

# 42<sup>nd</sup> Annual State Construction Conference

March 2, 2023



**NC★DOA**  
Department of Administration  
**State Construction Office**

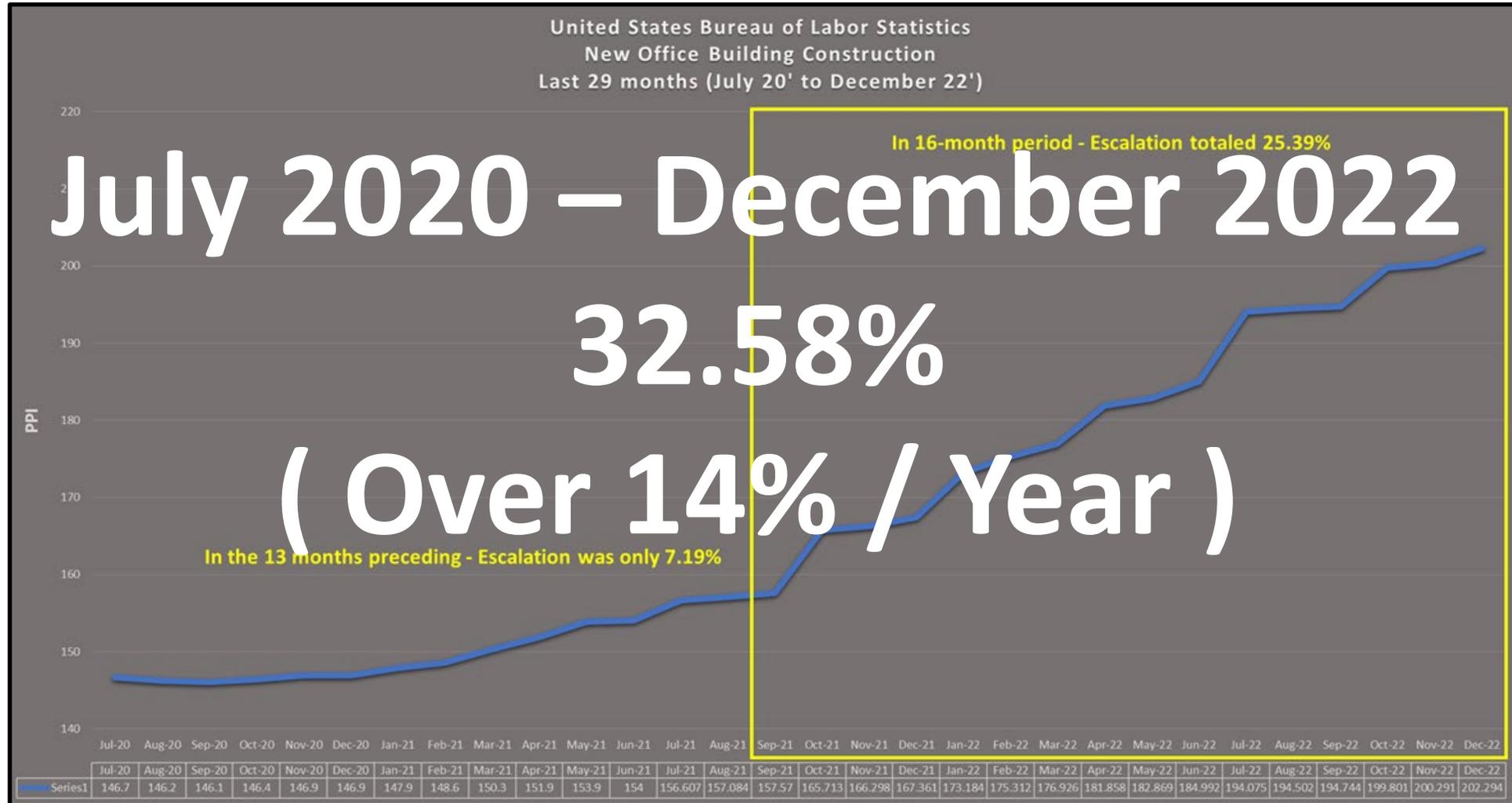
# Cost Estimation and Current Bid Environment



# DISCUSSION TOPICS

- Bid Environment
- SCIF
- Universal Terms
- OC-25 Estimate
- Top-Down Method
- Bottom-Up Method
- Best Practice: Project Cash Flow
- Best Practice: 90 / 10 Rule
- Best Practice: Escalation
- Best Practice: 70 / 30 Rule

