shows all associated line items that makeup the work activity. This report is organized by Rollup, CSI Divisions of Work, Work Activity and HDR Master Specification code. This report includes contractor markups.
4. Detail Direct Cost Report – A detailed report that show all associated line items but there are no contractor markups. The costs shown are direct costs.
5. Totals – On the last sheet of the Detail Direct Cost Report. This show all of the markups used in the OPCC.
6. Escalation Report – Show the assumed project milestones for design, bid and award period, construction duration, percentage rate per year.
7. Electrical and Instrumentation – Only the summary report. Excel based. The detailed electronic file can be provided if requested.

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Roll Up Report

Project name	Marin County - Digester Cleaning and Rehab
Labor rate table	HDR_2024_Union
Equipment rate table	HDR_EQ_2024
Project	Digester & Rehab.
Notes	<p>Any opinions of probable construction cost or cost estimates provided by HDR, Inc. are made based on information available to HDR, Inc. and based on the cost estimator's experience and qualifications and represents its judgment as an experienced and qualified professional engineer. However, HDR, Inc. has no control over the cost of labor, materials, equipment, or services furnished by others, or over the contractor(s)' methods of determining prices, or over competitive bidding or market conditions. HDR, Inc. does not guarantee that proposals, bids, or actual project or construction cost will not vary from opinions of probable cost or cost estimates prepared by HDR, Inc.</p> <p>A recent AGC report indicated that September 2020 and September 2022 saw a 21% increase in construction materials during this period. Also, during this period, substantial material prices increase in primary materials such as diesel fuel, steel, fabricated metals, lumber, concrete, rebar, copper, and PVC. Contractors are experiencing supply-chain issues, transportation issues, short pricing guarantees (1 to 7 days), longer than average fabrication durations, and limited availability of material supplies, labor premiums to attract craft workers, covid mandates, and the Russian invasion of Ukraine. This combination has produced a potentially volatile situation for owners as general contractors are drastically recovering costs. A project owner would be wise to ask many questions, work to obtain as much bid competition as possible, and retain a higher than usual contingency.</p>
Report format	Sorted by 'WBS_MAIN' 'WBS_MAIN' summary Allocate addons
Factor table	941-CA-SAN FRANCISCO

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Roll Up Report

Description	Quantity		Labor	Material	Subcontract	Equipment	Other	Total	
			Amount	Amount	Amount	Amount	Amount	Unit Cost	Amount
063 BASE BID	1.00	LS	830,764	504,325	584,105	271,761	612	2,191,566.63 /LS	2,191,567
064 ALTERNATE 1	1.00	LS	21,405	35,364		4,749		61,517.71 /LS	61,518
065 ALTERNATE 2	1.00	LS	131,832	28,542	8,001	3,912		172,288.16 /LS	172,288
066 ALTERNATE 3	1.00	LS	32,358	51,577		1,464		85,399.83 /LS	85,400

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Roll Up Report

Estimate Totals

Description	Amount	Totals	Rate
Labor	1,018,360		
Material	619,808		
Build America, Buy America Act			
Equipment	281,887		
Subcontract	592,106		
Other	612		
Subtotal Field Const Costs	2,510,773	2,510,773	
Sales Tax Estimate (Mat & Eq)	48,096		8.625 %
Subtotal Field Const Costs	48,096	2,558,869	
Design Contingency			
Subtotal Field Const Costs		2,558,869	
Escalation Project (Year)	60,877		2.440 %
Construction Subtotal	60,877	2,619,746	
Market Volatility Adjustment Factor	261,975		10.000 %
Construction Total	261,975	2,881,721	
Total		2,881,721	

Upper Range +15%

AAE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Summary Report

Project name Marin County - Digester Cleaning and Rehab

Labor rate table HDR_2024_Union

Equipment rate table HDR_EQ_2024

Project Digester & Rehab.

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A recent AGC report indicated that September 2020 and September 2022 saw a 21% increase in construction materials during this period. Also, during this period, substantial material prices increase in primary materials such as diesel fuel, steel, fabricated metals, lumber, concrete, rebar, copper, and PVC. Contractors are experiencing supply-chain issues, transportation issues, short pricing guarantees (1 to 7 days), longer than average fabrication durations, and limited availability of material supplies, labor premiums to attract craft workers, covid mandates, and the Russian invasion of Ukraine. This combination has produced a potentially volatile situation for owners as general contractors are drastically recovering costs. A project owner would be wise to ask many questions, work to obtain as much bid competition as possible, and retain a higher than usual contingency.

Report format Sorted by 'WBS_MAINMF04_DIV/HDR04SPEC'
'MF04_DIV' summary
Allocate add-ons

Factor table 941-CA-SAN FRANCISCO

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Summary Report

3/7/2024 11:39 AM

Design Stage: 100%

Estimate Version: Rev 06, 03/07/2024

Description	Quantity						Total	
		Labor Amount	Material Amount	Subcontract Amount	Equipment Amount	Other Amount	Unit Cost	Amount
063 BASE BID								
DIVISION 01 GENERAL REQUIREMENTS	13.00 LS	672,643	332,824	584,105	257,020		142,045.552/LS	1,846,592
DIVISION 02 EXISTING CONDITIONS	1.00 LS	1,343			242		1,585.20 /LS	1,585
DIVISION 26 ELECTRICAL	1.00 LS	76,902	28,346		1,823	612	107,683.76 /LS	107,684
DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)	1.00 LS	79,876	143,154		12,675		235,705.49 /LS	235,705
063 BASE BID		830,764	504,325	584,105	271,761	612	2,191,566.63 /LS	2,191,567
1.00 LS								
5,441.840 Labor hours								
8,629.370 Equipment hours								
064 ALTERNATE 1								
DIVISION 02 EXISTING CONDITIONS	1.00 LS	9,797	6,823		1,527		18,146.63 /LS	18,147
DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)	1.00 LS	1,625	3,003		766		5,393.74 /LS	5,394
DIVISION 46 WATER AND WASTEWATER EQUIPMENT	1.00 EA	9,983	25,538		2,457		37,977.340/EA	37,977
064 ALTERNATE 1		21,405	35,364		4,749		61,517.71 /LS	61,518
1.00 LS								
104.728 Labor hours								
152.849 Equipment hours								
065 ALTERNATE 2								
DIVISION 02 EXISTING CONDITIONS	1.00 LS	4,896	49		2,698		7,642.30 /LS	7,642
DIVISION 03 CONCRETE	1.00 LS	113,913	15,111	8,001	711		137,735.60 /LS	137,736
DIVISION 05 METALS	1.00 LS	6,610	1,152		500		8,262.130/LS	8,262
DIVISION 22 PLUMBING	1.00 EA	2,743	3,507				6,250.15 /EA	6,250
DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)	1.00 LS	3,670	8,724		4		12,397.98 /LS	12,398
065 ALTERNATE 2		131,832	28,542	8,001	3,912		172,288.16 /LS	172,288
1.00 LS								
906.606 Labor hours								
58.340 Equipment hours								
066 ALTERNATE 3								
DIVISION 05 METALS	1.00 LS	782	4,901		44		5,726.96 /LS	5,727
DIVISION 06 WOOD, PLASTICS & COMPOSITES	10.00 SF	381	1,238				161.911/SF	1,619
DIVISION 23 HEATING, VENTILATING & AIR-CONDITIONING (HVAC)	40.00 LF	29,940	16,122		1,420		1,187.050/LF	47,482
DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)		1,256	29,316					30,572
066 ALTERNATE 3		32,358	51,577		1,464		85,399.83 /LS	85,400
1.00 LS								
130.081 Labor hours								
9.074 Equipment hours								

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Summary Report

Estimate Totals

Description	Amount	Totals	Rate
Labor	1,016,360		
Material	619,808		
Build America, Buy America Act			
Equipment	281,887		
Subcontract	592,106		
Other	612		
Subtotal Field Const Costs	2,510,773	2,510,773	
Sales Tax Estimate (Mat & Eq)	48,096		8.625 %
Subtotal Field Const Costs	48,096	2,558,869	
Design Contingency			
Subtotal Field Const Costs		2,558,869	
Escalation Project (Year)	60,877		2.440 %
Construction Subtotal	60,877	2,619,746	
Market Volatility Adjustment Factor	261,975		10.000 %
Construction Total	261,975	2,881,721	
Total		2,881,721	

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Work Activity Report

Project name Marin County - Digester Cleaning and Rehab

Labor rate table HDR_2024_Union

Equipment rate table HDR_EQ_2024

Project Digester & Rehab.

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Report format Sorted by 'WBS_MAIN/MF04_DIV/Work Activity'
'Work Activity' summary
Allocate add-ons

Factor table 941-CA-SAN FRANCISCO

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Work Activity Report

3/7/2024 11:39 AM

Design Stage: 100%

Estimate Version: Rev 06, 03/07/2024

Description	Quantity							Total	
			Labor	Material	Subcontract	Equipment	Other	Unit Cost	Amount
			Amount	Amount	Amount	Amount	Amount		
063 BASE BID									
DIVISION 01 GENERAL REQUIREMENTS									
01 00 00.000.05 Hazardous Environmental Conditions - SPEC 01 11 00 - 1 - 1.2D	1.00	LS	10,241		56,010			66,251.040/LS	66,251
01 00 00.000.10 Confined Space Entry Policy/Procedure SPEC 01 11 00 - 2 - 1.3 - G2	1.00	LS	10,241					10,241.34 /LS	10,241
01 00 00.000.15 Work By Owner - Coordination SPEC 01 11 00 - 3 - 1.7	1.00	LS	10,001					10,001.380/LS	10,001
01 00 00.000.20 Sequencing of Work Requiremnts & Responsible Party(s) - 01 11 00 - 6 3.1 E	1.00	LS	10,241					10,241.34 /LS	10,241
01 00 00.000.25 Gas Purge & Dewater 2 Digester (Contractor & Owner) - 01 11 00 3.1 E2	1.00	LS	3,923	24,004		1,119		29,045.68 /LS	29,046
01 00 00.000.30 Purge Secondary Digester Nitrogen (5,000 ft^3) - SPEC 01 11 00 - 6 - 3.1 Ee	1.00	LS		16,003				16,002.78 /LS	16,003
01 00 00.000.32 Purge Primary Digester Nitrogen (5,000 ft^3) - SPEC 01 11 00 - 6 - 3.1 Ee	1.00	LS		16,003				16,002.78 /LS	16,003
01 00 00.000.35 Remove Approximately 33,000 GAL of Sludge x 7 Days - 2 EA SPEC 01 11 00 - 6 - 3.1 Ef	14.00	DAY	23,681	56,944	2	46,191		9,058.376/DAY	126,817
01 00 00.000.40 Truck/Dewater Remaining Sludge Off Site From 23.5' Elevation x 40,000 GAL - SPEC 01 11	10.00	DAY	10,846		188,033	11,030		20,990.879/DAY	209,909
01 00 00.000.45 Clean Floor & Walls of Two Digesters- SPEC 01 11 00 - 6 - 3.1 3a	20.00	DAY	148,372	4,801	160,028	79,480		19,634.051/DAY	392,681
01 00 00.000.50 Contractor to Reinstall Finished Digester Cover 2 EA - SPEC 01 11 00 - 6 - 4a	1.00	LS	87,799	125,622		33,236		246,656.75 /LS	246,657
01 00 00.000.55 Contractor to Remove Finished Digester Cover (2EA)- SPEC 01 11 00 - 6 - 4a	4.00	DAY	61,944			16,618		19,640.443/DAY	78,562
01 00 00.000.60 Water Test 2 EA Digesters	10.00	DAY	49,731			32,496		8,222.651/DAY	82,227
01 00 00.000.65 Test Mixing & Heating Functions 2 EA- SPEC 01 11 00 - 6 - 4c	80.00	HR	38,885	13,435		21,465		922.311/HR	73,785
01 00 00.000.81 Transfer Seed Sludge from Primary to Secondary Digester - SPEC 01 11 00 - 7 - 5b	1.00	LS	11,840	28,005	2	3,416		43,262.79 /LS	43,263
01 00 00.000.85 Start up & Monitor Secondary Digester (Contractor & Owner) - 01 11 00 - 7 - 6	1.00	LS			24,004			24,004.18 /LS	24,004
01 00 00.000.86 Perform Lab Testing of Volatile Acid (VAs) & Alkalinity 3x per week - 01 11 00 - 7 - 6e	150.00	EA			36,006			240.042/EA	36,006
01 00 00.000.87 Clean & Repair Primary Digester (Contractor) - 01 11 00 - 7 - 7	2.00	LS	90,792	48,008		11,970		75,385.12 /LS	150,770
01 21 00.000.05 Traffic Control Allowance	1.00	LS			40,007			40,006.94 /LS	40,007
01 21 00.000.10 Protection of Existing Landscaping Allowance	1.00	LS			40,007			40,006.96 /LS	40,007
01 74 00.000.05 Digester Cover Cleaning, Inspected, Preparation - 1.2.3a	1.00	LS			40,007			40,006.92 /LS	40,007
01.21.00.005 Scaffolding Allowance - 2 Digesters	1.00	LS						104,104.61 /LS	104,105
DIVISION 01 GENERAL REQUIREMENTS			672,643	332,824	584,105	257,021		142,045.552/LS	1,846,592
13.00 LS									
4,854.00 Labor hours									
8,560.00 Equipment hours									
DIVISION 02 EXISTING CONDITIONS									
02 41 00.150.05 Demo (DR) Digester Recirculation DI Pipe, 8" DIA x 21 LF	21.00	LF	688			124		38.663/LF	812
02 41 00.150.10 Demo (DM) Digester Mixing DI Pipe, 8" DIA x 10 LF	10.00	LF	328			59		38.663/LF	387
02 41 00.150.15 Demo (DF) Digester Feed DI Pipe, 6" DIA x 10 LF	10.00	LF	328			59		38.664/LF	387
DIVISION 02 EXISTING CONDITIONS			1,343			242		1,585.20 /LS	1,585
1.00 LS									
11.717 Labor hours									
2.342 Equipment hours									
DIVISION 26 ELECTRICAL									
26.00.00.005 Electrical Equipment+Testing/Commissioning	2.00	EA	47,009	23,109		904	271	35,646.395/EA	71,293
26.00.00.020 Electrical - Above Ground Raceways	225.00	LF	16,074	2,864		495	183	87.179/LF	19,615
26.00.00.035 Electrical - Power Wire and Cable (AG+UG)	270.00	LF	13,819	2,374		425	158	62.132/LF	16,776
DIVISION 26 ELECTRICAL			76,902	28,346		1,823	612	107,683.76 /LS	107,684
1.00 LS									
170.955 Labor hours									
DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)									
40 05 07.010.05 Unistrut Pipe Supports for Back Wall (6 EA)	6.00	EA	5,900	5,579				1,913.102/EA	11,479
40 05 19.006.05 (DF) Digester Feed DI Pipe, 6" DIA x 5 LF	5.00	LF	9,111	10,623		14		3,949.628/LF	19,748

