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The Art of Estimating Fees:

Unlocking Profitable Projects for Your Engineering Firm

June 10, 2025

TEIGER CONSULTING

Facilitated by:
Fiona Johann, PMP, AEC PM
 Strategic Initiatives Team Lead
 Engineering Management Institute

Presented by:
Douglas Teiger, FAIA
 Founder
 Teiger Consulting

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EMI QUALITY ASSURANCE

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» PURPOSE & LEARNING OBJECTIVES

Purpose: To equip engineers with practical tools and strategies to accurately estimate project fees aligned with scope and cost, ensuring project profitability and effective resource management.

- Identify the correlation between project scope, estimated project cost, and fee
- Develop a Rough Order of Magnitude (ROM) for construction costs in a simple way
- Create a top-down approach to fee estimation based on percentage of costs as a guideline
- Estimate fees, whether they are for hourly or fixed-fee projects
- Define the allocation of hours for each project phase and develop strategies to effectively manage them

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INTRODUCTION

Fiona Johann, PMP, AEC PM



Fiona

Johann, PMP, AEC PM

- **PMP-certified Project Manager** with a background in higher education leadership
- Partners with AEC professionals to build strong project management and leadership skills
- Experienced in strategic initiatives, program development, and stakeholder engagement
- Focused on helping engineers become confident, effective project leaders

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INTRODUCTION

Douglas Teiger, FAIA



Douglas

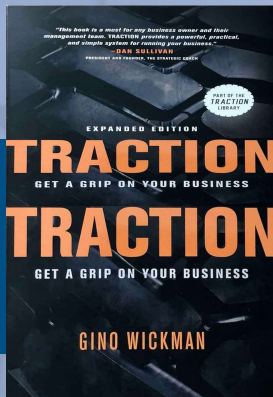
Teiger, FAIA

- Graduate from Cornell University, in 1982 with BARCH
- He opened his own firm in 1989
- Grew from a solo practitioner to becoming managing partner in his 32-person firm
- Master's in Spiritual Psychology from USM in 2009
- He served as President of the AIA Los Angeles Chapter in 2017
- Transitioned out of his firm elevating three associates to partners, sold his shares and started his next venture, Teiger Consulting

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Recommendations



Traction
by Gino Wickman
eosworldwide.com



Architects' Guide to Fee Bidding
by M. Paul Nicholson
amazon.com

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Define Project Scope with ROM of Construction Cost

ONLY MODIFY YELLOW CELLS

Project Data	Bldg Code SF	Cost/SF	Cost
1 Habital Space SF (Measured to Exterior Walls)	5,000.00	\$ 500.00	\$ 2,500,000.00
2 Covered Outdoor Patios & 2nd floor decks	750.00	\$ 200.00	\$ 150,000.00
3 Other SCOPE OF WORK	-	\$ -	\$ -
4 Hardscape SF (Estimated Budget for what you design, not Landscape Architect)			\$ 150,000.00
5 Other Items based on a \$/SF			\$ -
6 Pool			\$ 150,000.00
7 Other Items with a Lump Sum Costs not part of fee but to understand total project construction costs			\$ -
8 Estimated Construction Cost	5,750.00		\$ 2,950,000.00 \$ 2,800,000.00

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Fees Based on a % of a Cost

Phases	Fee as %	Fee/SF	Fee
1 Pre-Design (Name whatever you want)	0.25%	\$ 1.22	\$ 7,000.00
2 Net Architecture Fee SD-BD	8.00%	\$ 38.96	\$ 224,000.00
3 HOURLY Est. Fee CA (Internal use)	2.90%	\$ 14.13 See below to calculate CA Fee	\$ 81,270.00
4 Total Arch Fee Inc CA	11.15%	\$ 54.31	\$ 312,270.00

CA Fee Calculation		
5 Months of CA	18	
6 Average # of Weeks / Month	4.3	
7 Total Weeks	77.4	
8 Average Hours/Week of CA (Est)	6 based on 1 person	
9 CA Average Bill Rate	\$ 175.00	
10 CA Total Cost based on hourly Est.	\$ 81,270.00	
11 CA Cost per month	\$ 4,515.00	

Estimate CA Hourly Fees

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» Fees Based Proposal

Option A: Full Service

Architectural Services by Phase	Amount
Phase 0 : Concept	\$ 7,000.00
Phase 1 : Schematic Design Phase	\$ 67,200.00
Phase 2 : Design Development Phase	\$ 33,600.00
Phase 3 : Construction Document Phase	\$ 100,800.00
Phase 4 : Expediting Permit Phase	\$ 11,200.00
Phase 5 : Bidding Phase	\$ 11,200.00
Phase 6 : Construction Admin Phase*	\$ 81,270.00
* Estimated Hourly	
TOTAL	\$ 312,270.00

Option B: Selective Service

Architectural Services by Phase	Amount
Phase 0 : Concept (Re-Name as Req'd)	\$ 7,000.00
Sub-Total	\$ 7,000.00
Phase 1 : Schematic Design Phase	\$ 52,640.00
Phase 2 : Design Development Phase	\$ 19,740.00
Phase 3 : Construction Document Phase	\$ 59,220.00
Sub-Total	\$ 131,600.00
Phase 4 : Permit Phase	\$ 11,200.00
Phase 5 : Bidding Phase	\$ 11,200.00
Phase 6 : Construction Admin Phase	\$ 81,270.00
Phase 7 : Architectural Detailing	\$ 35,000.00
Phase 8 : Interior Architectural Services	\$ 35,000.00
TOTAL	\$ 312,270.00