# BID ENVIRONMENT



2023 State Construction Conference

# SCIF

## North Carolina **State Capital and Infrastructure Fund**

2023 State Construction Conference

# SCIF

## Cash Flow By Quarter

- Total Project Cost >\$3 Million
- Quarterly Allotments Need-Based
- Capital Analyst at Your Fiscal

**SCIF CASH FLOW ALLOTMENTS BY QUARTER** 

**Instructions:**

1. This form is for SCIF funded projects with total budgets of \$3 million or greater
2. Each project will need its own form
3. Fill out the highlighted fields with the information for the project
4. The projected future allotments by quarter should be based on projected project need, and not just an even division of the funds among quarters
5. Email the completed form to your capital analyst

AGENCY:  DATE:

PROJECT TITLE:

TOTAL PROJECT BUDGET: \$  TOTAL ALLOTTED TO DATE:

*There is a current request for SCIF Flex Funding in the amount of \$24,000,000 in addition to this current Total Project Budget amount.*

CASH BALANCE:  PROJECTED BALANCE: \$

BUDGET CODE:  FUND CODE:

**BRIEF PROJECT DESCRIPTION:**  
New DHHS Campus Phase 1 project to relocate all DHHS staff from the current Dorothea Dix Park location to a new campus on Blue Ridge Road in Raleigh.

WHAT PHASE IS THE PROJECT IN?

**PROJECTED FUTURE ALLOTMENTS BY QUARTER**

FY 22-23				
Q1:	Q2:	Q3:	Q4:	Total:
\$ 5,146,525.00	\$ 13,008,304.00	\$ 17,759,500.00	\$ 24,244,900.00	\$ 60,159,229.00

FY 23-24				
Q1:	Q2:	Q3:	Q4:	Total:
\$ 39,280,430.00	\$ 44,346,638.00	\$ 36,621,392.00	\$ 23,341,032.00	\$ 143,589,492.00

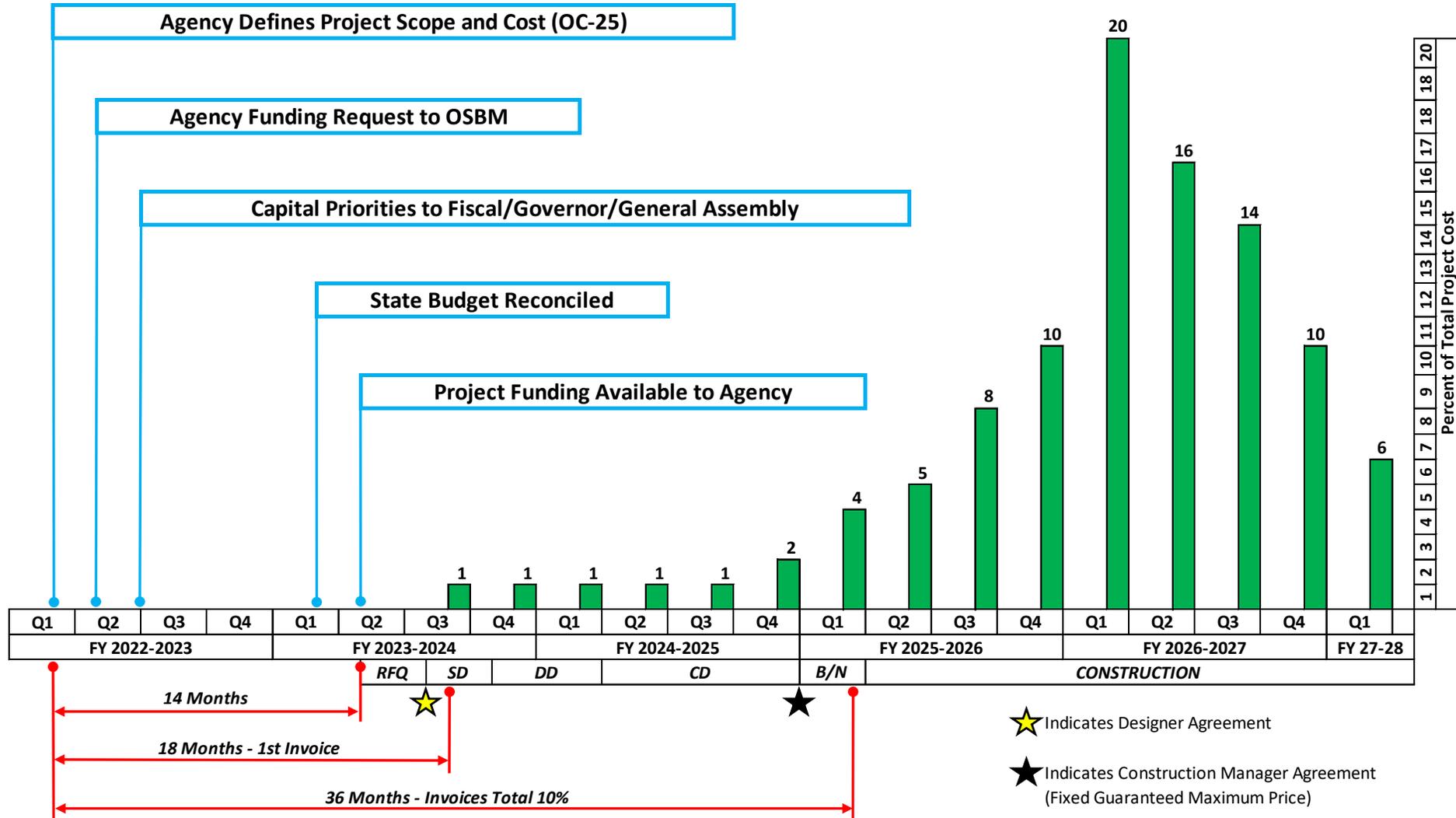
FY 24-25				
Q1:	Q2:	Q3:	Q4:	Total:
\$ 21,375,896.00	\$ 21,628,001.00	\$ 15,449,379.00	\$ 7,452,310.00	\$ 65,905,586.00