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Work Activity Report

Description	Quantity		Labor	Material	Subcontract	Equipment	Other	Total	
			Amount	Amount	Amount	Amount	Amount	Unit Cost	Amount
40 05 19.008.05 (DR) Digester Recirculation DI Pipe, 8" DIA x 45 LF	45.00	LF	34,364	42,061		401		1,707.226/LF	76,825
40 05 19.008.10 (DM) Digester Mixing DI Pipe, 8" DIA x 8 LF	8.00	LF	4,502	14,362		11		2,359.264/LF	18,874
40 05 19.008.15 Replaced Exposed Plug Valves - Phase 1 - 2	32.00	EA	26,000	70,530		12,250		3,399.358/EA	108,779
DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)			79,876	143,154		12,675		235,705.49 /LS	235,705
1.00 LS									
405.168 Labor hours									
67.028 Equipment hours									
063 BASE BID			830,764	504,325	584,105	271,761	612	2,191,566.63 /LS	2,191,567
1.00 LS									
5,441.840 Labor hours									
8,629.370 Equipment hours									
064 ALTERNATE 1									
DIVISION 02		EXISTING CONDITIONS							
02 41 00.110.10 Demo Concrete Slab, 12" Thick x 32 SF	1.00	CY	718			330		1,047.56 /CY	1,048
02 41 00.160.05 Demo Existing Sludge Grinder - GRI-17-100, 50 GP, 3 HP - Spec 46 24 23-1	1.00	DAY	9,079	240		1,197		10,516.26 /DAY	10,516
22 09 00.000.05 Demo Existing Vendor Control Panel VCP-17-100	1.00	EA		6,583				6,582.81 /EA	6,583
DIVISION 02 EXISTING CONDITIONS			9,797	6,823		1,527		18,146.63 /LS	18,147
1.00 LS									
54.061 Labor hours									
132.849 Equipment hours									
DIVISION 40		PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)							
40 05 19.006.10 Install Existing Plug Valves, 6" Dia (2 EA)	2.00	EA	1,625	3,003		766		2,696.87 /EA	5,394
DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)			1,625	3,003		766		5,393.74 /LS	5,394
1.00 LS									
10.667 Labor hours									
4.00 Equipment hours									
DIVISION 46		WATER AND WASTEWATER EQUIPMENT							
46 01 70.005.05 Install New Sludge Grinder - In-line Muffin Monster Model 10k Series	1.00	EA	9,983	25,538		2,457		37,977.340/EA	37,977
DIVISION 46 WATER AND WASTEWATER EQUIPMENT			9,983	25,538		2,457		37,977.340/EA	37,977
1.00 EA									
40.00 Labor hours									
16.00 Equipment hours									
064 ALTERNATE 1			21,405	35,364	0	4,749	0	61,517.71 /LS	61,518
1.00 LS									
104.728 Labor hours									
152.849 Equipment hours									

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Work Activity Report

Description	Quantity	Labor		Material		Subcontract		Equipment		Other		Total	
		Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Unit Cost	Amount		
065 ALTERNATE 2													
DIVISION 02 EXISTING CONDITIONS													
02 41 00.080.05 Sawcut Around Existing Concrete, 6" Thick x 83 LF	83.00	LF		1,023	49				918			23.983/LF	1,991
02 41 00.110.05 Demo Existing Concrete, 6" Thick x 294 SF	32.699	SY		3,872					1,779			172.841/SY	5,652
DIVISION 02 EXISTING CONDITIONS				<u>4,896</u>	<u>49</u>				<u>2,698</u>			<u>7,642.30 /LS</u>	<u>7,642</u>
1.00 LS													
40.082 Labor hours													
37.230 Equipment hours													
DIVISION 03 CONCRETE													
03 11 13.504.05 Concrete Slab, 12" Thick, Spec 1.3.B.1d	11.00	CY		5,631	8,261				525			1,310.595/CY	14,417
03 11 13.773.05 Concrete Encasement, 32" Thick x 20 SF	3.00	CY		1,658	1,902				81			1,213.577/CY	3,641
03 11 16.015.05 Concrete Curb, 7" Thick x 12" High x 45 LF	45.00	LF		462	963				105			33.992/LF	1,530
03 31 32.000.05 Repair Spalled Concrete & Treat Exposed Rebar	1.00	LS					8,001					8,001.40 /LS	8,001
03.35.00.005 Drill in Dowel In Edge - Two Rows	166.00	EA		106,163	3,985							663.538/EA	110,147
DIVISION 03 CONCRETE				<u>113,913</u>	<u>15,111</u>		<u>8,001</u>		<u>711</u>			<u>137,735.60 /LS</u>	<u>137,736</u>
1.00 LS													
796.409 Labor hours													
8.717 Equipment hours													
DIVISION 05 METALS													
05 52 05.500.05 SST Chanel C6x13 Guadrail x 21 LF - SPEC 1.3.B.1c	21.00	LF		6,610	1,152				500			393.435/LF	8,262
DIVISION 05 METALS				<u>6,610</u>	<u>1,152</u>				<u>500</u>			<u>8,262.130/LS</u>	<u>8,262</u>
1.00 LS													
36.653 Labor hours													
12.218 Equipment hours													
DIVISION 22 PLUMBING													
31 69 00.000.05 Trench Drain, 4" DIA & 12"x12" Drain Box - SPEC 1.3.B.1b	1.00	EA		2,743	3,507							6,250.15 /EA	6,250
DIVISION 22 PLUMBING				<u>2,743</u>	<u>3,507</u>							<u>6,250.15 /EA</u>	<u>6,250</u>
1.00 EA													
14.00 Labor hours													
DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)													
40 05 19.004.05 Trench Drain Pipe DI, 4" DIA x 11 LF	11.00	LF		3,670	8,724				4			1,127.089/LF	12,398
DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)				<u>3,670</u>	<u>8,724</u>				<u>4</u>			<u>12,397.98 /LS</u>	<u>12,398</u>
1.00 LS													
19.461 Labor hours													
0.176 Equipment hours													

Upper Range +15%

AAE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Work Activity Report

Description	Quantity						Total	
		Labor Amount	Material Amount	Subcontract Amount	Equipment Amount	Other Amount	Unit Cost	Amount
065 ALTERNATE 2		131,832	28,542	8,001	3,912	0	172,288.16 /LS	172,288
1.00 LS								
906.606 Labor hours								
58.340 Equipment hours								
066 ALTERNATE 3								
DIVISION 05 METALS								
05 50 00.315.05 Stairs	3.00 RISR	782	4,901		44		1,908.987/RISR	5,727
DIVISION 05 METALS		782	4,901		44		5,726.96 /LS	5,727
1.00 LS								
4.297 Labor hours								
1.074 Equipment hours								
DIVISION 06 WOOD, PLASTICS & COMPOSITES								
06 82 00.010 FRP Grating, 1" Thick x 10 SF	10.00 SF	381	1,238				161.911/SF	1,619
DIVISION 06 WOOD, PLASTICS & COMPOSITES		381	1,238				161.911/SF	1,619
10.00 SF								
2.40 Labor hours								
DIVISION 23 HEATING, VENTILATING & AIR-CONDITIONING (HVAC)								
23 31 00.000.05 Extended Foul Air Duct, 36" Dia x 20 LF	20.00 LF	3,800	3,071				343.572/LF	6,871
23 80 00.000.05 Floc Tank Drop Legs - 6" Dia x 20 LF	20.00 LF	18,754	3,799				1,127.653/LF	22,553
23 80 00.000.10 New SST Panel On Top of FKC	1.00 EA	7,386	9,251		1,420		18,057.52 /EA	18,058
DIVISION 23 HEATING, VENTILATING & AIR-CONDITIONING (HVAC)		29,940	16,122		1,420		1,187.050/LF	47,482
40.00 LF								
115.300 Labor hours								
8.00 Equipment hours								
DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)								
40 05 19.036.05 New Elbow Under Screw with Tee, 36" DIA	1.00 EA	999	28,196				29,194.70 /EA	29,195
40 05 70.200.05 Fiberglass Air Damper Valve, "06 Dia - (4 EA)	4.00 EA	257	1,120				344.263/EA	1,377
DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)		1,256	29,316					30,572
8.084 Labor hours								
066 ALTERNATE 3		32,358	51,577	0	1,464	0	85,399.83 /LS	85,400
1.00 LS								
130.081 Labor hours								
9.074 Equipment hours								

Upper Range +15%

AAE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Work Activity Report

Estimate Totals

Description	Amount	Totals	Rate
Labor	1,016,359		
Material	619,808		
Build America, Buy America Act			
Equipment	281,887		
Subcontract	592,106		
Other	612		
Subtotal Field Const Costs	2,510,772	2,510,772	
Sales Tax Estimate (Mat & Eq)	48,096		8.625 %
Subtotal Field Const Costs	48,096	2,558,868	
Design Contingency			
Subtotal Field Const Costs		2,558,868	
Escalation Project (Year)	60,877		2.440 %
Construction Subtotal	60,877	2,619,745	
Market Volatility Adjustment Factor	261,975		10.000 %
Construction Total	261,975	2,881,720	
Total		2,881,720	

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Project name Marin County - Digester Cleaning and Rehab

Labor rate table HDR_2024_Union

Equipment rate table HDR_EQ_2024

Project Digester & Rehab.

Notes Any opinions of probable construction cost or cost estimates provided by HDR, Inc. are made based on information available to HDR, Inc. and based on the cost estimator's experience and qualifications and represents its judgment as an experienced and qualified professional engineer. However, HDR, Inc. has no control over the cost of labor, materials, equipment, or services furnished by others, or over the contractor(s)' methods of determining prices, or over competitive bidding or market conditions. HDR, Inc. does not guarantee that proposals, bids, or actual project or construction cost will not vary from opinions of probable cost or cost estimates prepared by HDR, Inc.

A recent AGC report indicated that September 2020 and September 2022 saw a 21% increase in construction materials during this period. Also, during this period, substantial material prices increase in primary materials such as diesel fuel, steel, fabricated metals, lumber, concrete, rebar, copper, and PVC. Contractors are experiencing supply-chain issues, transportation issues, short pricing guarantees (1 to 7 days), longer than average fabrication durations, and limited availability of material supplies, labor premiums to attract craft workers, covid mandates, and the Russian invasion of Ukraine. This combination has produced a potentially volatile situation for owners as general contractors are drastically recovering costs. A project owner would be wise to ask many questions, work to obtain as much bid competition as possible, and retain a higher than usual contingency.

Report format Sorted by 'WBS_MAIN/MF04_DIV/Work Activity/HDR04SPEC'
'Detail' summary
Allocate addons

Factor table 941-CA-SAN FRANCISCO

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount

063 BASE BID

DIVISION 01 GENERAL REQUIREMENTS

01 00 00.000.05 Hazardous Environmental Conditions - SPEC 01 11 00 - 1 - 1.2D

Table rows for Hazardous Environmental Conditions, including item 0920 and 0140 with labor requirements and costs.

01 00 00.000.10 Confined Space Entry Policy/Procedure SPEC 01 11 00 - 2 - 1.3 - G2

Table rows for Confined Space Entry Policy/Procedure, including item 0140 with labor requirements and costs.

01 00 00.000.15 Work By Owner - Coordination SPEC 01 11 00 - 3 - 1.7

Table rows for Work By Owner - Coordination, including item 0920 with labor requirements and costs.

AACE Classification Accuracy Range
Upper Range +15% Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Item	Description	Takeoff Qty	Labor	Material	Subcontract	Equipment	Other	Total			
			Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount	
	01 00 00.000.15 Work By Owner - Coordination SPEC 01 11 00 - 3 - 1.7		10,001	0	0			0	0	10,001.380/LS	10,001
	1.00 LS										
01 00 00.000.20			Sequencing of Work Requiremnts & Responsible Party(s) - 01 11 00 - 6 3.1 E								
01 00 00.000	General Requirements										
n	0140 Field personnel, field engineer, maximum	2.00 week	10,241	-	-			-	-	5,120.67 /week	10,241
	01 00 00.000 General Requirements		10,241							10,241.34 /LS	10,241
	1.00 LS										
	80.00 Labor hours										
	01 00 00.000.20 Sequencing of Work Requiremnts & Responsible Party(s) - 01 11 00 - 6 3.1 E		10,241	0	0			0	0	10,241.34 /LS	10,241
	1.00 LS										
	80.00 Labor hours										
01 00 00.000.25			Gas Purge & Dewater 2 Digester (Contractor & Owner) - 01 11 00 3.1 E2								
01 00 00.000	General Requirements										
n	0920 Gas Purge & Dewater Secondary Digester (Contractor & Owner) - 01 11 00 3.1 E - 2	1.00 LS	3,923	24,004				1,119		29,045.68 /LS	29,046
	01 00 00.000 General Requirements		3,923	24,004				1,119		29,045.68 /LS	29,046
	1.00 LS										
	20.00 Labor hours										
	8.00 Equipment hours										
	01 00 00.000.25 Gas Purge & Dewater 2 Digester (Contractor & Owner) - 01 11 00 3.1 E2		3,923	24,004	0			1,119	0	29,045.68 /LS	29,046
	1.00 LS										
	20.00 Labor hours										
	8.00 Equipment hours										
01 00 00.000.30			Purge Secondary Digester Nitrogen (5,000 ft^3) - SPEC 01 11 00 - 6 - 3.1 Ee								
01 00 00.000	General Requirements										
n	0920 Purge Secondary Digester Nitrogen regulated nitrogen (5,000 ft^3) to digester - SPEC 01 11 00 - 6 - 3.1 - E - 2e	1.00 LS		16,003						16,002.78 /LS	16,003
	01 00 00.000 General Requirements			16,003						16,002.78 /LS	16,003
	1.00 LS										