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» Fees Based on a % of a Cost: Option A

Phases	Fee as %	Fee/SF	Fee
1 Pre-Design (Name whatever you want)	0.25%	\$ 1.22	\$ 7,000.00
2 Net Architecture Fee SD-BD	8.00%	\$ 38.96	\$ 224,000.00
3 HOURLY Est. Fee CA (Internal use)	2.90%	\$ 14.13 See below to calculate CA Fee	\$ 81,270.00
4 Total Arch Fee Inc CA	11.15%	\$ 54.31	\$ 312,270.00

CA Fee Calculation

5 Months of CA	18	
6 Average # of Weeks / Month	4.3	
7 Total Weeks	77.4	
8 Average Hours/Week of CA (Est)	6	based on 1 person
9 CA Average Bill Rate	\$ 175.00	
10 CA Total Cost based on hourly Est.	\$ 81,270.00	
11 CA Cost per month	\$ 4,515.00	

Estimate CA Hourly Fees

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Fees Based on a % of a Cost: Option B

Phases	Fee as %	Fee/SF	Fee
1 Pre-Design (Name whatever you want)	0.25%	\$ 1.22	\$ 7,000.00
2 Architectural Permit Set SD-DD-CD	5.00%	\$ 24.35	\$ 140,000.00
3 Expediting Permit Services (Hourly)	0.40%	\$ 1.95	\$ 11,200.00
4 Bidding Services	0.40%	\$ 1.95	\$ 11,200.00
5 Const. Admin. HOURLY (Est. Fee for Internal use)	2.90%	\$ 14.13	See below to calculate CA Fee \$ 81,270.00
6 Architectural Detailing Services	1.20%	\$ 5.84	\$ 33,600.00
7 Interior Architectural services	1.00%	\$ 4.87	\$ 28,000.00
8 Total Arch Fee Inc CA	11.15%	\$ 54.31	\$ 312,270.00

CA Fee Calculation		
9 Months of CA	18	
10 Average # of Weeks / Month	4.3	
11 Total Weeks	77.4	
12 Average Hours/Week of CA (Est)	6	based on 1 person
13 CA Average Bill Rate	\$ 175.00	
14 CA Total Cost based on hourly Est.	\$ 81,270.00	
15 CA Cost per month	\$ 4,515.00	

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Breakdown by Phase and Hours: Option B

Phases	Fee as %	Fee/SF	Fee	Reduction %	Extra Profit	Revised Estimate
1 Pre-Design (Name whatever you want)	0.25%	\$ 1.22	\$ 7,000.00	10%	\$ 700.00	\$ 6,300.00
2 Architectural Permit Set SD-DD-CD	5.00%	\$ 24.35	\$ 140,000.00	10%	\$ 14,000.00	\$ 126,000.00
3 Expediting Permit Services (Hourly)	0.40%	\$ 1.95	\$ 11,200.00	10%	\$ 1,120.00	\$ 10,080.00
4 Bidding Services	0.40%	\$ 1.95	\$ 11,200.00	10%	\$ 1,120.00	\$ 10,080.00
5 Const. Admin. HOURLY (Est. Fee for Internal use)	2.90%	\$ 14.13	See below to calculate CA Fee \$ 81,270.00	10%	\$ 8,127.00	\$ 73,143.00
6 Architectural Detailing Services	1.20%	\$ 5.84	\$ 33,600.00	10%	\$ 3,360.00	\$ 30,240.00
7 Interior Architectural services	1.00%	\$ 4.87	\$ 28,000.00	10%	\$ 2,800.00	\$ 25,200.00
8 Total Arch Fee Inc CA	11.15%	\$ 54.31	\$ 312,270.00		\$ 31,227.00	\$ 281,043.00

Architectural Services by Phase	% Per Phase	Amount	Use for Invoice	Reduction Use for BQE	Ave Bill Rate	Actual Hrs by Role		Based on a utilized work week	Profit
						165.00	162.26		
10 Phase 0: Concept Pre-Design	100.0%	\$ 7,000.00	\$ 6,300.00		38	37	0	1	100.0%
11 Phase 00: Entitlement	0.0%	\$ -	\$ -		0	0	0	0	0.0%
Sub-Total Pre-Design	100%	\$ 7,000.00	\$ 6,300.00		38	37	0	1	
12 Phase 1: Schematic Design Phase	40.0%	\$ 56,000.00	\$ 50,400.00		305	303	0	9	100.0%
13 Phase 2: Design Development Phase	15.0%	\$ 21,000.00	\$ 18,900.00		115	118	0	3	100.0%
14 Phase 3: Construction Document Phase	45.0%	\$ 63,000.00	\$ 56,700.00		344	347	0	10	100.0%
Sub-Total Permit Set	100%	\$ 140,000.00	\$ 126,000.00		764	768	0	22	
15 Phase 4: Permit Phase	100.00%	\$ 11,200.00	\$ 10,080.00		61	64	0	2	100.0%
16 Phase 5: Bidding Phase	100.00%	\$ 11,200.00	\$ 10,080.00		61	59	0	2	100.0%
17 Phase 6: Construction Admin Phase	100.00%	\$ 81,270.00	\$ 73,143.00		443	466	0	13	100.0%
18 Phase 7: Architectural Detailing	100.00%	\$ 33,600.00	\$ 30,240.00		183	185	0	5	100.0%
19 Phase 8: Interior Architectural Services	100.00%	\$ 28,000.00	\$ 25,200.00		153	154	0	4	100.0%
20 TOTAL		\$ 312,270.00	\$ 281,043.00		1703	1732	0	72	100.0%