FY 25-26				
Q1:	Q2:	Q3:	Q4:	Total:
\$ 3,527,912.00	\$ 3,000,000.00			\$ 6,527,912.00

FY 26-27				
Q1:	Q2:	Q3:	Q4:	Total:
				\$ -

Total \$ 276,182,219.00

# BEST PRACTICE - Project Cash Flow



2023 State Construction Conference

# SCIF

## Flex Fund Request State Agencies

- Design Development
- OC-25: Original as Baseline
- 90/10 Rule
- Scope Reduction
- Escalation
- Maximum 10% of Total Project Cost

2023 State Construction Conference

FLEX FUND REQUEST		OSBM OFFICE OF STATE BUDGET AND MANAGEMENT		
AGENCY:	Department of Administration	DATE:	9/8/2022	
PROJECT TITLE:	DHHS Campus Phase 1			
BUDGET CODE:	42001	FUND CODE:	4101	
<b>BRIEF PROJECT DESCRIPTION:</b>				
OC-25 Project Description: Construct a new Phase I DHHS Office Campus to replace the space currently occupied at Dorothea Dix Property. 420,000 SF of general office space, 500 surface parking spaces, and 900 structured parking spaces. Buildings will consist of multiple mid-rise office buildings and one structured parking. A central utility plant is included for Phase I, to be expanded for future Phase II. Work will also include roadway and utilities site improvements. Site is State-owned land on Blue Ridge Road, Raleigh.				
OC-25 BUDGET:	\$ 249,074,000	CURRENT PROJ BUDGET:	\$ 253,700,000	
% Increase	9.46% <small>10% max</small>	REQUESTED INCREASE	\$ 24,000,000	
CURRENT PROJECT PHASE:	Bidding and construction using a modified Construction Manager at Risk delivery method, having received a Guaranteed Maximum Price (GMP) at the completion of the Design Development Phase. <small>(schematic design, construction docs, construction etc.)</small>			
Funds needed per FY	\$ 24,000,000	FY22	FY23	FY24
<b>REASON INCREASE NEEDED:</b>				
Construction inflation data sourced from the U.S. Bureau of Labor Statistics and Carolinas Associated General Contractors is provided in this submittal. The data identifies that over the past 24 months, the inflationary impact on the project's bid packages is projected to be an increase in the cost of 28%-30% or \$52.8 million. The design and construction management team has re-designed and value engineered the project to identify a funding shortfall of \$35 million or 19.9% of the value of first tier sub-contractor bid packages. Further value engineering, scope reductions, and applying various contingencies identify the \$24 million in Flex Funding request.				
<b>ALTERNATIVE SOLUTION(S):</b> <small>bid alternatives / scope reduction; other fund sources:</small>				
Please refer to the submittal package cover letter and backup documentation.		<b>BEST PRACTICES:</b>		
		90/10 Rule - Designer held to scope of 90%, with 10% of total construction held until receipt of GMP		
		Reduction in project program scope / value engineering		
		Escalation - Owner holds to address bidding results; owner's option to add funds to bidding total in lieu of redesign / project schedule delay		
<b>BEFORE SUBMITTING - Initial to Indicate adherence to the following</b>				
Per 143C-8-9, the scope of this project is NOT increased		OK		
Design Development has been completed		OK		
A copy of the OC-25 is attached to the email request		OK		