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Item	Description	Takeoff Qty	Labor			Material			Subcontract			Equipment			Other			Total	
			Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Unit Cost	Amount			
	01 00 00.000.30 Purge Secondary Digester Nitrogen (5,000 ft³) - SPEC 01 11 00 - 6 - 3.1 Ee		0	16,003	0			0	0				16,002.78 /LS	16,003					
	1.00 LS																		
01 00 00.000.32 Purge Primary Digester Nitrogen (5,000 ft³) - SPEC 01 11 00 - 6 - 3.1 Ee																			
01 00 00.000	General Requirements																		
n	0920 Purge Primary Digester Nitrogen (5,000 ft³) - SPEC 01 11 00 - 6 - 3.1 Ee	1.00 LS		16,003									16,002.78 /LS	16,003					
	01 00 00.000 General Requirements			16,003									16,002.78 /LS	16,003					
	1.00 LS																		
	01 00 00.000.32 Purge Primary Digester Nitrogen (5,000 ft³) - SPEC 01 11 00 - 6 - 3.1 Ee		0	16,003	0			0	0				16,002.78 /LS	16,003					
	1.00 LS																		
01 00 00.000.35 Remove Approximately 33,000 GAL of Sludge x 7 Days - 2 EA SPEC 01 11 00 - 6 - 3.1 Ef																			
01 00 00.000	General Requirements																		
n	0920 Fuel	1.00 LS		56,010	2								56,011.33 /LS	56,011					
	1000 Dewatering, pumping 8 hours, attended 2 hrs per day, 4" diaphragm pump, includes 20 LF of suction hose and 100 LF of discharge hose	14.00 DAY	23,681	-	-			3,978	-				1,975.651 /DAY	27,659					
n	1020 Dewatering, pumping 8 hours, attended 2 hrs per day, 4" diaphragm pump, includes 20 suction hose and 100 lf of discharge hose, add for additional pump	14.00 day	-	-	-			2,854	-				203.824 /day	2,854					
n	5000 21,000 Gallon (Closed Top Frac Tank)	14.00 day	-	934	-			39,359	-				2,878.092 /day	40,293					
	01 00 00.000 General Requirements		23,681	56,944	2			46,191	-				126,817.27 /LS	126,817					
	1.00 LS																		
	168.00 Labor hours																		
	560.00 Equipment hours																		
	01 00 00.000.35 Remove Approximately 33,000 GAL of Sludge x 7 Days - 2 EA SPEC 01 11 00 - 6 - 3.1 Ef		23,681	56,944	2			46,191	0				9,058.376 /DAY	126,817					
	14.00 DAY																		
	168.00 Labor hours																		
	560.00 Equipment hours																		
01 00 00.000.40 Truck/Dewater Remaining Sludge Off Site From 23.5' Elevation x 40,000 GAL - SPEC 01 11 00 - 6 - 3.1 Eh																			
01 00 00.000	General Requirements																		
n	0560 Haul 40,000 Gallons	10.00 DAY	10,846	-	-			11,030	-				2,187.615 /DAY	21,876					
n	0560 Haul 40,000 Gallons - Load Trucks	25.00 TRK						8,001	-				320.056 /TRK	8,001					

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Item	Description	Takeoff Qty		Labor	Material	Subcontract	Equipment	Other	Total	
				Amount	Amount	Amount	Name	Amount	Amount	Unit Cost
01 00 00.000	<i>General Requirements</i>									
n	0560 Haul 40,000 Gallons - Hauling & Disposal	25.00	TRK			180,031		-	7,201.250 /TRK	180,031
	01 00 00.000 General Requirements			10,846		188,033		11,030	209,908.79 /LS	209,909
	1.00 LS									
	80.00 Labor hours									
	80.00 Equipment hours									
	01 00 00.000.40 Truck/Dewater Remaining Sludge Off Site From 23.5' Elevation x 40,000 GAL - SPEC 01 11 00 - 6 - 3.1 Eh			10,846	0	188,033		11,030	0	20,990.879/DAY
	10.00 DAY									
	80.00 Labor hours									
	80.00 Equipment hours									
01 00 00.000.45	<i>Clean Floor & Walls of Two Digesters- SPEC 01 11 00 - 6 - 3.1 3a</i>									
01 00 00.000	<i>General Requirements</i>									
n	0840 Cleaning masonry, high pressure wash, water and chemical, excludes scaffolding, maximum	20.00	DAY	76,362	4,801	-		37,476	-	5,931.945 /DAY
n	0840 Productivity Loss	20.00	day	38,181	0	-		18,738	-	2,845.952 /day
n	0840 Rental of sludge screen	20.00	day			160,028			-	8,001.388 /day
	1100 Dewatering, pumping 8 hours, attended 2 hrs per day, 6" centrifugal pump, includes 20 LF of suction hose and 100 LF of discharge hose	20.00	day	33,830	-	-		11,317	-	2,257.350 /day
n	1120 Dewatering, pumping 8 hours, attended 2 hrs per day, 6" centrifugal pump, includes 20 suction hose and 100 of discharge hose, add for additional pump	20.00	day	-	-	-		11,948	-	597.417 /day
	01 00 00.000 General Requirements			148,372	4,801	160,028		79,480		392,681.02 /LS
	1.00 LS									
	1,200.00 Labor hours									
	5,600.00 Equipment hours									
	01 00 00.000.45 Clean Floor & Walls of Two Digesters- SPEC 01 11 00 - 6 - 3.1 3a			148,372	4,801	160,028		79,480	0	19,634.051/DAY
	20.00 DAY									
	1,200.00 Labor hours									
	5,600.00 Equipment hours									
01 00 00.000.50	<i>Contractor to Reinstall Finished Digester Cover 2 EA - SPEC 01 11 00 - 6 - 4a</i>									
01 00 00.000	<i>General Requirements</i>									
	0600 Crane crew, daily use for small jobs, 100-ton truck-mounted hydraulic crane, portal to portal	8.00	day	17,282	-	-		33,236	-	6,314.729 /day
n	6000 Paints and protective coatings, galvanizing structural steel in shop, over 20 tons, hot dip	100.00	ton	-	102,418	-		-	-	1,024.178 /ton

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Item	Description	Takeoff Qty	Labor		Material		Subcontract		Equipment		Other		Total	
			Amount	Amount	Amount	Name	Amount	Amount	Amount	Unit Cost	Amount			
01 00 00.000	<i>General Requirements</i>													
n 3860	Structural steel project, shop extra for sandblasting and primer coat of paint, (included in project material cost, above)	100.00 ton	-	23,204	-				-	-	-	232.040 /ton		23,204
0105	(CAIR) Air Tool Laborers	200.00 mh	20,323	-	-				-	-	-	101.613 /mh		20,323
0155	(CLAM) Common Maintenance Laborers	200.00 mh	21,203	-	-				-	-	-	106.014 /mh		21,203
0300	(EQHO) Equipment Operators, Crane - Outside Foreman	40.00 mh	5,969	-	-				-	-	-	149.22 /mh		5,969
0305	(EQHV) Equipment Operators, Crane or Shovel	40.00 mh	5,809	-	-				-	-	-	145.219 /mh		5,809
0905	(SSWL) Welders, Structural Steel	80.00 mh	11,369	-	-				-	-	-	142.119 /mh		11,369
0910	(SSWO) Welders, Structural Steel - Outside Foreman	40.00 mh	5,845	-	-				-	-	-	146.120 /mh		5,845
01 00 00.000 General Requirements			87,799	125,622					33,236			246,656.75 /LS		246,657
1.00 LS														
728.00 Labor hours														
128.00 Equipment hours														
01 00 00.000.50 Contractor to Reinstall Finished Digester Cover 2 EA - SPEC 01 11 00 - 6 - 4a			87,799	125,622	0				33,236		0	246,656.75 /LS		246,657
1.00 LS														
728.00 Labor hours														
128.00 Equipment hours														
01 00 00.000.55 Contractor to Remove Finished Digester Cover (2EA)- SPEC 01 11 00 - 6 - 4a														
01 00 00.000	<i>General Requirements</i>													
0600	Crane crew, daily use for small jobs, 100-ton truck-mounted hydraulic crane, portal to portal	4.00 DAY	8,641	-	-				16,618			6,314.728 /DAY		25,259
0105	(CAIR) Air Tool Laborers	200.00 mh	20,323	-	-				-	-	-	101.613 /mh		20,323
0155	(CLAM) Common Maintenance Laborers	200.00 mh	21,203	-	-				-	-	-	106.014 /mh		21,203
0300	(EQHO) Equipment Operators, Crane - Outside Foreman	40.00 mh	5,969	-	-				-	-	-	149.220 /mh		5,969
0305	(EQHV) Equipment Operators, Crane or Shovel	40.00 mh	5,809	-	-				-	-	-	145.219 /mh		5,809
01 00 00.000 General Requirements			61,944						16,618			78,561.77 /LS		78,562
1.00 LS														
544.00 Labor hours														
64.00 Equipment hours														
01 00 00.000.55 Contractor to Remove Finished Digester Cover (2EA)- SPEC 01 11 00 - 6 - 4a			61,944	0	0				16,618		0	19,640.443 /DAY		78,562
4.00 DAY														
544.00 Labor hours														
64.00 Equipment hours														

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes sections for Water Test 2 EA Digesters, Test Mixing & Heating Functions 2 EA- SPEC 01 11 00 - 6 - 4c, and Transfer Seed Sludge from Primary to Secondary Digester - SPEC 01 11 00 - 7 - 5b.

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Amount. Rows include items like 'General Requirements', 'Transfer Seed Sludge from Primary to Secondary Digester', 'Start up & Monitor Secondary Digester', 'Perform Lab Testing of Volatile Acid (VAs) & Alkalinity 3x per week', and 'Clean & Repair Primary Digester'.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Item	Description	Takeoff Qty		Labor	Material	Subcontract	Equipment	Other	Total		
				Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
01 00 00.000 n	0920 Two bottom pipes to overflow box - 01 11 00 - 7 - 7 - A1 - Materials <i>General Requirements</i>	1.00	LS		24,004					24,004.17 /LS	24,004
	01 00 00.000 <i>General Requirements</i>			90,792	48,008			11,970		75,385.12 /LS	150,770
	2.00 LS										
	480.00 Labor hours										
	1,280.00 Equipment hours										
	01 00 00.000.87 Clean & Repair Primary Digester (Contractor) - 01 11 00 - 7 - 7			90,792	48,008	0		11,970	0	75,385.12 /LS	150,770
	2.00 LS										
	480.00 Labor hours										
	1,280.00 Equipment hours										
<hr/>											
01 21 00.000.05 <i>Traffic Control Allowance</i>											
01 21 00.000 n	0925 Traffic Control Allowance <i>Allowances</i>	1.00	LS			40,007				40,006.94 /LS	40,007
	01 21 00.000 <i>Allowances</i>					40,007				40,006.94 /LS	40,007
	1.00 LS										
	01 21 00.000.05 <i>Traffic Control Allowance</i>			0	0	40,007		0	0	40,006.94 /LS	40,007
	1.00 LS										
<hr/>											
01 21 00.000.10 <i>Protection of Existing Landscaping Allowance</i>											
01 21 00.000 n	0925 Protection of Existing Landscaping Allowance <i>Allowances</i>	1.00	LS			40,007				40,006.96 /LS	40,007
	01 21 00.000 <i>Allowances</i>					40,007				40,006.96 /LS	40,007
	1.00 LS										
	01 21 00.000.10 <i>Protection of Existing Landscaping Allowance</i>			0	0	40,007		0	0	40,006.96 /LS	40,007
	1.00 LS										
<hr/>											
01 74 00.000.05 <i>Digester Cover Cleaning, Inspected, Preparation - 1.2.3a</i>											
01 74 00.000 n	0925 Digester Cover Cleaning, Inspected, Preparation - 1.2.3a <i>Cleaning</i>	1.00	LS			40,007				40,006.92 /LS	40,007
	01 74 00.000 <i>Cleaning</i>					40,007				40,006.92 /LS	40,007
	1.00 LS										

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Item	Description	Takeoff Qty	Labor	Material	Subcontract	Equipment	Other	Total		
			Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
	01 74 00.000.05 Digester Cover Cleaning, Inspected, Preparation - 1.2.3a		0	0	40,007		0	0	40,006.92 /LS	40,007
	1.00 LS									
01.21.00.005 Scaffolding Allowance - 2 Digesters										
01 21 00.000	Allowances									
0090	Scaffolding, steel tubular, regular, labor only to erect & dismantle, building exterior, wall face, 6'-4" x 5' frames, 1 to 5 stories, excludes planks	1,000.00 csf	104,105	-	-		-	-	104.105 /csf	104,105
	01 21 00.000 Allowances		104,105						104,104.61 /LS	104,105
	1.00 LS									
	750.00 Labor hours									
	01.21.00.005 Scaffolding Allowance - 2 Digesters		104,105	0	0		0	0	104,104.61 /LS	104,105
	1.00 LS									
	750.00 Labor hours									
DIVISION 01 GENERAL REQUIREMENTS			672,643	332,824	584,105		257,021	0	142,045.552/LS	1,846,592
	13.00 LS									
	4,854.00 Labor hours									
	8,560.00 Equipment hours									
DIVISION 02 EXISTING CONDITIONS										
02 41 00.150.05 Demo (DR) Digester Recirculation DI Pipe, 8" DIA x 21 LF										
02 41 00.150	Process Pipe Demolition									
n	1100 Selective demolition, water & sewer piping & fittings, ductile iron pipe, 6"-12", diameter, excludes excavation	21.00 LF	688	-	-		124	-	38.663 /LF	812
	02 41 00.150 Process Pipe Demolition		688				124		38.663/LF	812
	21.00 LF									
	6.001 Labor hours									
	1.200 Equipment hours									
	02 41 00.150.05 Demo (DR) Digester Recirculation DI Pipe, 8" DIA x 21 LF		688	0	0		124	0	38.663/LF	812
	21.00 LF									
	6.001 Labor hours									
	1.200 Equipment hours									

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes items for Demo (DM) Digester Mixing DI Pipe and Demo (DF) Digester Feed DI Pipe.