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Fee by Percent by Phase: Option A

Phases	Fee as %	Fee/SF	Fee	Reduction %	Extra Profit	Revised Estimate
1 Pre-Design (Name whatever you want)	0.25%	\$ 1.22	\$ 7,000.00	10%	\$ 700.00	\$ 6,300.00
2 Net Architecture Fee SD-BD	8.00%	\$ 38.96	\$ 224,000.00	10%	\$ 22,400.00	\$ 201,600.00
3 HOURLY Est. Fee CA (Internal use)	2.90%	\$ 14.13 See below to calculate CA Fee	\$ 81,270.00	10%	\$ 8,127.00	\$ 73,143.00
4 Total Arch Fee Inc CA	11.15%	\$ 54.31	\$ 312,270.00	0	\$ 31,227.00	\$ 274,743.00

Architectural Services by Phase	% of Fee	Amount	Amount	HRS / Phase	Hours	Actual	Work Wks	Profit
6 Phase 0 : Concept (Re-Name as Req'd)	100.0%	\$ 7,000.00	\$ 6,300.00	38	37	0	1	100.0%
7 Phase 00 : Entitlement (Re-Name as Req'd)	0.0%	\$ -	\$ -	0	0	0	0	0.0%
Sub-Total	100%	\$ 7,000.00	\$ 6,300.00	38	37	0	1	
8 Phase 1 : Schematic Design Phase	35.0%	\$ 78,400.00	\$ 70,560.00	428	425	0	12	100.0%
9 Phase 2 : Design Development Phase	15.0%	\$ 33,600.00	\$ 30,240.00	183	189	0	5	100.0%
10 Phase 3 : Construction Document 50% PC Submit	40.0%	\$ 89,600.00	\$ 80,640.00	489	493	0	14	100.0%
11 Phase 4 : Expediting Permit Phase	5.0%	\$ 11,200.00	\$ 10,080.00	61	64	0	2	100.0%
12 Phase 5 : Bidding Phase	5.0%	\$ 11,200.00	\$ 10,080.00	61	59	0	2	100.0%
Sub-Total	100%	\$ 224,000.00	\$ 201,600.00	1222	1229	0	35	
13 Phase 6 : Construction Admin Phase	100%	\$ 81,270.00	\$ 73,143.00	443	466	0	13	100.0%
14 TOTAL		\$ 312,270.00	\$ 281,043.00	1703	1732	0		100.0%

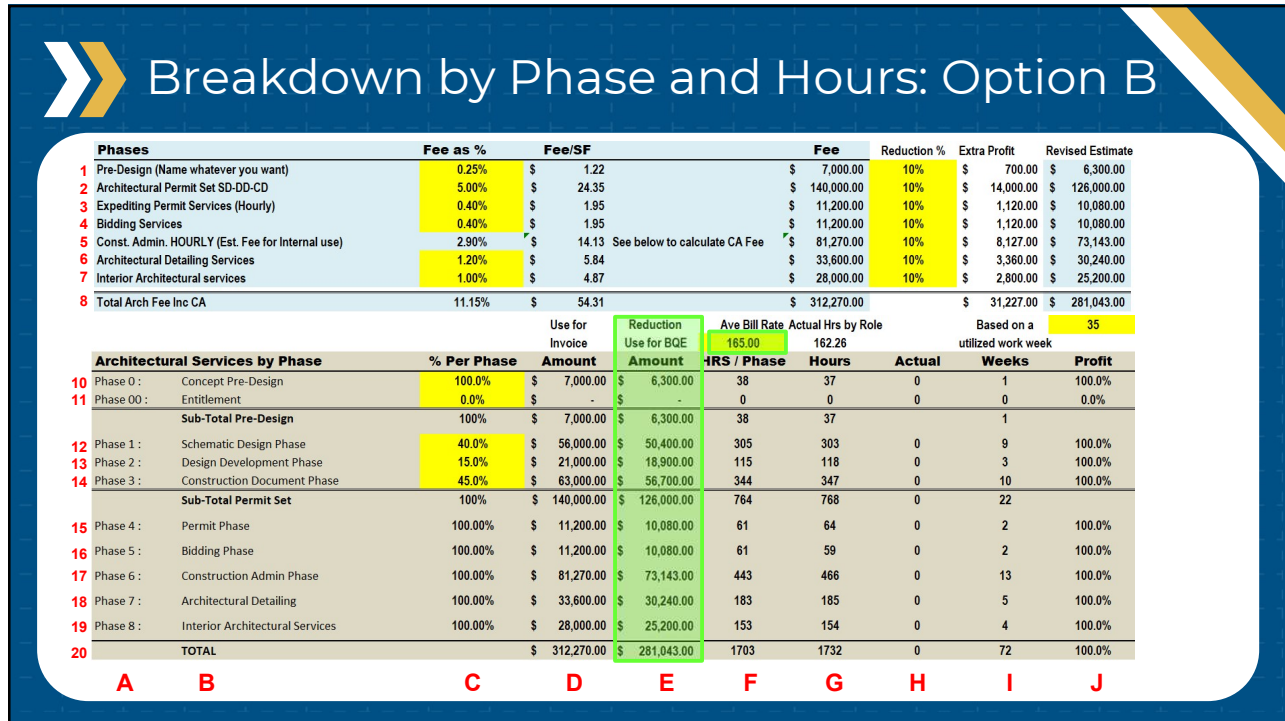
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Breakdown by Phase and Hours: Option B