# BEST PRACTICE - 90 / 10 Rule

Design Project to  
**90%**  
of  
**Estimated Construction  
Costs**  
  
**10% Owner's Reserve**

Health and Human Services-Phase I					23-Jun-20
DHHS Office Campus					
Raleigh, North Carolina					
Construct a new Phase I DHHS Office Campus to replace the space currently occupied at Dorothea Dix Property. 420,000 SF of general office space, 500 surface parking spaces, and 900 structured parking spaces. Buildings will consist of multiple mid-rise office buildings and one structured parking. A central utility plant is included for Phase I, to be expanded for future Phase II. Work will also include roadway and utilities site improvements. Site is State-owned land on Blue Ridge Road, Raleigh.					
SCOPE OF PROGRAM		QTY	UNIT	UNIT COST	TOTAL
Land	Land Requirement				
Site	Site Work	1	LS	\$ 3,500,000	\$ 3,500,000
Site	Surface Parking	500	space	\$ 2,350	\$ 1,175,000
Site	Site	1	LS	\$ 6,000,000	\$ 6,000,000
Construction	Structured Parking	900	space	\$ 20,000	\$ 18,000,000
Construction	New Office Space	420,000	SF	\$ 305	\$ 128,100,000
Construction	Elevators	9	EA	\$ 475,000	\$ 4,275,000
Life Safety	Life Safety & Emergency	20,000	GFSF	\$ 1.10	\$ 462,000
Generator	Data Integrity & Back-up Power	1	System	\$ 2,000,000	\$ 2,000,000
Physical Plant				\$ 13,000,000	\$ 13,000,000
	All IT, Data, Systems, Cabling & Fiber, DIT	1	System	\$ 15,000,000	\$ 15,000,000
<b>ESTIMATED CONSTRUCTION COSTS</b>					<b>\$ 192,273,328</b>
ADVANCE PLANNING	0.75 % (includes programming, reasonability, analysis)				\$ 1,442,017
DESIGN FEE	7.5 % (% of Est Construction)				\$ 14,782,990
PRECONSTRUCTION	1 % (% of Estimated Construction Costs [1% for				\$ 1,922,733
COMMISSIONING FEE	0.5 % (0.5% simple; 1% complex; 1.5% complex)				\$ 961,367
SPECIAL INSPECTIONS	1.25 % (1.25% estimated)				\$ 2,403,417
SUSTAINABILITY	0 % (0% LEED Gold, 2% LEED Silver)				\$ -
FURNITURE	LS				\$ 7,000,000
MOVING	LS				\$ 5,000,000
CONTINGENCIES	3 % (% of Estimated Construction Costs [3%				\$ 5,506,300
<b>SUB-TOTAL ESTIMATED COSTS</b>					<b>\$ 229,374,471</b>
Fee + Advance Planning + Fixed Owner Costs					
Escalation	5% AIR = 0.40% per month	20	months	0.40% per month	
<b>ESCALATION COST INCREASE (Estimated Construction Costs x Escalation %)</b>					<b>\$15,381,866</b>
<b>TOTAL ESTIMATED PROJECT COSTS (Estimated Costs + Escalation Cost Increase)</b>					<b>\$ 244,756,337</b>