DIVISION 26

ELECTRICAL

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Item	Description	Takeoff Qty		Labor	Material	Subcontract	Name	Equipment	Other	Total	Unit Cost	Amount
				Amount	Amount	Amount		Amount	Amount	Amount		
<u>26.00.00.005</u>				<u>Electrical Equipment+Testing/Commissioning</u>								
26 05 00.000	0400 Electrical Equipment+Testing/Commissioning	2.00	EA	47,009	23,109	-		904	271	35,646.395	/EA	71,293
	26 05 00.000 Electrical: Basic Requirements			47,009	23,109			904	271			71,293
	167.90 Labor hours											
	26.00.00.005 Electrical Equipment+Testing/Commissioning			47,009	23,109	0		904	271	35,646.395	/EA	71,293
	2.00 EA											
	167.90 Labor hours											
<u>26.00.00.020</u>				<u>Electrical - Above Ground Raceways</u>								
26 05 00.000	0100 Electrical - Above Ground Raceways	225.00	LF	16,074	2,864	-		495	183	87.179	/LF	19,615
	26 05 00.000 Electrical: Basic Requirements			16,074	2,864			495	183			19,615
	1.833 Labor hours											
	26.00.00.020 Electrical - Above Ground Raceways			16,074	2,864	0		495	183	87.179	/LF	19,615
	225.00 LF											
	1.833 Labor hours											
<u>26.00.00.035</u>				<u>Electrical - Power Wire and Cable (AG+UG)</u>								
26 05 00.000	0200 Electrical - Power Wire and Cable (AG+UG)	270.00	LF	13,819	2,374	-		425	158	62.132	/LF	16,776
	26 05 00.000 Electrical: Basic Requirements			13,819	2,374			425	158			16,776
	1.222 Labor hours											
	26.00.00.035 Electrical - Power Wire and Cable (AG+UG)			13,819	2,374	0		425	158	62.132	/LF	16,776
	270.00 LF											
	1.222 Labor hours											
	DIVISION 26 ELECTRICAL			76,902	28,346	0		1,823	612	107,683.76	/LS	107,684
	1.00 LS											
	170.955 Labor hours											

DIVISION 40

PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Amount. Includes sub-sections for Unistrut Pipe Supports and (DF) Digester Feed DI Pipe.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Item	Description	Takeoff Qty	Labor		Material		Subcontract		Equipment		Other		Total	
			Amount	Amount	Amount	Name	Amount	Amount	Amount	Unit Cost	Amount			
<i>40 05 19.008.05 (DR) Digester Recirculation DI Pipe, 8" DIA x 45 LF</i>														
<i>40 05 19.008 Pipe and Fittings - Ductile Iron, 08" Dia</i>														
n	7001 Pipeline Testing, Hydro (LF)	45.00 LF	377	6	-				18	-	8.907 /LF		401	
	7600 Paints & coatings, pipes, primer + 1 coat, brushwork, 6" to 8" diameter	49.50 lf	354	16	-				-	-	7.475 /lf		370	
	01158 Pipe Support, 8", Hanger, Stainless Steel, Inc. Material, Welder, Labor	20.00 ea	19,665	12,428	-				-	-	1,604.691 /ea		32,094	
	1124 Piping system identification labels, pipe markers, indicate contents and flow direction, self adhesive, 8" pipe	5.00 ea	188	47	-				-	-	46.96 /ea		235	
	0700 Gasket and bolt set, for flanges, 150 lb., 8" pipe size	24.00 ea	10,095	2,041	-				-	-	505.67 /ea		12,136	
n	0105 DIP,FLGxFLG,8"dia,5'-0" long,class 53,excl excav, backfill	9.00 ea	2,037	21,965	-				-	-	2,666.844 /ea		24,002	
n	1108 Fitting,DIP,FLG,45 degree bend,8"dia,c 110 water piping	2.00 ea	453	1,316	-				-	-	884.485 /ea		1,769	
n	1408 Fitting,DIP,FLG,Tee,8"dia,c 110 water piping	1.00 ea	226	1,189	-				-	-	1,415.45 /ea		1,415	
n	4703 DIP,Polywrap 8 mil LDT 500ft,8"dia	1.00 roll	156	848	-				-	-	1,004.32 /roll		1,004	
n	0503 Plug Valve Flange: 8" / Handwheel or Lever Operator / Includes Gear Operator	1.00 ea	812	2,204	-				383	-	3,399.36 /ea		3,399	
	<i>40 05 19.008 Pipe and Fittings - Ductile Iron, 08" Dia</i>		<u>34,364</u>	<u>42,061</u>					<u>401</u>		<u>1,707.226/LF</u>		<u>76,825</u>	
	45.00 LF													
	146.732 Labor hours													
	2.72 Equipment hours													
	<i>40 05 19.008.05 (DR) Digester Recirculation DI Pipe, 8" DIA x 45 LF</i>		34,364	42,061	0				401	0	1,707.226/LF		76,825	
	45.00 LF													
	146.732 Labor hours													
	2.72 Equipment hours													

40 05 19.008.10 (DM) Digester Mixing DI Pipe, 8" DIA x 8 LF

<i>40 05 19.008 Pipe and Fittings - Ductile Iron, 08" Dia</i>														
n	1510 Fitting,DIP,FLG,Flat Blind Flange,8"dia, water piping	1.00 ea	123	287	-				-	-	410.41 /ea		410	
n	7001 Pipeline Testing, Hydro (LF)	8.00 LF	67	1	-				3	-	8.908 /LF		71	
	7600 Paints & coatings, pipes, primer + 1 coat, brushwork, 6" to 8" diameter	8.80 lf	63	3	-				-	-	7.476 /lf		66	
	1124 Piping system identification labels, pipe markers, indicate contents and flow direction, self adhesive, 8" pipe	5.00 ea	188	47	-				-	-	46.962 /ea		235	
	0700 Gasket and bolt set, for flanges, 150 lb., 8" pipe size	4.00 ea	1,683	340	-				-	-	505.675 /ea		2,023	

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes sub-items for Pipe and Fittings - Ductile Iron, 08" Dia and Replaced Exposed Plug Valves - Phase 1 - 2.

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes rows for DIVISION 40 PROCESS INTEGRATION and 063 BASE BID.

064 ALTERNATE 1

DIVISION 02 EXISTING CONDITIONS

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes rows for 02 41 00.110.10 and 02 41 00.160.05.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Item	Description	Takeoff Qty	Labor	Material	Subcontract	Equipment	Other	Total		
			Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
	02 41 00.160.05 Demo Existing Sludge Grinder - GRI-17-100, 50 GP, 3 HP - Spec 46 24 23-1		9,079	240	0		1,197	0	10,516.26 /DAY	10,516
	1.00 DAY									
	48.00 Labor hours									
	128.00 Equipment hours									
22 09 00.000.05 Demo Existing Vendor Control Panel VCP-17-100										
22 09 00.000	Instrumentation & Control for Plumbing									
n	0260 Demo Existing Vendor Control Panel VCP-17-100	1.00 EA	-	6,583	-	-	-	6,582.81 /EA	6,583	
	22 09 00.000 Instrumentation & Control for Plumbing			6,583				6,582.81 /EA	6,583	
	1.00 EA									
	22 09 00.000.05 Demo Existing Vendor Control Panel VCP-17-100		0	6,583	0	0	0	6,582.81 /EA	6,583	
	1.00 EA									
DIVISION 02 EXISTING CONDITIONS			9,797	6,823	0		1,527	0	18,146.63 /LS	18,147
	1.00 LS									
	54.061 Labor hours									
	132.849 Equipment hours									
DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)										
40 05 19.006.10 Install Existing Plug Valves, 6" Dia (2 EA)										
40 05 19.006	Pipe and Fittings - Ductile Iron, 06" Dia									
n	0502 Install Existing Plug Valves, 6" Dia (2 EA)	2.00 EA	1,625	3,003	-		766	-	2,696.87 /EA	5,394
	40 05 19.006 Pipe and Fittings - Ductile Iron, 06" Dia		1,625	3,003			766		5,394	
	10.667 Labor hours									
	4.00 Equipment hours									
	40 05 19.006.10 Install Existing Plug Valves, 6" Dia (2 EA)		1,625	3,003	0		766	0	2,696.87 /EA	5,394
	2.00 EA									
	10.667 Labor hours									
	4.00 Equipment hours									

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Item	Description	Takeoff Qty	Labor	Material	Subcontract	Equipment	Other	Total		
			Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
	DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)		1,625	3,003	0		766	0	5,393.74 /LS	5,394
	1.00 LS									
	10.667 Labor hours									
	4.00 Equipment hours									
DIVISION 46 WATER AND WASTEWATER EQUIPMENT										
<i>46 01 70.005.05 Install New Sludge Grinder - In-line Muffin Monster Model 10k Series</i>										
46 01 70.005	<i>Sludge Removal and Disposal Equipment</i>									
9998	Install New Sludge Grinder - Muffin Monster Model 10k Series - Spec 46 24 23-1	1.00 EA	9,983	25,538	-		2,457	-	37,977.340 /EA	37,977
	<i>46 01 70.005 Sludge Removal and Disposal Equipment</i>		9,983	25,538			2,457		37,977.340/EA	37,977
	1.00 EA									
	40.00 Labor hours									
	16.00 Equipment hours									
	<i>46 01 70.005.05 Install New Sludge Grinder - In-line Muffin Monster Model 10k Series</i>		9,983	25,538	0		2,457	0	37,977.340/EA	37,977
	1.00 EA									
	40.00 Labor hours									
	16.00 Equipment hours									
	DIVISION 46 WATER AND WASTEWATER EQUIPMENT		9,983	25,538	0		2,457	0	37,977.340/EA	37,977
	1.00 EA									
	40.00 Labor hours									
	16.00 Equipment hours									
	064 ALTERNATE 1		21,405	35,364	0		4,749	0	61,517.71 /LS	61,518
	1.00 LS									
	104.728 Labor hours									
	152.849 Equipment hours									

065 ALTERNATE 2

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes sub-sections for DIVISION 02 EXISTING CONDITIONS and DIVISION 03 CONCRETE.

DIVISION 03

CONCRETE

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Amount. Includes items like concrete forms, reinforcing steel, and structural concrete.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Item	Description	Takeoff Qty	Labor	Material	Subcontract		Equipment	Other	Total	
			Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
	03 11 13.504 12" Slab on Grade		5,631	8,261			525		1,310.595/CY	14,417
	11.00 CY									
	35.842 Labor hours									
	7.263 Equipment hours									
	03 11 13.504.05 Concrete Slab, 12" Thick, Spec 1.3.B.1d		5,631	8,261	0		525	0	1,310.595/CY	14,417
	11.00 CY									
	35.842 Labor hours									
	7.263 Equipment hours									
	03 11 13.773.05 Concrete Encasement, 32" Thick x 20 SF									
03 11 13.773	32" Foundation Slab									
n	3050 C.I.P. concrete forms, slab on grade, edge, wood, 7" to 12" high, 4 use, includes erecting, bracing, stripping and cleaning	50.086 sfca	665	105	-		-	-	15.375 /sfca	770
n	9015 C.I.P. concrete forms, bulkhead for slab on grade w/ keyway, up to 12", exp metal, includes erecting, bracing, stripping and cleaning	2.80 sfca	22	2	-		-	-	8.682 /sfca	24
n	2050 Reinforcing steel, unload and sort, add to base_SLAB ON GRADE	0.263 ton	24	-	-		10	-	130.152 /ton	34
	0600 Reinforcing steel, in place, slab on grade, #3 to #7, A615, grade 60, incl labor for accessories, excl material for accessories	0.263 ton	611	647	-		-	-	4,784.45 /ton	1,258
	2220 Reinforcing steel, crane cost for handling, 90 picks/day, up to 0.5 Ton/day	0.263 ton	70	-	-		28	-	372.167 /ton	98
	4650 Structural concrete, placing, slab on grade, pumped, over 6" thick, includes leveling (strike off) & consolidation, excludes material	3.00 cy	143	-	-		14	-	52.517 /cy	158
	4650 Structural concrete, placing, slab on grade, pumped, over 6" thick, includes leveling (strike off) & consolidation, excludes material	0.30 cy	14	-	-		1	-	52.50 /cy	16
n	0725 Struct SLAB ON GRADE concrete, ready mix, normal wt, 4500 psi, includes local aggregate, sand, portland cement and water, delivered, includes all additives	3.00 CY	-	976	-		-	-	325.397 /CY	976
n	0725 Struct SLAB ON GRADE concrete, ready mix, normal wt, 4500 psi, includes local aggregate, sand, portland cement and water, delivered, includes all additives	0.30 cy	-	98	-		-	-	325.43 /cy	98
n	0255 Concrete finishing, floors, manual screed, bull float, machine float & steel trowel (walk-behind)_SOG	19.999 sf	40	-	-		2	-	2.095 /sf	42
n	0122 Control joint, concrete floor slab, sawcut in green concrete, 1" depth_SOG	1.00 lf	1	0	-		0	-	1.36 /lf	1
n	0215 Control joint, clean out control joint of debris_SOG	1.00 lf	0	-	-		-	-	0.18 /lf	0

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Amount. Includes items for Foundation Slab, Concrete Encasement, Concrete Curb, and Repair Spalled Concrete.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Item	Description	Takeoff Qty	Labor		Material		Subcontract		Equipment		Other		Total	
			Amount	Amount	Amount	Name	Amount	Amount	Amount	Unit Cost	Amount			
	03 31 32.000.05 Repair Spalled Concrete & Treat Exposed Rebar		0	0	8,001				0	0	8,001.40 /LS		8,001	
	1.00 LS													
03.35.00.005 Drill in Dowel In Edge - Two Rows														
03 35 00.210	Cast-In-Place Concrete, Drill and Epoxy Rebar Dowel - Medium													
n 9005	Reinforcing steel, in place, drill and epoxy dowels, deformed, 2' long, #5, A615, grade 60; incl drilling into existing concrete and injected epoxy	166.00 EA	106,163	3,985	-				-	-	663.538 /EA		110,147	
	03 35 00.210 Cast-In-Place Concrete, Drill and Epoxy Rebar Dowel - Medium		106,163	3,985							663.538/EA		110,147	
	166.00 EA													
	747.00 Labor hours													
	03.35.00.005 Drill in Dowel In Edge - Two Rows		106,163	3,985	0				0	0	663.538/EA		110,147	
	166.00 EA													
	747.00 Labor hours													
DIVISION 03 CONCRETE			113,913	15,111	8,001				711	0	137,735.60 /LS		137,736	
	1.00 LS													
	796.409 Labor hours													
	8.717 Equipment hours													
DIVISION 05 METALS														
05 52 05.500.05 SST Chanel C6x13 Guadrail x 21 LF - SPEC 1.3.B.1c														
05 52 05.500	Steel Railings													
0668	SST Chanel C6x13 Guadrail x 21 LF - SPEC 1.3.B.1c	21.00 LF	6,610	1,152	-				500	-	393.435 /LF		8,262	
	05 52 05.500 Steel Railings		6,610	1,152					500		393.435/LF		8,262	
	21.00 LF													
	36.653 Labor hours													
	12.218 Equipment hours													
	05 52 05.500.05 SST Chanel C6x13 Guadrail x 21 LF - SPEC 1.3.B.1c		6,610	1,152	0				500	0	393.435/LF		8,262	
	21.00 LF													
	36.653 Labor hours													
	12.218 Equipment hours													

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes summary row for DIVISION 05 METALS.