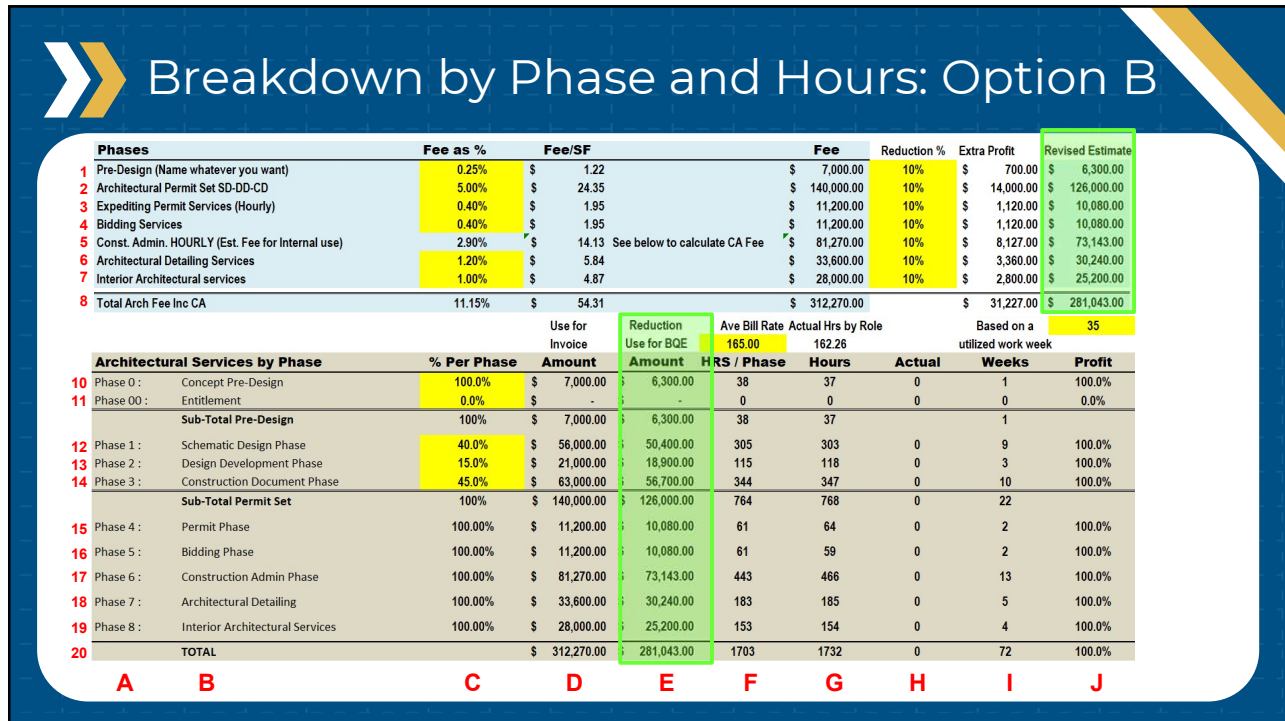
Phases	Fee as %	Fee/SF	Fee	Reduction %	Extra Profit	Revised Estimate
1 Pre-Design (Name whatever you want)	0.25%	\$ 1.22	\$ 7,000.00	10%	\$ 700.00	\$ 6,300.00
2 Architectural Permit Set SD-DD-CD	5.00%	\$ 24.35	\$ 140,000.00	10%	\$ 14,000.00	\$ 126,000.00
3 Expediting Permit Services (Hourly)	0.40%	\$ 1.95	\$ 11,200.00	10%	\$ 1,120.00	\$ 10,080.00
4 Bidding Services	0.40%	\$ 1.95	\$ 11,200.00	10%	\$ 1,120.00	\$ 10,080.00
5 Const. Admin. HOURLY (Est. Fee for Internal use)	2.90%	\$ 14.13 See below to calculate CA Fee	\$ 81,270.00	10%	\$ 8,127.00	\$ 73,143.00
6 Architectural Detailing Services	1.20%	\$ 5.84	\$ 33,600.00	10%	\$ 3,360.00	\$ 30,240.00
7 Interior Architectural services	1.00%	\$ 4.87	\$ 28,000.00	10%	\$ 2,800.00	\$ 25,200.00
8 Total Arch Fee Inc CA	11.15%	\$ 54.31	\$ 312,270.00		\$ 31,227.00	\$ 281,043.00