# UNIVERSAL TERMS

Name/Location/Description

Project Name/Location/Description

SCOPE OF PROGRAM

TOTAL ESTIMATED CONSTRUCTION COSTS

CONSULTANTS, CONTINGENCIES, ESCALATION

TOTAL ESTIMATED PROJECT COSTS

# UNIVERSAL TERMS

Name/Location/Description

Project Name/Location/Description

Above-The-LINE  
AKA Hard Costs

**SCOPE OF PROGRAM**

**TOTAL ESTIMATED CONSTRUCTION COSTS**

**CONSULTANTS, CONTINGENCIES, ESCALATION**

**TOTAL ESTIMATED PROJECT COSTS**

# UNIVERSAL TERMS

Name/Location/Description

Project Name/Location/Description

Above-The-LINE  
AKA Hard Costs

SCOPE OF PROGRAM

Quantities, GSF, Unit Costs

**TOTAL ESTIMATED CONSTRUCTION COSTS**

CONSULTANTS, CONTINGENCIES, ESCALATION

TOTAL ESTIMATED PROJECT COSTS

# UNIVERSAL TERMS

Name/Location/Description

Project Name/Location/Description

Above-The-LINE  
AKA Hard Costs

SCOPE OF PROGRAM

Quantities, GSF, Unit Costs

TOTAL ESTIMATED CONSTRUCTION COSTS

Below-The-LINE  
AKA Soft Costs

CONSULTANTS, CONTINGENCIES, ESCALATION

TOTAL ESTIMATED PROJECT COSTS

# UNIVERSAL TERMS

Name/Location/Description

Project Name/Location/Description

Above-The-LINE  
AKA Hard Costs

SCOPE OF PROGRAM

Quantities, GSF, Unit Costs

TOTAL ESTIMATED CONSTRUCTION COSTS

Below-The-LINE  
AKA Soft Costs

CONSULTANTS, CONTINGENCIES, ESCALATION

**Above + Below The LINE**

**TOTAL ESTIMATED PROJECT COSTS**

# UNIVERSAL TERMS

Name/Location/Description	Project Name/Location/Description	
Above-The-LINE AKA Hard Costs	SCOPE OF PROGRAM	
Quantities, GSF, Unit Costs	TOTAL ESTIMATED CONSTRUCTION COSTS	<b>The LINE</b>
Below-The-LINE AKA Soft Costs	CONSULTANTS, CONTINGENCIES, ESCALATION	
Above + Below The LINE	TOTAL ESTIMATED PROJECT COSTS	

# OC - 25 ESTIMATE

## Use of the Estimate

- Funding/Authority Request
- Scope & Cost of Project
- Reserves for Owner Soft Costs
- Designer Agreement
- CM at Risk Agreement
- **ESTIMATE IN TODAY'S \$\$\$**

Health and Human Services-Phase I					23-Jun-20
DHHS Office Campus					
Raleigh, North Carolina					
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Land	Land Requirement				
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Site	Surface Parking	500	space	\$ 2,350	\$ 1,175,000
Site	Site	1	LS	\$ 6,000,000	\$ 6,000,000
Construction	Structured Parking	900	space	\$ 20,000	\$ 18,000,000
Construction	New Office Space	420,000	GSF	\$ 305	\$ 128,100,000
Construction	Elevators	9	EA	\$ 475,000	\$ 4,275,000
Life Safety	Life Safety & Emergency Power	420,000	GSF	\$ 1.10	\$ 462,000
Generator	Data Integrity & Back-up Power	1	System	\$ 2,000,000	\$ 2,000,000
Physical Plant		1	LS	\$ 13,000,000	\$ 13,000,000
	All IT, Data, Systems, Cabling & Fiber, DIT	1	System	\$ 15,000,000	\$ 15,000,000
<b>ESTIMATED CONSTRUCTION COSTS</b>					<b>\$ 192,273,328</b>
ADVANCE PLANNING	0.75 %	(Includes programming, feasibility, analysis)		\$ 879,375	
DESIGN FEE	7.5 %	(% of Est. Construction)		\$ 14,782,990	
PRECONSTRUCTION	1 %	(% of Estimated Construction Costs [1% for		\$ 567,695	
COMMISSIONING FEE	0.5 %	(0.5% simple; 1.0% moderate; 1.5% complex)		\$ 961,367	
SPECIAL INSPECTIONS	1.25 %	(1.25% estimated)		\$ 2,403,417	
SUSTAINABILITY	0 %	(3% LEED Gold, 2% LEED Silver)		\$ -	
FURNITURE	LS			\$ 7,000,000	
MOVING	LS			\$ 5,000,000	
CONTINGENCIES	3 %	(% of Estimated Construction Costs [3%		\$ 5,506,300	
<b>SUB-TOTAL ESTIMATED COSTS</b>					<b>\$ 229,374,471</b>
Fee + Advance Planning + Fixed Owner Costs					
Escalation	5% AIR = 0.40% per month	20	months	0.40% per month	
<b>ESCALATION COST INCREASE (Estimated Construction Costs x Escalation %)</b>					<b>\$15,381,866</b>
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# OC - 25 ESTIMATE