DIVISION 22 PLUMBING

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes items for Trench Drain, 4" DIA & 12"x12" Drain Box.

DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes items for Pipeline Testing, Hydro (LF), Paints & coatings, pipes, primer + 1 coat, brushwork, up to 4" diameter, Piping system identification labels, pipe markers, indicate contents and flow direction, self adhesive, 4" pipe, Gasket and bolt set, for flanges, 150 lb., 4" pipe size, DIP, FLGxFLG, 4" dia, 1'-0" long, class 53, excl excav, backfill.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes items for Pipe and Fittings - Ductile Iron, 04" Dia and Trench Drain Pipe DI, 4" DIA x 11 LF.

066 ALTERNATE 3

DIVISION 05

METALS

Table for Division 05 Metals including items for Stairs (Metal Stairs - Aluminum) and Floor grating, aluminum, 1-1/2" x 3/16" bearing bars.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Item	Description	Takeoff Qty	Labor	Material	Subcontract	Equipment	Other	Total		
			Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
	05 50 00.315.05 Stairs		782	4,901	0		44	0	1,908.987/RISR	5,727
	3.00 RISR									
	4.297 Labor hours									
	1.074 Equipment hours									
	DIVISION 05 METALS		782	4,901	0		44	0	5,726.96 /LS	5,727
	1.00 LS									
	4.297 Labor hours									
	1.074 Equipment hours									

DIVISION 06 **WOOD, PLASTICS & COMPOSITES**

	06 82 00.010		<i>FRP Grating, 1" Thick x 10 SF</i>								
	06 82 00.010										
n	0140	Fiberglass Grating, molded, green (for moderate corrosive environment), 1" x 4" mesh, 1" thick	10.00	SF	381	1,238	-	-	-	161.911 /SF	1,619
		06 82 00.010 FRP Grating			381	1,238				161.911/SF	1,619
		10.00 SF									
		2.40 Labor hours									
	06 82 00.010 FRP Grating, 1" Thick x 10 SF		381		1,238	0		0	0	161.911/SF	1,619
		10.00 SF									
		2.40 Labor hours									
	DIVISION 06 WOOD, PLASTICS & COMPOSITES		381		1,238	0		0	0	161.911/SF	1,619
	10.00 SF										
	2.40 Labor hours										

DIVISION 23 **HEATING, VENTILATING & AIR-CONDITIONING (HVAC)**

	23 31 00.000.05		<i>Extended Foul Air Duct, 36" Dia x 20 LF</i>								
	23 31 00.000										
n	3570	Ductwork, rigid fiberglass reinforced plastic, for acid fume and smoke exhaust systems, nonflammable, straight, 36" diameter, FM approved	20.00	LF	3,800	3,071	-	-	-	343.572 /LF	6,871
		HVAC Ductwork									

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Rows include HVAC Ductwork, Floc Tank Drop Legs, and New SST Panel On Top of FKC.

DIVISION 40

PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Item	Description	Takeoff Qty	Labor		Material		Subcontract		Equipment		Other		Total	
			Amount	Amount	Amount	Name	Amount	Amount	Amount	Unit Cost	Amount			
<i>40 05 19.036.05 New Elbow Under Screw with Tee, 36" DIA</i>														
<i>40 05 19.036</i>	<i>Pipe and Fittings - Ductile Iron, 36" Dia</i>													
n	1426 Fitting,DIP.FLG,Tee,36"dia,c 110 water piping -	1.00 EA	999	28,196	-								29,194.70 /EA	29,195
	<i>40 05 19.036 Pipe and Fittings - Ductile Iron, 36" Dia</i>		999	28,196										29,195
	6.40 Labor hours													
	<i>40 05 19.036.05 New Elbow Under Screw with Tee, 36" DIA</i>		999	28,196	0			0	0				29,194.70 /EA	29,195
	1.00 EA													
	6.40 Labor hours													
<i>40 05 70.200.05 Fiberglass Air Damper Valve, "06 Dia - (4 EA)</i>														
<i>40 05 70.200.1</i>	<i>Fiberglass Air Damper Valve, "06 DIA</i>													
n	1080 Fiberglass Air Damper Valve, "06 Dia - (4 EA)	4.00 EA	257	1,120	-								344.263 /EA	1,377
	<i>40 05 70.200.1 Fiberglass Air Damper Valve, "06 DIA</i>		257	1,120									344.263/EA	1,377
	4.00 EA													
	1.684 Labor hours													
	<i>40 05 70.200.05 Fiberglass Air Damper Valve, "06 Dia - (4 EA)</i>		257	1,120	0			0	0				344.263/EA	1,377
	4.00 EA													
	1.684 Labor hours													
DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)			1,256	29,316	0			0	0					30,572
	8.084 Labor hours													
066 ALTERNATE 3			32,358	51,577	0			1,464	0				85,399.83 /LS	85,400
	1.00 LS													
	130.081 Labor hours													
	9.074 Equipment hours													

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report with Contractor Markups

Estimate Totals

Description	Amount	Totals	Rate
Labor	1,016,359		
Material	619,808		
Build America, Buy America Act			
Equipment	281,887		
Subcontract	592,106		
Other	612		
Subtotal Field Const Costs	2,510,772	2,510,772	
Sales Tax Estimate (Mat & Eq)	48,096		8.625 %
Subtotal Field Const Costs	48,096	2,558,868	
Design Contingency			
Subtotal Field Const Costs		2,558,868	
Escalation Project (Year)	60,877		2.440 %
Construction Subtotal	60,877	2,619,745	
Market Volatility Adjustment Factor	261,975		10.000 %
Construction Total	261,975	2,881,720	
Total		2,881,720	

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs



Project name	Marin County - Digester Cleaning and Rehab
Labor rate table	HDR_2024_Union
Equipment rate table	HDR_EQ_2024
Project	Digester & Rehab.
Notes	<p>Any opinions of probable construction cost or cost estimates provided by HDR, Inc. are made based on information available to HDR, Inc. and based on the cost estimator's experience and qualifications and represents its judgment as an experienced and qualified professional engineer. However, HDR, Inc. has no control over the cost of labor, materials, equipment, or services furnished by others, or over the contractor(s)' methods of determining prices, or over competitive bidding or market conditions. HDR, Inc. does not guarantee that proposals, bids, or actual project or construction cost will not vary from opinions of probable cost or cost estimates prepared by HDR, Inc.</p> <p>A recent AGC report indicated that September 2020 and September 2022 saw a 21% increase in construction materials during this period. Also, during this period, substantial material prices increase in primary materials such as diesel fuel, steel, fabricated metals, lumber, concrete, rebar, copper, and PVC. Contractors are experiencing supply-chain issues, transportation issues, short pricing guarantees (1 to 7 days), longer than average fabrication durations, and limited availability of material supplies, labor premiums to attract craft workers, covid mandates, and the Russian invasion of Ukraine. This combination has produced a potentially volatile situation for owners as general contractors are drastically recovering costs. A project owner would be wise to ask many questions, work to obtain as much bid competition as possible, and retain a higher than usual contingency.</p>
Report format	Sorted by 'WBS_MAIN/MF04_DIV/Work Activity/HDR04SPEC' 'Detail' summary
Factor table	941-CA-SAN FRANCISCO



Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount

063 BASE BID

DIVISION 01 GENERAL REQUIREMENTS

01 00 00.000.05 Hazardous Environmental Conditions - SPEC 01 11 00 - 1 - 1.2D

Table rows for Hazardous Environmental Conditions, including item 0920 and 0140 with labor and material details.

01 00 00.000.10 Confined Space Entry Policy/Procedure SPEC 01 11 00 - 2 - 1.3 - G2

Table rows for Confined Space Entry Policy/Procedure, including item 0140 with labor details.

01 00 00.000.15 Work By Owner - Coordination SPEC 01 11 00 - 3 - 1.7

Table rows for Work By Owner - Coordination, including item 0920 with labor details.

AACE Classification Accuracy Range
Upper Range +15% Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation

Detail Report - Direct Costs

Item	Description	Takeoff Qty	Labor	Material	Subcontract	Equipment	Other	Total		
			Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
	01 00 00.000.15 Work By Owner - Coordination SPEC 01 11 00 - 3 - 1.7		5,000	0	0		0	0	5,000.00 /LS	5,000
	1.00 LS									
01 00 00.000.20			Sequencing of Work Requiremnts & Responsible Party(s) - 01 11 00 - 6 3.1 E							
01 00 00.000	General Requirements									
n	0140 Field personnel, field engineer, maximum	2.00 week	4,800	-	-				2,400.00 /week	4,800
	01 00 00.000 General Requirements		4,800						4,800.00 /LS	4,800
	1.00 LS									
	80.00 Labor hours									
	01 00 00.000.20 Sequencing of Work Requiremnts & Responsible Party(s) - 01 11 00 - 6 3.1 E		4,800	0	0		0	0	4,800.00 /LS	4,800
	1.00 LS									
	80.00 Labor hours									
01 00 00.000.25			Gas Purge & Dewater 2 Digester (Contractor & Owner) - 01 11 00 3.1 E2							
01 00 00.000	General Requirements									
n	0920 Gas Purge & Dewater Secondary Digester (Contractor & Owner) - 01 11 00 3.1 E - 2	1.00 LS	1,881	15,000			699		17,580.23 /LS	17,580
	01 00 00.000 General Requirements		1,881	15,000			699		17,580.23 /LS	17,580
	1.00 LS									
	20.00 Labor hours									
	8.00 Equipment hours									
	01 00 00.000.25 Gas Purge & Dewater 2 Digester (Contractor & Owner) - 01 11 00 3.1 E2		1,881	15,000	0		699	0	17,580.23 /LS	17,580
	1.00 LS									
	20.00 Labor hours									
	8.00 Equipment hours									
01 00 00.000.30			Purge Secondary Digester Nitrogen (5,000 ft^3) - SPEC 01 11 00 - 6 - 3.1 Ee							
01 00 00.000	General Requirements									
n	0920 Purge Secondary Digester Nitrogen regulated nitrogen (5,000 ft^3) to digester - SPEC 01 11 00 - 6 - 3.1 - E - 2e	1.00 LS		10,000					10,000.00 /LS	10,000
	01 00 00.000 General Requirements			10,000					10,000.00 /LS	10,000
	1.00 LS									

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Item	Description	Takeoff Qty	Labor			Material			Subcontract			Equipment			Other			Total	
			Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Unit Cost	Amount			
	01 00 00.000.30 Purge Secondary Digester Nitrogen (5,000 ft³) - SPEC 01 11 00 - 6 - 3.1 Ee		0	10,000	0			0	0				10,000.00 /LS	10,000					
	1.00 LS																		
01 00 00.000.32 Purge Primary Digester Nitrogen (5,000 ft³) - SPEC 01 11 00 - 6 - 3.1 Ee																			
01 00 00.000	General Requirements																		
n	0920 Purge Primary Digester Nitrogen (5,000 ft³) - SPEC 01 11 00 - 6 - 3.1 Ee	1.00 LS		10,000									10,000.00 /LS	10,000					
	01 00 00.000 General Requirements			10,000									10,000.00 /LS	10,000					
	1.00 LS																		
	01 00 00.000.32 Purge Primary Digester Nitrogen (5,000 ft³) - SPEC 01 11 00 - 6 - 3.1 Ee		0	10,000	0			0	0				10,000.00 /LS	10,000					
	1.00 LS																		
01 00 00.000.35 Remove Approximately 33,000 GAL of Sludge x 7 Days - 2 EA SPEC 01 11 00 - 6 - 3.1 Ef																			
01 00 00.000	General Requirements																		
n	0920 Fuel	1.00 LS		35,000	1								35,001.00 /LS	35,001					
	1000 Dewatering, pumping 8 hours, attended 2 hrs per day, 4" diaphragm pump, includes 20 LF of suction hose and 100 LF of discharge hose	14.00 DAY	11,167	-	-			2,486	-				975.206 /DAY	13,653					
n	1020 Dewatering, pumping 8 hours, attended 2 hrs per day, 4" diaphragm pump, includes 20 suction hose and 100 lf of discharge hose, add for additional pump	14.00 day	-	-	-			1,783	-				127.368 /day	1,783					
n	5000 21,000 Gallon (Closed Top Frac Tank)	14.00 day	-	584	-			24,595	-				1,798.496 /day	25,179					
	01 00 00.000 General Requirements		11,167	35,584	1			28,864	-				75,615.97 /LS	75,616					
	1.00 LS																		
	168.00 Labor hours																		
	560.00 Equipment hours																		
	01 00 00.000.35 Remove Approximately 33,000 GAL of Sludge x 7 Days - 2 EA SPEC 01 11 00 - 6 - 3.1 Ef		11,167	35,584	1			28,864	0				5,401.141 /DAY	75,616					
	14.00 DAY																		
	168.00 Labor hours																		
	560.00 Equipment hours																		
01 00 00.000.40 Truck/Dewater Remaining Sludge Off Site From 23.5' Elevation x 40,000 GAL - SPEC 01 11 00 - 6 - 3.1 Eh																			
01 00 00.000	General Requirements																		
n	0560 Haul 40,000 Gallons	10.00 DAY	5,102	-	-			6,893	-				1,199.499 /DAY	11,995					
n	0560 Haul 40,000 Gallons - Load Trucks	25.00 TRK			5,000				-				200.00 /TRK	5,000					