Architectural Services by Phase	% Per Phase	Amount	Amount	HRS / Phase	Hours	Actual	Weeks	Profit
10 Phase 0 : Concept Pre-Design	100.0%	\$ 7,000.00	\$ 6,300.00	38	37	0	1	100.0%
11 Phase 00 : Entitlement	0.0%	\$ -	\$ -	0	0	0	0	0.0%
Sub-Total Pre-Design	100%	\$ 7,000.00	\$ 6,300.00	38	37	0	1	
12 Phase 1 : Schematic Design Phase	40.0%	\$ 56,000.00	\$ 50,400.00	305	303	0	9	100.0%
13 Phase 2 : Design Development Phase	15.0%	\$ 21,000.00	\$ 18,900.00	115	118	0	3	100.0%
14 Phase 3 : Construction Document Phase	45.0%	\$ 63,000.00	\$ 56,700.00	344	347	0	10	100.0%
Sub-Total Permit Set	100%	\$ 140,000.00	\$ 126,000.00	764	768	0	22	
15 Phase 4 : Permit Phase	100.00%	\$ 11,200.00	\$ 10,080.00	61	64	0	2	100.0%
16 Phase 5 : Bidding Phase	100.00%	\$ 11,200.00	\$ 10,080.00	61	59	0	2	100.0%
17 Phase 6 : Construction Admin Phase	100.00%	\$ 81,270.00	\$ 73,143.00	443	466	0	13	100.0%
18 Phase 7 : Architectural Detailing	100.00%	\$ 33,600.00	\$ 30,240.00	183	185	0	5	100.0%
19 Phase 8 : Interior Architectural Services	100.00%	\$ 28,000.00	\$ 25,200.00	153	154	0	4	100.0%
20 TOTAL		\$ 312,270.00	\$ 281,043.00	1703	1732	0	72	100.0%

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Schedule: Option B

Architectural Services by Phase	% Per Phase	Amount	Use for Invoice	Reduction Use for BQE	Ave Bill Rate	Actual Hrs by Role	Actual	Weeks	Profit	WEEKS	Start	25%	50%	75%	Finish
Phase 0 : Concept Pre-Design	100.0%	\$ 7,000.00	\$ 6,300.00	38	37	0	1	100.0%	2	6/10/2021	6/13/2021	6/17/2021	6/20/2021	6/24/2021	
Phase 00 : Entitlement	0.0%	\$ -	\$ -	0	0	0	0	0.0%	0	7/8/2021	7/8/2021	7/8/2021	7/8/2021	7/8/2021	
Sub-Total Pre-Design	100%	\$ 7,000.00	\$ 6,300.00	38	37	0	1	100.0%	2						
Phase 1 : Schematic Design Phase	40.0%	\$ 56,000.00	\$ 50,400.00	305	303	0	9	100.0%	8	9/2/2021	9/16/2021	9/30/2021	10/14/2021	10/28/2021	
Phase 2 : Design Development Phase	15.0%	\$ 21,000.00	\$ 18,900.00	115	118	0	3	100.0%	4	10/28/2021	11/4/2021	11/11/2021	11/18/2021	11/25/2021	
Phase 3 : Construction Document Phase	45.0%	\$ 63,000.00	\$ 56,700.00	344	347	0	10	100.0%	10	11/25/2021	12/12/2021	12/30/2021	1/16/2022	2/3/2022	
Sub-Total Permit Set	100%	\$ 140,000.00	\$ 126,000.00	764	768	0	22	100.0%	22	5.12	(Months)				
Phase 4 : Permit Phase	100.00%	\$ 11,200.00	\$ 10,080.00	61	64	0	2	100.0%	12	12/30/2021	1/20/2022	2/10/2022	3/3/2022	3/24/2022	
Phase 5 : Bidding Phase	100.00%	\$ 11,200.00	\$ 10,080.00	61	59	0	2	100.0%	0	2/3/2022	2/3/2022	2/3/2022	2/3/2022	2/3/2022	
Phase 6 : Construction Admin Phase	100.00%	\$ 81,270.00	\$ 73,143.00	443	466	0	13	100.0%	77	2/18/2022	7/3/2022	11/15/2022	3/31/2023	8/13/2023	
Phase 7 : Architectural Detailing	100.00%	\$ 33,600.00	\$ 30,240.00	183	185	0	5	100.0%	5	12/30/2021	2/11/2022	2/3/2022	3/1/2022	2/3/2022	
Phase 8 : Interior Architectural Services	100.00%	\$ 28,000.00	\$ 25,200.00	153	154	0	4	100.0%	5	12/30/2021	2/11/2022	2/3/2022	3/1/2022	2/3/2022	
TOTAL		\$ 312,270.00	\$ 281,043.00	1703	1732	0	72	100.0%							