## Where Do We Begin?

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# TOP-DOWN METHOD

**KNOWN: Scope of Program**

Use

**TOP-DOWN**

Cost Estimating Method

To Develop

**UNKNOWN Total Project Cost**

(Total Funding)

Health and Human Services-Phase I				23-Jun-20	
DHHS Office Campus					
Raleigh, North Carolina					
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<b>Scope of Program.....KNOWN</b>					
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<b>Total Project Cost.....UNKNOWN</b>					

# TOP-DOWN METHOD

Name/Location/Description

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AKA Hard Costs

Quantities, GSF, Unit Costs

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COMMISSIONING FEE	0.5 %	(0.5% simple; 1.0% moderate; 1.5% complex)			\$ 961,367	
SPECIAL INSPECTIONS	1.25 %	(1.25% estimated)			\$ 2,403,417	
SUSTAINABILITY	0 %	(3% LEED Gold, 2% LEED Silver)			\$ -	
FURNITURE	LS				\$ 7,000,000	
MOVING	LS				\$ 5,000,000	
CONTINGENCIES	3 %	(% of Estimated Construction Costs [3%			\$ 5,506,300	
<b>SUB-TOTAL ESTIMATED COSTS</b>						<b>\$ 229,374,471</b>
Fee + Advance Planning + Fixed Owner Costs)						
Escalation	5% AIR = 0.40% per month	20	months	0.40% per month		
<b>ESCALATION COST INCREASE (Estimated Construction Costs x Escalation %)</b>						<b>\$15,381,866</b>
<b>TOTAL ESTIMATED PROJECT COSTS (Estimated Costs + Escalation Cost Increase)</b>						<b>\$ 244,756,337</b>

# TOP-DOWN METHOD

Name/Location/Description

Above-The-LINE

AKA Hard Costs

Quantities, GSF, Unit Costs

Estimated Construction Costs

Health and Human Services-Phase I					23-Jun-20
DHHS Office Campus					
Raleigh, North Carolina					
Construct a new Phase I DHHS Office Campus to replace the space currently occupied at Dorothea Dix Property. 420,000 SF of general office space, 500 surface parking spaces, and 900 structured parking spaces. Buildings will consist of multiple mid-rise office buildings and one structured parking. A central utility plant is included for Phase I, to be expanded for future Phase II. Work will also include roadway and utilities site improvements. Site is State-owned land on Blue Ridge Road, Raleigh.					
SCOPE OF PROGRAM		QTY	UNIT	UNIT COST	TOTAL
Land	Land Requirement				
Site	Site Work	1	LS	\$ 3,500,000	\$ 3,500,000
Site	Surface Parking	500	space	\$ 2,350	\$ 1,175,000
Site	Site	1	LS	\$ 6,000,000	\$ 6,000,000
Construction	Structured Parking	900	space	\$ 20,000	\$ 18,000,000
Construction	New Office Space	420,000	GSF	\$ 305	\$ 128,100,000
Construction	Elevators	9	EA	\$ 475,000	\$ 4,275,000
Life Safety	Life Safety & Emergency Power	420,000	GSF	\$ 1.10	\$ 462,000
Generator	Data Integrity & Back-up Power	1	System	\$ 2,000,000	\$ 2,000,000
Physical Plant		1	LS	\$ 13,000,000	\$ 13,000,000
	All IT, Data, Systems, Cabling & Fiber, D11	1	System	\$ 15,000,000	\$ 15,000,000
<b>ESTIMATED CONSTRUCTION COSTS</b>					<b>\$ 192,273,328</b>
	ADVANCE PLANNING	0.75	%	(includes programming, reasonability, analysis)	\$ 879,375
	DESIGN FEE	7.5	%	(% of Est. Construction)	\$ 14,782,990
	PRECONSTRUCTION	1	%	(% of Estimated Construction Costs [1% for	\$ 567,695
	COMMISSIONING FEE	0.5	%	(0.5% simple; 1.0% moderate; 1.5% complex)	\$ 961,367
	SPECIAL INSPECTIONS	1.25	%	(1.25% estimated)	\$ 2,403,417
	SUSTAINABILITY	0	%	(3% LEED Gold, 2% LEED Silver)	\$ -
	FURNITURE		LS		\$ 7,000,000
	MOVING		LS		\$ 5,000,000
	CONTINGENCIES	3	%	(% of Estimated Construction Costs [3%	\$ 5,506,300
<b>SUB-TOTAL ESTIMATED COSTS</b>					<b>\$ 229,374,471</b>
Fee + Advance Planning + Fixed Owner Costs)					
	Escalation	5% AIR = 0.40% per month	20	months	0.40% per month
<b>ESCALATION COST INCREASE (Estimated Construction Costs x Escalation %)</b>					<b>\$15,381,866</b>
<b>TOTAL ESTIMATED PROJECT COSTS (Estimated Costs + Escalation Cost Increase)</b>					<b>\$ 244,756,337</b>