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Item	Description	Takeoff Qty		Labor	Material	Subcontract	Equipment	Other	Total		
				Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
01 00 00.000	<i>General Requirements</i>										
n	0560 Haul 40,000 Gallons - Hauling & Disposal	25.00	TRK			112,500		-	4,500.00 /TRK	112,500	
	01 00 00.000 General Requirements			5,102		117,500		6,893	129,494.99 /LS	129,495	
	1.00 LS										
	80.00 Labor hours										
	80.00 Equipment hours										
	01 00 00.000.40 Truck/Dewater Remaining Sludge Off Site From 23.5' Elevation x 40,000 GAL - SPEC 01 11 00 - 6 - 3.1 Eh			5,102	0	117,500		6,893	0	12,949.499/DAY	129,495
	10.00 DAY										
	80.00 Labor hours										
	80.00 Equipment hours										
01 00 00.000.45	<i>Clean Floor & Walls of Two Digesters- SPEC 01 11 00 - 6 - 3.1 3a</i>										
01 00 00.000	<i>General Requirements</i>										
n	0840 Cleaning masonry, high pressure wash, water and chemical, excludes scaffolding, maximum	20.00	DAY	35,616	3,000	-		23,419	-	3,101.728 /DAY	62,035
n	0840 Productivity Loss	20.00	day	17,808	0	-		11,709	-	1,475.864 /day	29,517
n	0840 Rental of sludge screen	20.00	day			100,000			-	5,000.00 /day	100,000
	1100 Dewatering, pumping 8 hours, attended 2 hrs per day, 6" centrifugal pump, includes 20 LF of suction hose and 100 LF of discharge hose	20.00	day	15,953	-	-		7,072	-	1,151.237 /day	23,025
n	1120 Dewatering, pumping 8 hours, attended 2 hrs per day, 6" centrifugal pump, includes 20 suction hose and 100 of discharge hose, add for additional pump	20.00	day	-	-	-		7,466	-	373.32 /day	7,466
	01 00 00.000 General Requirements			69,377	3,000	100,000		49,666		222,042.98 /LS	222,043
	1.00 LS										
	1,200.00 Labor hours										
	5,600.00 Equipment hours										
	01 00 00.000.45 Clean Floor & Walls of Two Digesters- SPEC 01 11 00 - 6 - 3.1 3a			69,377	3,000	100,000		49,666	0	11,102.149/DAY	222,043
	20.00 DAY										
	1,200.00 Labor hours										
	5,600.00 Equipment hours										
01 00 00.000.50	<i>Contractor to Reinstall Finished Digester Cover 2 EA - SPEC 01 11 00 - 6 - 4a</i>										
01 00 00.000	<i>General Requirements</i>										
	0600 Crane crew, daily use for small jobs, 100-ton truck-mounted hydraulic crane, portal to portal	8.00	day	8,128	-	-		20,769	-	3,612.08 /day	28,897
n	6000 Paints and protective coatings, galvanizing structural steel in shop, over 20 tons, hot dip	100.00	ton	-	64,000	-		-	-	640.00 /ton	64,000

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Item	Description	Takeoff Qty	Labor	Material	Subcontract	Equipment	Other	Total		
			Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
01 00 00.000	<i>General Requirements</i>									
n 3860	Structural steel project, shop extra for sandblasting and primer coat of paint, (included in project material cost, above)	100.00 ton	-	14,500	-		-	-	145.00 /ton	14,500
0105	(CAIR) Air Tool Laborers	200.00 mh	9,360	-	-		-	-	46.80 /mh	9,360
0155	(CLAM) Common Maintenance Laborers	200.00 mh	9,800	-	-		-	-	49.00 /mh	9,800
0300	(EQHO) Equipment Operators, Crane - Outside Foreman	40.00 mh	2,824	-	-		-	-	70.60 /mh	2,824
0305	(EQHV) Equipment Operators, Crane or Shovel	40.00 mh	2,744	-	-		-	-	68.60 /mh	2,744
0905	(SSWL) Welders, Structural Steel	80.00 mh	5,364	-	-		-	-	67.05 /mh	5,364
0910	(SSWO) Welders, Structural Steel - Outside Foreman	40.00 mh	2,762	-	-		-	-	69.05 /mh	2,762
	01 00 00.000 General Requirements		40,982	78,500			20,769		140,250.640/LS	140,251
	1.00 LS									
	728.00 Labor hours									
	128.00 Equipment hours									
	01 00 00.000.50 Contractor to Reinstall Finished Digester Cover 2 EA - SPEC 01 11 00 - 6 - 4a		40,982	78,500	0		20,769	0	140,250.640/LS	140,251
	1.00 LS									
	728.00 Labor hours									
	128.00 Equipment hours									
01 00 00.000.55	<i>Contractor to Remove Finished Digester Cover (2EA)- SPEC 01 11 00 - 6 - 4a</i>									
01 00 00.000	<i>General Requirements</i>									
0600	Crane crew, daily use for small jobs, 100-ton truck-mounted hydraulic crane, portal to portal	4.00 DAY	4,064	-	-		10,384	-	3,612.08 /DAY	14,448
0105	(CAIR) Air Tool Laborers	200.00 mh	9,360	-	-		-	-	46.80 /mh	9,360
0155	(CLAM) Common Maintenance Laborers	200.00 mh	9,800	-	-		-	-	49.00 /mh	9,800
0300	(EQHO) Equipment Operators, Crane - Outside Foreman	40.00 mh	2,824	-	-		-	-	70.60 /mh	2,824
0305	(EQHV) Equipment Operators, Crane or Shovel	40.00 mh	2,744	-	-		-	-	68.60 /mh	2,744
	01 00 00.000 General Requirements		28,792				10,384		39,176.32 /LS	39,176
	1.00 LS									
	544.00 Labor hours									
	64.00 Equipment hours									
	01 00 00.000.55 Contractor to Remove Finished Digester Cover (2EA)- SPEC 01 11 00 - 6 - 4a		28,792	0	0		10,384	0	9,794.08 /DAY	39,176
	4.00 DAY									
	544.00 Labor hours									
	64.00 Equipment hours									

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Item	Description	Takeoff Qty	Labor		Material		Subcontract		Equipment		Other		Total	
			Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount				
<i>01 00 00.000.60 Water Test 2 EA Digesters</i>														
<i>01 00 00.000 General Requirements</i>														
n	0560 Haul Gallons	10.00 DAY	5,102	-	-	-	-	-	6,893	-	-	1,199.499 /DAY	11,995	
	8550 Water Test	80.00 hr	18,480	-	-	-	-	-	13,413	-	-	398.668 /hr	31,893	
	<i>01 00 00.000 General Requirements</i>		23,582						20,306			43,888.42 /LS	43,888	
	1.00 LS													
	320.00 Labor hours													
	320.00 Equipment hours													
	<i>01 00 00.000.60 Water Test 2 EA Digesters</i>		23,582	0	0				20,306	0		4,388.842/DAY	43,888	
	10.00 DAY													
	320.00 Labor hours													
	320.00 Equipment hours													
<i>01 00 00.000.65 Test Mixing & Heating Functions 2 EA- SPEC 01 11 00 - 6 - 4c</i>														
<i>01 00 00.000 General Requirements</i>														
	8550 Heat Test	80.00 HR	18,480	8,395	-	-	-	-	13,413	-	-	503.607 /HR	40,289	
	<i>01 00 00.000 General Requirements</i>		18,480	8,395					13,413			40,288.550/LS	40,289	
	1.00 LS													
	240.00 Labor hours													
	240.00 Equipment hours													
	<i>01 00 00.000.65 Test Mixing & Heating Functions 2 EA- SPEC 01 11 00 - 6 - 4c</i>		18,480	8,395	0				13,413	0		503.607/HR	40,289	
	80.00 HR													
	240.00 Labor hours													
	240.00 Equipment hours													
<i>01 00 00.000.81 Transfer Seed Sludge from Primary to Secondary Digester - SPEC 01 11 00 - 7 - 5b</i>														
<i>01 00 00.000 General Requirements</i>														
n	0920 Fuel	1.00 LS		17,500	1							17,501.00 /LS	17,501	
	1000 Dewatering, pumping 8 hours, attended 2 hrs per day, 4" diaphragm pump, includes 20 LF of suction hose and 100 LF of discharge hose	7.00 DAY	5,583	-	-				1,243	-		975.206 /DAY	6,826	
n	1020 Dewatering, pumping 8 hours, attended 2 hrs per day, 4" diaphragm pump, includes 20 suction hose and 100 lf of discharge hose, add for additional pump	7.00 day	-	-	-				892	-		127.369 /day	892	

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Item	Description	Takeoff Qty	Labor	Material	Subcontract	Equipment	Other	Total		
			Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
	01 00 00.000 General Requirements		5,583	17,500	1		2,135	25,219.02 /LS	25,219	
	1.00 LS									
	84.00 Labor hours									
	280.00 Equipment hours									
	01 00 00.000.81 Transfer Seed Sludge from Primary to Secondary Digester - SPEC 01 11 00 - 7 - 5b		5,583	17,500	1		2,135	0	25,219.02 /LS	25,219
	1.00 LS									
	84.00 Labor hours									
	280.00 Equipment hours									
01 00 00.000.85 Start up & Monitor Secondary Digester (Contractor & Owner) - 01 11 00 - 7 - 6										
01 00 00.000	General Requirements									
n	0920 Start up & Monitor Secondary Digester (Contractor & Owner) - 01 11 00 - 7 - 6	1.00 LS			15,000			15,000.00 /LS	15,000	
	01 00 00.000 General Requirements				15,000			15,000.00 /LS	15,000	
	1.00 LS									
	01 00 00.000.85 Start up & Monitor Secondary Digester (Contractor & Owner) - 01 11 00 - 7 - 6		0	0	15,000		0	0	15,000.00 /LS	15,000
	1.00 LS									
01 00 00.000.86 Perform Lab Testing of Volatile Acid (VAs) & Alkalinity 3x per week - 01 11 00 - 7 - 6e										
01 00 00.000	General Requirements									
n	0920 Perform Lab Testing of Volatile Acid (VAs) & Alkalinity 3x per week - 01 11 00 - 7 - 6e	150.00 EA			22,500			150.00 /EA	22,500	
	01 00 00.000 General Requirements				22,500			22,500.00 /LS	22,500	
	1.00 LS									
	01 00 00.000.86 Perform Lab Testing of Volatile Acid (VAs) & Alkalinity 3x per week - 01 11 00 - 7 - 6e		0	0	22,500		0	0	150.00 /EA	22,500
	150.00 EA									
01 00 00.000.87 Clean & Repair Primary Digester (Contractor) - 01 11 00 - 7 - 7										
01 00 00.000	General Requirements									
n	0920 Two bottom pipes to overflow box - 01 11 00 - 7 - 7 - A1 - Labor	5.00 DAY	21,735		0		3,740	5,094.986 /DAY	25,475	
n	0920 Two bottom pipes to overflow box - 01 11 00 - 7 - 7 - A1 - Materials	1.00 LS		15,000				15,000.00 /LS	15,000	
n	0920 Suction to sludge mixing pumps, discharge from sludge mixing pump - 01 11 00 - 7 - 7 - A2	5.00 DAY	21,735				3,740	5,094.986 /DAY	25,475	

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Item	Description	Takeoff Qty	LS	Labor	Material	Subcontract	Equipment	Other	Total	
				Amount	Amount	Amount	Name	Amount	Amount	Unit Cost
01 00 00.000 n	0920 Two bottom pipes to overflow box - 01 11 00 - 7 - 7 - A1 - Materials <i>General Requirements</i>	1.00	LS		15,000				15,000.00 /LS	15,000
	01 00 00.000 <i>General Requirements</i>			43,470	30,000		7,480		40,474.93 /LS	80,950
	2.00 LS									
	480.00 Labor hours									
	1,280.00 Equipment hours									
	01 00 00.000.87 Clean & Repair Primary Digester (Contractor) - 01 11 00 - 7 - 7			43,470	30,000	0	7,480	0	40,474.93 /LS	80,950
	2.00 LS									
	480.00 Labor hours									
	1,280.00 Equipment hours									
<hr/>										
01 21 00.000.05	<i>Traffic Control Allowance</i>									
01 21 00.000 n	0925 Traffic Control Allowance <i>Allowances</i>	1.00	LS			25,000			25,000.00 /LS	25,000
	01 21 00.000 <i>Allowances</i>					25,000			25,000.00 /LS	25,000
	1.00 LS									
	01 21 00.000.05 Traffic Control Allowance			0	0	25,000	0	0	25,000.00 /LS	25,000
	1.00 LS									
<hr/>										
01 21 00.000.10	<i>Protection of Existing Landscaping Allowance</i>									
01 21 00.000 n	0925 Protection of Existing Landscaping Allowance <i>Allowances</i>	1.00	LS			25,000			25,000.00 /LS	25,000
	01 21 00.000 <i>Allowances</i>					25,000			25,000.00 /LS	25,000
	1.00 LS									
	01 21 00.000.10 Protection of Existing Landscaping Allowance			0	0	25,000	0	0	25,000.00 /LS	25,000
	1.00 LS									
<hr/>										
01 74 00.000.05	<i>Digester Cover Cleaning, Inspected, Preparation - 1.2.3a</i>									
01 74 00.000 n	0925 Digester Cover Cleaning, Inspected, Preparation - 1.2.3a <i>Cleaning</i>	1.00	LS			25,000			25,000.00 /LS	25,000
	01 74 00.000 <i>Cleaning</i>					25,000			25,000.00 /LS	25,000
	1.00 LS									

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Item	Description	Takeoff Qty	Labor	Material	Subcontract	Equipment	Other	Total		
			Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
	01 74 00.000.05 Digester Cover Cleaning, Inspected, Preparation - 1.2.3a		0	0	25,000		0	0	25,000.00 /LS	25,000
	1.00 LS									
01.21.00.005 Scaffolding Allowance - 2 Digesters										
01 21 00.000	Allowances									
0090	Scaffolding, steel tubular, regular, labor only to erect & dismantle, building exterior, wall face, 6'-4" x 5' frames, 1 to 5 stories, excludes planks	1,000.00 csf	49,046	-	-		-	-	49.046 /csf	49,046
	01 21 00.000 Allowances		49,046						49,045.50 /LS	49,046
	1.00 LS									
	750.00 Labor hours									
	01.21.00.005 Scaffolding Allowance - 2 Digesters		49,046	0	0		0	0	49,045.50 /LS	49,046
	1.00 LS									
	750.00 Labor hours									
DIVISION 01 GENERAL REQUIREMENTS			316,862	207,979	365,002		160,610	0	80,804.037/LS	1,050,452
	13.00 LS									
	4,854.00 Labor hours									
	8,560.00 Equipment hours									
DIVISION 02 EXISTING CONDITIONS										
02 41 00.150.05 Demo (DR) Digester Recirculation DI Pipe, 8" DIA x 21 LF										
02 41 00.150	Process Pipe Demolition									
n	1100 Selective demolition, water & sewer piping & fittings, ductile iron pipe, 6"-12", diameter, excludes excavation	21.00 LF	320	-	-		77	-	18.923 /LF	397
	02 41 00.150 Process Pipe Demolition		320				77		18.923 /LF	397
	21.00 LF									
	6.001 Labor hours									
	1.200 Equipment hours									
	02 41 00.150.05 Demo (DR) Digester Recirculation DI Pipe, 8" DIA x 21 LF		320	0	0		77	0	18.923 /LF	397
	21.00 LF									
	6.001 Labor hours									
	1.200 Equipment hours									

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Item	Description	Takeoff Qty	Labor	Material	Subcontract	Equipment	Other	Total			
			Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount	
<i>02 41 00.150.10 Demo (DM) Digester Mixing DI Pipe, 8" DIA x 10 LF</i>											
<i>02 41 00.150</i>	<i>Process Pipe Demolition</i>										
n	1100 Selective demolition, water & sewer piping & fittings, ductile iron pipe, 6"-12", diameter, excludes excavation	10.00 LF	152	-	-			37	-	18.923 /LF	189
	<i>02 41 00.150 Process Pipe Demolition</i>		152					37		18.923/LF	189
	10.00 LF										
	2.858 Labor hours										
	0.571 Equipment hours										
	<i>02 41 00.150.10 Demo (DM) Digester Mixing DI Pipe, 8" DIA x 10 LF</i>		152	0	0			37	0	18.923/LF	189
	10.00 LF										
	2.858 Labor hours										
	0.571 Equipment hours										
<i>02 41 00.150.15 Demo (DF) Digester Feed DI Pipe, 6" DIA x 10 LF</i>											
<i>02 41 00.150</i>	<i>Process Pipe Demolition</i>										
n	1100 Selective demolition, water & sewer piping & fittings, ductile iron pipe, 6"-12", diameter, excludes excavation	10.00 LF	152	-	-			37	-	18.923 /LF	189
	<i>02 41 00.150 Process Pipe Demolition</i>		152					37		18.923/LF	189
	10.00 LF										
	2.858 Labor hours										
	0.571 Equipment hours										
	<i>02 41 00.150.15 Demo (DF) Digester Feed DI Pipe, 6" DIA x 10 LF</i>		152	0	0			37	0	18.923/LF	189
	10.00 LF										
	2.858 Labor hours										
	0.571 Equipment hours										
DIVISION 02 EXISTING CONDITIONS			625	0	0			151	0	775.84 /LS	776
	1.00 LS										
	11.717 Labor hours										
	2.342 Equipment hours										

DIVISION 26

ELECTRICAL

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes sub-items for Electrical Equipment+Testing/Commissioning, Electrical - Above Ground Raceways, and Electrical - Power Wire and Cable (AG+UG).