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Schedule: Option B

Architectural Services by Phase	WEEKS	Start	25%	50%	75%	Finish
Phase 0 : Concept Pre-Design	2	6/10/2021	6/13/2021	6/17/2021	6/20/2021	6/24/2021
Phase 00 : Entitlement	0	7/8/2021	7/8/2021	7/8/2021	7/8/2021	7/8/2021
Sub-Total Pre-Design	2					
Phase 1 : Schematic Design Phase	8	9/2/2021	9/16/2021	9/30/2021	10/14/2021	10/28/2021
Phase 2 : Design Development Phase	4	10/28/2021	11/4/2021	11/11/2021	11/18/2021	11/25/2021
Phase 3 : Construction Document Phase	10	11/25/2021	12/12/2021	12/30/2021	1/16/2022	2/3/2022
Sub-Total Permit Set	22	5.12	(Months)			
Phase 4 : Permit Phase	12	12/30/2021	1/20/2022	2/10/2022	3/3/2022	3/24/2022
Phase 5 : Bidding Phase	0	2/3/2022	2/3/2022	2/3/2022	2/3/2022	2/3/2022
Phase 6 : Construction Admin Phase	77	2/18/2022	7/3/2022	11/15/2022	3/31/2023	8/13/2023
Phase 7 : Architectural Detailing	5	12/30/2021	2/11/2022	2/3/2022	3/1/2022	2/3/2022
Phase 8 : Interior Architectural Services	5	12/30/2021	2/11/2022	2/3/2022	3/1/2022	2/3/2022
TOTAL						

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Hours per Phase

Weeks for each phase	2	0	8	4	10	12	0	77	5	5		
	\$ 6,300.00	\$ -	\$ 50,400.00	\$ 18,900.00	\$ 56,700.00	\$ 10,080.00	\$ 10,080.00	\$ 73,143.00	\$ 30,240.00	\$ 25,200.00	\$ 281,043.00	
	100%	0%	100%	100%	100%	100%	100%	100%	100%	100%		
Budgeting by Role and Phase	Concept Pre-Design	Entitlement	SD	DD	CD	PT	BD	CA	AD	ID	TOTALS	
Partner	% involved in this phase	20%	0%	10%	5%	10%	10%	5%	10%	10%		
\$ 250.00	\$ of Fee	\$ 1,260.00	\$ -	\$ 5,040.00	\$ 945.00	\$ 5,670.00	\$ 1,008.00	\$ 504.00	\$ 7,314.30	\$ 3,024.00	\$ 27,285.30	
	Hrs Allowed	5	0	20	4	23	4	2	29	12	109	
	Hrs Actual										0	
	Remaining Hours in Phase	5	0	20	4	23	4	2	29	12	109	
	% Over/Under	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
	Ave Hrs/WK based on Schedule	2.5	0.0	2.5	0.9	2.3	0.3	0.0	0.4	2.4	2.0	
Senior Staff	% involved in this phase	30%	0%	40%	30%	30%	10%	75%	70%	30%		
\$ 175.00	\$ of Fee	\$ 1,890.00	\$ -	\$ 20,160.00	\$ 5,670.00	\$ 17,010.00	\$ 1,008.00	\$ 7,560.00	\$ 51,200.10	\$ 9,072.00	\$ 121,130.10	
	Hrs Allowed	11	0	115	32	97	6	43	293	52	692	
	Hrs Actual										0	
	Remaining Hours in Phase	11	0	115	32	97	6	43	293	52	692	
	% Over/Under	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
	Ave Hrs/WK based on Schedule	5.4	0.0	14.4	8.1	9.7	0.5	0.0	3.8	10.4	8.6	
Junior Staff	% involved in this phase	50%	0%	50%	65%	80%	20%	20%	60%	60%		
\$ 150.00	\$ of Fee	\$ 3,150.00	\$ -	\$ 25,200.00	\$ 12,285.00	\$ 34,020.00	\$ 8,064.00	\$ 2,016.00	\$ 14,628.60	\$ 18,144.00	\$ 152,020.60	
	Hrs Allowed	21	0	168	82	227	54	13	98	121	884	
	Hrs Actual										0	
	Remaining Hours in Phase	21	0	168	82	227	54	13	98	121	884	
	% Over/Under	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
	Ave Hrs/WK based on Schedule	10.5	0.0	21.0	20.5	22.7	4.5	0.0	1.3	24.2	20.2	
	Concept Pre-Design	Entitlement	SD	DD	CD	PT	BD	CA	AD	ID		
	Estimated Hours	37	0	303	118	347	64	59	466	185	154	1695
	Actual Hours	0	0	0	0	0	0	0	0	0	0	
	Remaining	37	0	303	118	347	64	59	466	185	154	1695
Project Size	Totals Hrs based on Wks in Schedule	140	0	560	280	700	840	0	5418	350	350	

Note your staff can not work full time each week and be withing budget.