# TOP-DOWN METHOD

Name/Location/Description

Above-The-LINE

AKA Hard Costs

Quantities, GSF, Unit Costs

Estimated Construction Costs

Designer Agreement

CM @ Risk Agreement

Health and Human Services-Phase I					23-Jun-20
DHHS Office Campus					
Raleigh, North Carolina					
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SCOPE OF PROGRAM		QTY	UNIT	UNIT COST	TOTAL
Land	Land Requirement				
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Construction	New Office Space	420,000	GSF	\$ 305	\$ 128,100,000
Construction	Elevators	9	EA	\$ 475,000	\$ 4,275,000
Life Safety	Life Safety & Emergency	20,000	GSF	\$ 1.10	\$ 462,000
Generator	Data Integrity & Back-up Power	1	System	\$ 2,000,000	\$ 2,000,000
Physical Plant				\$ 13,000,000	\$ 13,000,000
	All IT, Data, Systems, Cabling & Fiber, D11	1	System	\$ 15,000,000	\$ 15,000,000
<b>ESTIMATED CONSTRUCTION COSTS</b>					<b>\$ 192,273,328</b>
	ADVANCE PLANNING	0.75	%	(includes programming, reasonity, analysis)	\$ 1,442,017
	DESIGN FEE	7.5	%	(% of Est. Construction)	\$ 14,420,167
	PRECONSTRUCTION	1	%	(% of Estimated Construction Costs [1% for	\$ 1,922,733
	COMMISSIONING FEE	0.5	%	(0.5% simple; 1.0% moderate; 1.5% complex)	\$ 961,367
	SPECIAL INSPECTIONS	1.25	%	(1.25% estimated)	\$ 2,403,417
	SUSTAINABILITY	0	%	(3% LEED Gold, 2% LEED Silver)	\$ -
	FURNITURE		LS		\$ 7,000,000
	MOVING		LS		\$ 5,000,000
	CONTINGENCIES	3	%	(% of Estimated Construction Costs [3%	\$ 5,506,300
<b>SUB-TOTAL ESTIMATED COSTS</b>					<b>\$ 229,374,471</b>
Fee + Advance Planning + Fixed Owner Costs					
	Escalation	5% AIR = 0.40% per month	20	months	0.40% per month
<b>ESCALATION COST INCREASE (Estimated Construction Costs x Escalation %)</b>					<b>\$15,381,866</b>
<b>TOTAL ESTIMATED PROJECT COSTS (Estimated Costs + Escalation Cost Increase)</b>					<b>\$ 244,756,337</b>