DIVISION 40

PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes sub-sections for Unistrut Pipe Supports and Digester Feed DI Pipe.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Amount. Includes sub-items for (DR) Digester Recirculation DI Pipe, 8" DIA x 45 LF.

40 05 19.008.10 (DM) Digester Mixing DI Pipe, 8" DIA x 8 LF

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Amount. Includes sub-items for (DM) Digester Mixing DI Pipe, 8" DIA x 8 LF.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes sub-items for Pipe and Fittings - Ductile Iron, 08" Dia and Replaced Exposed Plug Valves - Phase 1 - 2.

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes rows for DIVISION 40 PROCESS INTEGRATION and 063 BASE BID.

064 ALTERNATE 1

DIVISION 02 EXISTING CONDITIONS

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes rows for 02 41 00.110.10 and 02 41 00.160.05.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes entries for 'Demo Existing Sludge Grinder', 'Demo Existing Vendor Control Panel VCP-17-100', and 'Install Existing Plug Valves, 6" Dia (2 EA)'.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Item	Description	Takeoff Qty	Labor	Material	Subcontract	Equipment	Other	Total		
			Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
	DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)		770	1,877	0		478	0	3,124.79 /LS	3,125
	1.00 LS									
	10.667 Labor hours									
	4.00 Equipment hours									

DIVISION 46

WATER AND WASTEWATER EQUIPMENT

46 01 70.005.05

Install New Sludge Grinder - In-line Muffin Monster Model 10k Series

46 01 70.005	<i>Sludge Removal and Disposal Equipment</i>									
9998	Install New Sludge Grinder - Muffin Monster Model 10k Series - Spec 46 24 23-1	1.00 EA	4,831	15,958	-		1,535	-	22,324.29 /EA	22,324
	<i>46 01 70.005 Sludge Removal and Disposal Equipment</i>		4,831	15,958			1,535		22,324.29 /EA	22,324
	1.00 EA									
	40.00 Labor hours									
	16.00 Equipment hours									
	<i>46 01 70.005.05 Install New Sludge Grinder - In-line Muffin Monster Model 10k Series</i>		4,831	15,958	0		1,535	0	22,324.29 /EA	22,324
	1.00 EA									
	40.00 Labor hours									
	16.00 Equipment hours									

	DIVISION 46 WATER AND WASTEWATER EQUIPMENT		4,831	15,958	0		1,535	0	22,324.29 /EA	22,324
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1.00 EA

40.00 Labor hours

16.00 Equipment hours

064	ALTERNATE 1		10,282	22,099	0		2,968	0	35,348.300/LS	35,348
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1.00 LS

104.728 Labor hours

152.849 Equipment hours

065 ALTERNATE 2

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes sections for DIVISION 02 EXISTING CONDITIONS and DIVISION 03 CONCRETE.

DIVISION 03

CONCRETE

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes items like concrete forms, reinforcing steel, and structural concrete.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Amount, Other Amount, Total Unit Cost, Total Amount. Includes items like '12" Slab on Grade', 'Concrete Slab, 12" Thick', and '32" Foundation Slab'.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes line items for Foundation Slab, Concrete Encasement, Concrete Curb, and Repair Spalled Concrete.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation

Detail Report - Direct Costs

Item	Description	Takeoff Qty	Labor	Material	Subcontract	Equipment	Other	Total		
			Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
	03 31 32.000.05 Repair Spalled Concrete & Treat Exposed Rebar		0	0	5,000		0	0	5,000.00 /LS	5,000
	1.00 LS									
03.35.00.005 Drill in Dowel In Edge - Two Rows										
03 35 00.210	Cast-In-Place Concrete, Drill and Epoxy Rebar Dowel - Medium									
n 9005	Reinforcing steel, in place, drill and epoxy dowels, deformed, 2' long, #5, A615, grade 60; incl drilling into existing concrete and injected epoxy	166.00 EA	50,086	2,490	-		-	-	316.725 /EA	52,576
	03 35 00.210 Cast-In-Place Concrete, Drill and Epoxy Rebar Dowel - Medium		50,086	2,490					316.725/EA	52,576
	166.00 EA									
	747.00 Labor hours									
	03.35.00.005 Drill in Dowel In Edge - Two Rows		50,086	2,490	0		0	0	316.725/EA	52,576
	166.00 EA									
	747.00 Labor hours									
DIVISION 03 CONCRETE			53,763	9,443	5,000		444	0	68,649.95 /LS	68,650
	1.00 LS									
	796.409 Labor hours									
	8.717 Equipment hours									
DIVISION 05 METALS										
05 52 05.500.05 SST Chanel C6x13 Guadrail x 21 LF - SPEC 1.3.B.1c										
05 52 05.500	Steel Railings									
0668	SST Chanel C6x13 Guadrail x 21 LF - SPEC 1.3.B.1c	21.00 LF	2,807	623	-		270	-	176.19 /LF	3,700
	05 52 05.500 Steel Railings		2,807	623			270		176.19 /LF	3,700
	21.00 LF									
	36.653 Labor hours									
	12.218 Equipment hours									
	05 52 05.500.05 SST Chanel C6x13 Guadrail x 21 LF - SPEC 1.3.B.1c		2,807	623	0		270	0	176.19 /LF	3,700
	21.00 LF									
	36.653 Labor hours									
	12.218 Equipment hours									

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes summary row for DIVISION 05 METALS.

DIVISION 22 PLUMBING

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes items for Trench Drain, 4" DIA & 12"x12" Drain Box.

DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes items for Pipeline Testing, Hydro (LF) and Paints & coatings.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes items 4701 and 065 ALTERNATE 2.

066 ALTERNATE 3

DIVISION 05

METALS

Table for Division 05 Metals, including item 05 50 00.315.05 Stairs. Columns include Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Amount, Other Amount, Unit Cost, Total Amount.

AACE Classification Accuracy Range

Upper Range +15%

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes sub-totals for DIVISION 05 METALS.

DIVISION 06 WOOD, PLASTICS & COMPOSITES

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes sub-totals for DIVISION 06 WOOD, PLASTICS & COMPOSITES.

DIVISION 23 HEATING, VENTILATING & AIR-CONDITIONING (HVAC)

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Equipment Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Includes sub-totals for DIVISION 23 HEATING, VENTILATING & AIR-CONDITIONING (HVAC).

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Table with columns: Item, Description, Takeoff Qty, Labor Amount, Material Amount, Subcontract Amount, Name, Equipment Amount, Other Amount, Unit Cost, Total Amount. Rows include HVAC Ductwork, Floc Tank Drop Legs, and New SST Panel On Top of FKC.

DIVISION 40

PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Item	Description	Takeoff Qty		Labor	Material	Subcontract	Equipment	Other	Total	
				Amount	Amount	Amount	Name	Amount	Amount	Unit Cost
<i>40 05 19.036.05 New Elbow Under Screw with Tee, 36" DIA</i>										
<i>40 05 19.036</i>	<i>Pipe and Fittings - Ductile Iron, 36" Dia</i>									
n	1426 Fitting,DIP.FLG.Tee,36"dia,c 110 water piping -	1.00	EA	474	17,619	-	-	-	18,093.09 /EA	18,093
	<i>40 05 19.036 Pipe and Fittings - Ductile Iron, 36" Dia</i>			474	17,619					18,093
	6.40 Labor hours									
	<i>40 05 19.036.05 New Elbow Under Screw with Tee, 36" DIA</i>			474	17,619	0	0	0	18,093.09 /EA	18,093
	1.00 EA									
	6.40 Labor hours									
<i>40 05 70.200.05 Fiberglass Air Damper Valve, "06 Dia - (4 EA)</i>										
<i>40 05 70.200.1</i>	<i>Fiberglass Air Damper Valve, "06 Dia</i>									
n	1080 Fiberglass Air Damper Valve, "06 Dia - (4 EA)	4.00	EA	122	700	-	-	-	205.42 /EA	822
	<i>40 05 70.200.1 Fiberglass Air Damper Valve, "06 Dia</i>			122	700				205.42 /EA	822
	4.00 EA									
	1.684 Labor hours									
	<i>40 05 70.200.05 Fiberglass Air Damper Valve, "06 Dia - (4 EA)</i>			122	700	0	0	0	205.42 /EA	822
	4.00 EA									
	1.684 Labor hours									
	DIVISION 40 PROCESS INTEGRATION (EXPOSED PIPE, VALVES AND GATES)			596	18,319	0	0	0		18,915
	8.084 Labor hours									
	066 ALTERNATE 3			13,983	30,351	0	791	0	45,125.38 /LS	45,125
	1.00 LS									
	130.081 Labor hours									
	9.074 Equipment hours									

Upper Range +15%

AACE Classification Accuracy Range

Lower Range -10%

Marin County - District No. 5
Digester Cleaning and Rehabilitation
Detail Report - Direct Costs

Estimate Totals

Description	Amount	Totals	Rate
Labor	473,986		
Labor Burden	189,594		40.000 %
Premium on Labor - Keep and Retain	52,666		8.000 \$/hr
Material	381,861		
Build America, Buy America Act			
Equipment	175,779		
Discount RS Means Equip (-25%)			
Subcontract	370,002		
Other	314		
DIVISION 05	1,676		25.000 %
DIVISION 06	207		25.000 %
DIVISION 22	766		25.000 %
DIVISION 23	5,594		25.000 %
DIVISION 26	16,773		35.000 %
DIVISION 33			10.000 %
Subtotal Direct Project Costs	25,016	1,669,218	
Contractor's Mob	66,769		4.000 %
Contractor's Home Office Overhead	66,769		4.000 %
Contractor's General Condition	417,305		25.000 %
Subtotal Field Const Costs	550,843	2,220,061	
Sales Tax Estimate (Mat & Eq)	48,096		8.625 %
Subtotal Field Const Costs	48,096	2,268,157	
Contractor's Fee	226,816		10.000 %
Subtotal Field Const Costs	226,816	2,494,973	
Design Contingency			
Subtotal Field Const Costs		2,494,973	
Escalation Project (Year)	60,877		2.440 %
Subtotal	60,877	2,555,850	
Contractor's Bonds & Insurance	63,896		2.500 %
Construction Subtotal	63,896	2,619,746	
Market Volatility Adjustment Factor	261,975		10.000 %
Construction Total	261,975	2,881,721	
Total		2,881,721	

Upper Range +15%

AAACE Classification Accuracy Range

Lower Range -10%

Project Name: Marin San
Facility: Digester Cleaning and Rehabilitation
Design Stage: 100%
Date: March 7, 2024

Prepared By: Keyjon Jefferson



Escalation Adjustment - Calculation Worksheet

Escalation Rate per Year

5.00% = Annual Escalation Rate to Apply (2)

ESCALATION ADJUSTMENT:

Target NTP for Design:	7-Mar-24	<= If design is in progress or completed, use Today's date and adjust input cells as needed	
Design Period:	15-Mar-24	0.27	Mo Duration (or remaining design time duration)
Bid and Award:	14-Apr-24	1	Mo Duration
NTP Date:	21-Apr-24	7	Da Duration for NTP (7 days as default)
Construction Duration (calendar days):	270 Days	9	Mo Duration
Completion Date:	16-Jan-25		102.44% Factor
Mid-Point Construction:	3-Sep-24		
2.44% Esc Rate			
Escalation to Apply to Opinion of Cost			
Current Est Date:	7-Mar-24		
No. of Days to Mid-Point:	180		
No. of Years to Mid-Point:	0.4934		

NOTES:

1. Green cells are input cells. Yellow cells are default values. 30 calendar days is used to equate to 1 month.
2. Escalation percentage does not include any other Market Adjustment Factors that might apply.

The Escalation Rate and Calculations are for purposes of allowing for perceived increases in labor, material and equipment for the period indicated. This is only a projection and an approximation, and does not represent what the actual adjustment will ultimately be since that will vary from what is calculated above.

SCOPE OF SERVICES

Sanitary District No 5 of Marin County

Main Plant Digester Cleaning and Rehabilitation

TASK 0 – OVERAGE FROM DESIGN EFFORT

Overage from design effort due to out-of-scope items/requests from the client, including guiderails for dewatered sludge bin, screw press foul air duct improvements, digester structural upgrades, and writing the Div 00 and Div 01 (front end) specifications.