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Hours per Phase

Weeks for each phase	2	0	8	4	10	12	0	77	5	5		
	\$ 6,930.00	\$ -	\$ 50,400.00	\$ 18,900.00	\$ 56,700.00	\$ 10,080.00	\$ 10,080.00	\$ 73,143.00	\$ 30,240.00	\$ 25,200.00	\$ 281,673.00	
	110%	0%	100%	100%	100%	100%	100%	100%	100%	100%		
Budgeting by Role and Phase	Concept Pre-Design	Entitlement	SD	DD	CD	PT	BD	CA	AD	ID	TOTALS	
Partner	% involved in this phase	30%	0%	10%	5%	10%	10%	5%	10%	10%		
\$ 250.00	\$ of Fee	\$ 1,890.00	\$ -	\$ 5,040.00	\$ 945.00	\$ 5,670.00	\$ 1,008.00	\$ 504.00	\$ 7,314.30	\$ 3,024.00	\$ 27,915.30	
	Hrs Allowed	8	0	20	4	23	4	2	29	12	112	
	Hrs Actual										0	
	Remaining Hours in Phase	8	0	20	4	23	4	2	29	12	112	
	% Over/Under	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
	Ave Hrs/WK based on Schedule	3.8	0.0	2.5	0.9	2.3	0.3	0.0	0.4	2.4	2.0	
Senior Staff	% involved in this phase	30%	0%	40%	30%	30%	10%	75%	70%	30%		
\$ 175.00	\$ of Fee	\$ 1,890.00	\$ -	\$ 20,160.00	\$ 5,670.00	\$ 17,010.00	\$ 1,008.00	\$ 7,560.00	\$ 51,200.10	\$ 9,072.00	\$ 121,130.10	
	Hrs Allowed	11	0	115	32	97	6	43	293	52	692	
	Hrs Actual										0	
	Remaining Hours in Phase	11	0	115	32	97	6	43	293	52	692	
	% Over/Under	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
	Ave Hrs/WK based on Schedule	5.4	0.0	14.4	8.1	9.7	0.5	0.0	3.8	10.4	8.6	
Junior Staff	% involved in this phase	50%	0%	50%	65%	80%	20%	20%	60%	60%		
\$ 150.00	\$ of Fee	\$ 3,150.00	\$ -	\$ 25,200.00	\$ 12,285.00	\$ 34,020.00	\$ 8,064.00	\$ 2,016.00	\$ 14,628.60	\$ 18,144.00	\$ 152,020.60	
	Hrs Allowed	21	0	168	82	227	54	13	98	121	884	
	Hrs Actual										0	
	Remaining Hours in Phase	21	0	168	82	227	54	13	98	121	884	
	% Over/Under	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
	Ave Hrs/WK based on Schedule	10.5	0.0	21.0	20.5	22.7	4.5	0.0	1.3	24.2	20.2	
	Concept Pre-Design	Entitlement	SD	DD	CD	PT	BD	CA	AD	ID		
	Estimated Hours	37	0	303	118	347	64	59	466	185	154	1695
	Actual Hours	0	0	0	0	0	0	0	0	0	0	
	Remaining	37	0	303	118	347	64	59	466	185	154	1695
Project Size	Totals Hrs based on Wks in Schedule	140	0	560	280	700	840	0	5418	350	350	

Note your staff can not work full time each week and be withing budget.

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Hours per Phase

Weeks for each phase		2	0	8	4	10	12	0	77	5	5		
		\$ 6,300.00	\$ -	\$ 50,400.00	\$ 18,900.00	\$ 56,700.00	\$ 10,080.00	\$ 10,080.00	\$ 73,143.00	\$ 30,240.00	\$ 25,200.00	\$ 281,043.00	
		100%	0%	100%	100%	100%	100%	100%	100%	100%	100%		
Budgeting by Role and Phase		Concept	Pre-Design	Entitlement	SD	DD	CD	PT	BD	CA	AD	ID	TOTALS
Partner	% Involved in this phase	20%	0%	10%	5%	10%	10%	5%	10%	10%	10%		
\$ 250.00	\$ of Fee	\$ 1,260.00	\$ -	\$ 5,040.00	\$ 945.00	\$ 5,670.00	\$ 1,008.00	\$ 504.00	\$ 7,314.30	\$ 3,024.00	\$ 2,520.00	\$ 27,285.30	
	Hrs Allowed	5	0	20	4	23	4	2	29	12	10	109	
	Hrs Actual											0	
	Remaining Hours in Phase	5	0	20	4	23	4	2	29	12	10	109	
	% Over/Under	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
	Ave Hrs/WK based on Schedule	2.5	0.0	2.5	0.9	2.3	0.3	0.0	0.4	2.4	2.0		
Senior Staff	% Involved in this phase	30%	0%	40%	30%	30%	10%	75%	70%	30%	30%		
\$ 175.00	\$ of Fee	\$ 1,890.00	\$ -	\$ 20,160.00	\$ 5,670.00	\$ 17,010.00	\$ 1,008.00	\$ 7,560.00	\$ 51,200.10	\$ 9,072.00	\$ 7,560.00	\$ 121,130.10	
	Hrs Allowed	11	0	115	32	97	6	43	293	52	43	692	
	Hrs Actual											0	
	Remaining Hours in Phase	11	0	115	32	97	6	43	293	52	43	692	
	% Over/Under	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
	Ave Hrs/WK based on Schedule	5.4	0.0	14.4	8.1	9.7	0.5	0.0	3.8	10.4	8.6		
Junior Staff	% Involved in this phase	50%	0%	50%	65%	60%	80%	20%	20%	60%	60%		
\$ 150.00	\$ of Fee	\$ 3,150.00	\$ -	\$ 25,200.00	\$ 12,285.00	\$ 34,020.00	\$ 8,064.00	\$ 2,016.00	\$ 14,628.60	\$ 18,144.00	\$ 15,120.00	\$ 132,627.60	
	Hrs Allowed	21	0	168	82	227	54	13	98	121	101	884	
	Hrs Actual											0	
	Remaining Hours in Phase	21	0	168	82	227	54	13	98	121	101	884	
	% Over/Under	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
	Ave Hrs/WK based on Schedule	10.5	0.0	21.0	20.5	22.7	4.5	0.0	1.3	24.2	20.2		
		Concept	Pre-Design	Entitlement	SD	DD	CD	PT	BD	CA	AD	ID	
	Estimated Hours	37	0	303	118	347	64	59	466	185	154	1695	
	Actual Hours	0	0	0	0	0	0	0	0	0	0	0	
	Remaining	37	0	303	118	347	64	59	466	185	154	1695	
Project Size	Totals Hrs based on Wks in Schedule	140	0	560	280	700	840	0	5418	350	350		

Note your staff can not work full time each week and be withing budget.