TASK 1 – PROJECT MANAGEMENT

HDR will provide project management for the duration of the construction, which is estimated to be 9 months in 2024. Project management services will include:

- Preparing and submitting monthly progress reports that include a narrative of the work completed by task, upcoming work, project issues, budget and schedule status, potential scope changes, and other important information.
- Coordination with the internal team, monthly invoice preparation, and quality assurance/quality control (QA/QC).

Deliverables: Monthly invoices and progress reports in PDF format.

TASK 2 – BIDDING SERVICES

Subtask 2.1 - Prebid Meeting

Up to three (3) HDR team members will assist with conducting and attend the mandatory pre-bid meeting and job walk to meet with prospective contractors and answer contractor questions.

Deliverables: Pre-bid meeting minutes.

Subtask 2.2 - Bidding Services

HDR will provide assistance during the bidding period, which includes receiving, recording, and answering contractor questions, and issuing addenda to the contract documents for distribution to plan and specification holders.

Deliverables: Up to two (2) addenda to the bid set of contract documents and written clarification of contractor questions.

Subtask 2.3 - Evaluation of Bids

HDR will assist the OWNER with evaluating the bids, reviewing the bids for conformance with the bid documents, and providing input in the awarding of the contract. OWNER will prepare, negotiate, and execute the construction agreement with the selected contractor.

Deliverables: Bid tabulation sheet and recommendation for award letter.

Subtask 2.4 - Conformed Drawings

HDR will incorporate the addenda into the bid set and provide a “conformed” set of construction documents for reproduction and distribution to plan set holders.

Assumptions: Up to 40 drawings.

Deliverables:

- *PDF copy of the conformed construction specifications at 8 ½” x 11”.*
- *PDF copy of the full-size (22” x 34”) conformed drawings.*

TASK 3 - ENGINEERING SERVICES DURING CONSTRUCTION

Subtask 3.1 - Preconstruction Meeting

HDR will attend and lead a single preconstruction meeting with the contractor and OWNER prior to commencement of work at the site. It is assumed the preconstruction meeting will be virtual and up to 3 hours in length. Up to four (4) HDR team members will attend the preconstruction meeting.

Deliverables: Meeting notes.

Assumptions: Meeting will be virtual and up to 3 hours in length.

Subtask 3.2 – Construction Progress Meetings

HDR will attend and participate in contractor-led weekly progress meetings during construction. It is assumed that the contractor will schedule and lead the meeting, prepare the required materials, and prepare and distribute meeting minutes. HDR will review and provide comments on meeting minutes.

Deliverables: Comments on contractor-prepared meeting minutes as needed.

Assumptions:

- *Budget includes 36 virtual meetings, assumed to be up to one hour in length.*
- *Up to four (4) HDR team members will attend.*
- *Meetings will be led by contractor.*
- *Meeting minutes and agenda will be prepared by contractor.*

- *Construction progress meeting is held on the same day as site visit by HDR's construction inspector.*

Subtask 3.3 - Site Visits

HDR will visit the construction site to assist OWNER with reviewing the acceptability of the work and resolving field problems.

HDR will provide an operations specialist to oversee the purging of both the primary digester and secondary digester.

HDR will perform on-site observations to check the quality and quantity of the work performed by the contractor to assist OWNER with guarding against defects and deficiencies in the work.

The HDR inspector will take construction photographs to document the progress and special situations. Construction photographs will be stored and provided to OWNER in digital format at the close of the project.

Deliverables: Construction observation logs and digital construction photographs.

Assumptions:

- *HDR's operations specialist will be on-site two (2) days per week, eight (8) hours per day during the one (1) week that the primary digester is purged and the one (1) week the secondary digester is purged for a total of four (4) full day site visits. HDR's operations specialist will also make up to seven (7) half-day (4 hours) site visits.*
- *HDR's construction inspector will be on-site one (1) day per week, eight (8) hours per day, for thirty-six (36) weeks. HDR's construction specialist will also make up to nine (9) full-day (8-hours) site visits for a total of 45 site visits. Construction inspector will attend construction meeting during site visits.*
- *HDR's senior inspector will make up to two (2) site visits at six (6) hours each visit to perform electrical and other inspections and support the construction inspector.*
- *HDR's structural engineer will make up to two (2) site visits at six (6) hours each visit to perform structural inspections of existing conditions and contractor's work.*

Subtask 3.4 – Requests for Information (RFIs)

HDR will answer questions and provide written interpretations of the requirements of the contract documents and evaluate the acceptability of substitute materials and equipment.

HDR will maintain the clarifications log for OWNER.

Deliverables: Up to 20 RFIs are budgeted. RFI review will be up to the limit of the task budget. Expected additional work will be brought to the OWNER's attention prior to budget exhaustion.

Subtask 3.5 - Submittals/Resubmittals

HDR will review and comment on the contractor's submittals, such as sequencing plans, shop drawings, product data, samples, substitution requests, operations and maintenance (O&M) manuals, and other data, for the limited purpose of checking for conformance with the design concept and the information expressed in the contract documents.

HDR will maintain the submittal log for OWNER.

Deliverables: Up to 45 submittals/resubmittals are budgeted. Submittal review will be up to the limit of the task budget. Expected additional work will be brought to the OWNER's attention prior to budget exhaustion.

Assumptions: Substitution requests will be reviewed as a submittal and are included in the budgeted number.

Subtask 3.6 – Design Clarifications

HDR will prepare up to one design clarification to clarify the intent of the contract documents or document changes to the design, as well as advise the OWNER on impact thereof to the project. This includes, as necessary, reissuing revised specifications, drawings, and/or sketches, to clarify the intent of the contract documents. It is assumed that the OWNER will utilize the design clarification to produce contract change orders.

Assumptions: Up to one (1) design clarification memos.

Subtask 3.7 - Record Drawings

HDR will prepare record drawings based on redlines provided by the contractor, showing record information based on RFIs, shop drawings, and other record documents provided by the contractor, and which were annotated by the contractor's staff, contractor's subcontractors, or suppliers to show changes made during construction, relative to those issued for construction drawings. Up to 40 drawings are assumed.

Record drawings will not include stamps or signatures. One iteration of back checking will be performed.

Deliverables: PDF copy of full-size (22" x 34") as-built record drawings.

Assumptions:

- *No budget has been included for on-site verification. On-site verification of record drawing redlines will occur as part of the observation site visits or as-needed construction meeting tasks.*
- *HDR is not responsible for omissions or errors in the information provided by others and incorporated into the record drawings.*

EXCLUSIONS

The following is not included in the scope of work and budget at this time:

- Review of potential change orders and other potential project changes prepared by the contractor.
- Review progress pay requests prepared by the contractor.
- Startup and testing.
- Preparation of O&M manual.

Table 1 - Estimated Work Effort and Cost

Sanitary District No. 5 of Marin County

Main Plant Digester Cleaning and Rehabilitation

Task No.	Task Description	QA/QC	Project Manager	Construction Manager	Project Engineer	Staff Engineer	Structural Engineer	Electrical Engineer	Construction Inspector	Electrical Inspector	Ops	CADD Tech	Project Controller	Admin/ Clerical	Total HDR Labor Hours	Total HDR Labor (\$)	Training Fund	Total HDR Expenses (\$)	Total Cost (\$)
Task 0 - Overage from Design Effort																			
0.1	Overage from Design	4	34			80	40	40							198	\$49,911		\$89	\$50,000
	Subtotal Task 0	4	34	0	0	80	40	40	0	0	0	0	0	0	198	\$49,911		\$89	\$50,000
Task 1 - Project Management																			
1.1	Project Management		18			18							27		63	\$13,232			\$13,232
	Subtotal Task 1	0	18	0	0	18	0	0	0	0	0	0	27	0	63	\$13,232		\$0	\$13,232
Task 2 - Bidding Services																			
2.1	Prebid Meeting			8		10					8				26	\$6,968		\$375	\$7,343
2.2	Bidding Services (up to 2 addenda)			1		15	2				2	6		6	32	\$5,304			\$5,304
2.3	Evaluation of Bids			2		2					2				6	\$1,671			\$1,671
2.4	Conformed Drawings (up to 40 drawings)		1			10						20			31	\$4,613			\$4,613
	Subtotal Task 2	0	1	11	0	37	2	0	0	0	12	26	0	6	95	\$18,556		\$375	\$18,931
Task 3 - Engineering Services During Construction																			
3.1	Preconstruction Meeting (up to 3 hours, virtual)					3	3		3		3				12	\$2,957	\$3		\$2,961
3.2	Construction Progress Meetings (up to 36)					36	36		0		36				108	\$26,010	\$0		\$26,010
3.3	Site Visits (up to 60)						12		360	12	60				444	\$118,556	\$420	\$7,726	\$126,703
3.4	RFIs (up to 20)				18	20	9	8			20			16	91	\$20,104			\$20,104
3.5	Submittals/Resubmittals (up to 45)				39	40	21	2			30			25	157	\$34,304			\$34,304
3.6	Design Clarifications (up to 1)					5	3				2	5			15	\$2,873			\$2,873
3.7	Record Drawings (up to 40 drawings)	2				4	4	2				12			24	\$4,857			\$4,857
	Subtotal Task 3	2	0	0	57	108	88	12	363	12	151	17	0	41	851	\$209,662	\$424	\$7,726	\$217,811
TOTALS		6	53	11	57	243	130	52	363	12	163	43	27	47	1,207	\$291,361	\$424	\$8,190	\$299,974

WATER TREATMENT PLANT IMPROVEMENT PROGRAM

M.P. Project Description	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2028/2029	2029/2030	2030/2031	2031/2032	2032/2033	TOTAL
Secondary Clarifier Scum Collector Project	300,000										300,000
Dry Weather Influent Pump						50,000					50,000
Wet Weather Influent Pump				75,000							75,000
M.P. Boiler Replacement							75,000				75,000
Headworks Influent Screen Project						500,000					500,000
MP Electric Roll Up Door Install	75,000										75,000
MP Corosion Protection Project	150,000									150,000	300,000
(Utility) Truck Purchase				200,000				100,000		100,000	400,000
Dewatering Redundancy --Screw Press					300,000						300,000
Aeration Basin Diffuser Upgrade									200,000		200,000
Emergency Generator Replacement						250,000					250,000
Maintenance Shop-Rehabilitation	100,000										100,000
MP Occupancy Project		750,000	750,000								1,500,000
Digester Roof Recoating and Cleaning	600,000							250,000			850,000
Landscaping Improvements Project		50,000									50,000
Odor Control System Rehabilitation							650,000				650,000
Headworks Valve and Check Valve Replacement											0
HVAC Replacement Project				200,000							200,000
Cl2 Flash Mixer			35,000			35,000				35,000	105,000
MPR Bond Refi	760,412	760,284	759,784	758,912	757,668	761,052	758,940	761,456	763,476		6,841,984
Undesignated Capital Projects	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	500,000
Treatment Plant Total	1,275,000	850,000	835,000	525,000	350,000	885,000	775,000	400,000	250,000	335,000	6,480,000

WATER TREATMENT PLANT CAPITAL IMPROVEMENT PROGRAM

CS CIP Project Description	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2028/2029	2029/2030	2030/2031	2031/2032	2032/2033	TOTAL
Sewer Line Rehabilitation Program		1,500,000	750,000	750,000	750,000	700,000	700,000	700,000	700,000	525,000	7,075,000
CCTV and I&I Investigation Project	250,000									150,000	400,000
Pump and Valve Replacement Program	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000
Force Main Rehabilitation TPS #5-1303lf 8"											0
Man Hole Rehabilitation	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	750,000
TPS #2 Wet Well & Force Main Rehabilitation											0
TPS #3 Wet Well & Force Main Rehabilitation											0
TPS#4 Wet Well & Force Main Rehabilitation	50,000										50,000
TPS #8: Wet Well & Force Main Rehabilitation											0
TPS #6 Wet Well & Force Main Rehabilitation					400,000						400,000
TPS #7 Wet Well & Force Main rehabilitation											0
TPS #9 Wet Well Force Main Rehabilitation		350,000									350,000
BPS #1 Electrical Improvement Project	600,000	600,000									1,200,000
BPS #2 Force Main&Wet Well Rehabilitation						500,000					500,000
BPS #3 Force Main& Wet Well Rehabilitation Proj							510,000				510,000

BPS #7: Wet Well Rehabilitation			420,000								420,000
BPS#5,#8,#12 Wet Well Rehabilitation Project											0
BPS #9,#10,#11 Wet Well Rehabilitation											0
BPS #13 Force Main Rehabilitation Project											0
BPS #14 Force Main Rehabilitation Project											0
Power Feed Improvement Project (BPS#9,#10,#11)											0
San Rafael Ave Diverter Line Install	25,000										25,000
Portable Pump Replacement			50,000							50,000	100,000
Undesignated Capital Projects	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	500,000
Collection System Total	1,150,000	2,675,000	1,445,000	975,000	1,375,000	1,425,000	1,435,000	925,000	925,000	950,000	13,280,000

IT CAPITAL IMPROVEMENT PROGRAM

Paradise Cove Project Description	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2028/2029	2029/2030	2030/2031	2031/2032	2032/2033	TOTAL
Paradise Sewer Line Rehab Project		200,000	100,000	100,000	100,000						500,000
Grit Removal Project							50,000				50,000
Plant Grating Replacement- Fiberglass					25,000						25,000
Building Rehabilitation			250,000								250,000
Blower Replacement		20,000					20,000				40,000
P Cove Access Improvements	100,000										100,000
Pump Replacement Program		50,000				50,000				50,000	150,000
Paint Treatment Plant								150,000			150,000
Undesignated Capital Projects	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	250,000
Paradise Cove Total	125,000	295,000	375,000	125,000	150,000	75,000	95,000	175,000	25,000	75,000	1,515,000

SUMMARY OF CAPITAL IMPROVEMENT PROGRAM

Project Descriptions	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2028/2029	2029/2030	2030/2031	2031/2032	2032/2033	TOTAL
Main Plant	1,275,000	850,000	835,000	525,000	350,000	885,000	775,000	400,000	250,000	335,000	6,480,000
Collection System	1,150,000	2,675,000	1,445,000	975,000	1,375,000	1,425,000	1,435,000	925,000	925,000	950,000	13,280,000
Paradise Cove Plant	125,000	295,000	375,000	125,000	150,000	75,000	95,000	175,000	25,000	75,000	1,515,000
MPR Debt Service + 2020 Refi	760,412	760,284	759,784	758,912	757,668	761,052	758,940	761,456	763,476	0	6,841,984
TOTAL	3,310,412	4,580,284	3,414,784	2,383,912	2,632,668	3,146,052	3,063,940	2,261,456	1,963,476	1,360,000	28,116,984