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Hours per Phase

Weeks for each phase		2	0	8	4	10	12	0	77	5	5		
		\$ 6,300.00	\$ -	\$ 50,400.00	\$ 18,900.00	\$ 56,700.00	\$ 10,080.00	\$ 10,080.00	\$ 73,143.00	\$ 30,240.00	\$ 25,200.00	\$ 281,043.00	
		100%	0%	100%	100%	100%	100%	100%	100%	100%	100%		
Budgeting by Role and Phase		Concept	Pre-Design	Entitlement	SD	DD	CD	PT	BD	CA	AD	ID	TOTALS
Partner	% Involved in this phase	20%	0%	10%	5%	10%	10%	5%	10%	10%	10%		
\$ 250.00	\$ of Fee	\$ 1,260.00	\$ -	\$ 5,040.00	\$ 945.00	\$ 5,670.00	\$ 1,008.00	\$ 504.00	\$ 7,314.30	\$ 3,024.00	\$ 2,520.00	\$ 27,285.30	
	Hrs Allowed	5	0	20	4	23	4	2	29	12	10	109	
	Hrs Actual											0	
	Remaining Hours in Phase	5	0	20	4	23	4	2	29	12	10	109	
	% Over/Under	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
	Ave Hrs/WK based on Schedule	2.5	0.0	2.5	0.9	2.3	0.3	0.0	0.4	2.4	2.0		
Senior Staff	% Involved in this phase	30%	0%	40%	30%	30%	10%	75%	70%	30%	30%		
\$ 175.00	\$ of Fee	\$ 1,890.00	\$ -	\$ 20,160.00	\$ 5,670.00	\$ 17,010.00	\$ 1,008.00	\$ 7,560.00	\$ 51,200.10	\$ 9,072.00	\$ 7,560.00	\$ 121,130.10	
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	Hrs Actual											0	
	Remaining Hours in Phase	11	0	115	32	97	6	43	293	52	43	692	
	% Over/Under	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
	Ave Hrs/WK based on Schedule	5.4	0.0	14.4	8.1	9.7	0.5	0.0	3.8	10.4	8.6		
Junior Staff	% Involved in this phase	50%	0%	50%	65%	60%	80%	20%	20%	60%	60%		
\$ 150.00	\$ of Fee	\$ 3,150.00	\$ -	\$ 25,200.00	\$ 12,285.00	\$ 34,020.00	\$ 8,064.00	\$ 2,016.00	\$ 14,628.60	\$ 18,144.00	\$ 15,120.00	\$ 132,627.60	
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	Hrs Actual											0	
	Remaining Hours in Phase	21	0	168	82	227	54	13	98	121	101	884	
	% Over/Under	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
	Ave Hrs/WK based on Schedule	10.5	0.0	21.0	20.5	22.7	4.5	0.0	1.3	24.2	20.2		
		Concept	Pre-Design	Entitlement	SD	DD	CD	PT	BD	CA	AD	ID	
	Estimated Hours	37	0	303	118	347	64	59	466	185	154	1695	
	Actual Hours	0	0	0	0	0	0	0	0	0	0	0	
	Remaining	37	0	303	118	347	64	59	466	185	154	1695	
Project Size	Totals Hrs based on Wks in Schedule	140	0	560	280	700	840	0	5418	350	350		

Note your staff can not work full time each week and be withing budget.

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» Takeaways

1. Define Project scope
2. Create a ROM of construction cost
3. Fee based on a % of costs as a guideline
4. Estimate CA hourly fees
5. Fee broken down by % per Phase
6. Hours Per Phase based on Fee
7. Your fee proposal matches your proposal outline.



The Art of Estimating Fees: Unlocking Profitable Projects for Your Engineering Firm



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RESOURCES

Activity List Template	www.douglasteiger.com
Allocation Set Up	Visit CORE Tutorials
Budget Set Up	Visit CORE Tutorials
Architects' Guide to Fee Bidding	Book by M. Paul Nicholson

The Art of Estimating Fees: Unlocking Profitable Projects for Your Engineering Firm



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POLL QUESTION

Are you interested in learning more about BQE CORE?

- A** Yes, I'd like a product demo.
- B** No, not at this time.
- C** I am already a CORE customer.

The Art of Estimating Fees: Unlocking Profitable Projects for Your Engineering Firm



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SUMMARY

- Identify the correlation between project scope, estimated project cost, and fee
- Develop a Rough Order of Magnitude (ROM) for construction costs in a simple way
- Create a top-down approach to fee estimation based on percentage of costs as a guideline
- Estimate fees, whether they are for hourly or fixed-fee projects
- Define the allocation of hours for each project phase and develop strategies to effectively manage them

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QUESTIONS AND DISCUSSION

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SURVEY LINK 



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