# TOP-DOWN METHOD

Name/Location/Description

Above-The-LINE

AKA Hard Costs

Quantities, GSF, Unit Costs

Estimated Construction Costs

The  
LINE

Health and Human Services-Phase I					23-Jun-20
DHHS Office Campus					
Raleigh, North Carolina					
Construct a new Phase I DHHS Office Campus to replace the space currently occupied at Dorothea Dix Property. 420,000 SF of general office space, 500 surface parking spaces, and 900 structured parking spaces. Buildings will consist of multiple mid-rise office buildings and one structured parking. A central utility plant is included for Phase I, to be expanded for future Phase II. Work will also include roadway and utilities site improvements. Site is State-owned land on Blue Ridge Road, Raleigh.					
SCOPE OF PROGRAM		QTY	UNIT	UNIT COST	TOTAL
Land	Land Requirement				
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Life Safety	Life Safety & Emergency Power	420,000	GSF	\$ 1.10	\$ 462,000
Generator	Data Integrity & Back-up Power	1	System	\$ 2,000,000	\$ 2,000,000
Physical Plant		1	LS	\$ 13,000,000	\$ 13,000,000
	All IT, Data, Systems, Cabling & Fiber, DIT	1	System	\$ 15,000,000	\$ 15,000,000
<b>ESTIMATED CONSTRUCTION COSTS</b>					<b>\$ 192,273,328</b>
ADVANCE PLANNING	0.75 % (includes programming, feasibility, analysis)				\$ 1,442,017
DESIGN FEE	7.5 % (% of Est. Construction)				\$ 14,782,990
PRECONSTRUCTION	1 % (% of Estimated Construction Costs [1% for				\$ 567,695
COMMISSIONING FEE	0.5 % (0.5% simple; 1.0% moderate; 1.5% complex)				\$ 961,367
SPECIAL INSPECTIONS	1.25 % (1.25% estimated)				\$ 2,403,417
SUSTAINABILITY	0 % (3% LEED Gold, 2% LEED Silver)				\$ -
FURNITURE	LS				\$ 7,000,000
MOVING	LS				\$ 5,000,000
CONTINGENCIES	3 % (% of Estimated Construction Costs [3%				\$ 5,506,300
<b>SUB-TOTAL ESTIMATED COSTS</b>					<b>\$ 229,374,471</b>
Fee + Advance Planning + Fixed Owner Costs)					
Escalation	5% AIR = 0.40% per month	20	months	0.40% per month	
<b>ESCALATION COST INCREASE (Estimated Construction Costs x Escalation %)</b>					<b>\$15,381,866</b>
<b>TOTAL ESTIMATED PROJECT COSTS (Estimated Costs + Escalation Cost Increase)</b>					<b>\$ 244,756,337</b>

# TOP-DOWN METHOD

Name/Location/Description

Above-The-LINE

AKA Hard Costs

Quantities, GSF, Unit Costs

Estimated Construction Costs

Below-The-LINE

AKA Soft Costs

Health and Human Services-Phase I					23-Jun-20
DHHS Office Campus					
Raleigh, North Carolina					
Construct a new Phase I DHHS Office Campus to replace the space currently occupied at Dorothea Dix Property. 420,000 SF of general office space, 500 surface parking spaces, and 900 structured parking spaces. Buildings will consist of multiple mid-rise office buildings and one structured parking. A central utility plant is included for Phase I, to be expanded for future Phase II. Work will also include roadway and utilities site improvements. Site is State-owned land on Blue Ridge Road, Raleigh.					
SCOPE OF PROGRAM		QTY	UNIT	UNIT COST	TOTAL
Land	Land Requirement				
Site	Site Work	1	LS	\$ 3,500,000	\$ 3,500,000
Site	Surface Parking	500	space	\$ 2,350	\$ 1,175,000
Site	Site	1	LS	\$ 6,000,000	\$ 6,000,000
Construction	Structured Parking	900	space	\$ 20,000	\$ 18,000,000
Construction	New Office Space	420,000	GSF	\$ 305	\$ 128,100,000
Construction	Elevators	9	EA	\$ 475,000	\$ 4,275,000
Life Safety	Life Safety & Emergency Power	420,000	GSF	\$ 1.10	\$ 462,000
Generator	Data Integrity & Back-up Power	1	System	\$ 2,000,000	\$ 2,000,000
Physical Plant		1	LS	\$ 13,000,000	\$ 13,000,000
	All IT, Data, Systems, Cabling & Fiber, DIT	1	System	\$ 15,000,000	\$ 15,000,000
<b>ESTIMATED CONSTRUCTION COSTS</b>					<b>\$ 192,273,328</b>
ADVANCE PLANNING	0.75 %	(Includes programming, feasibility, analysis)			\$ 879,375
DESIGN FEE	7.5 %	(% of Est. Construction)			\$ 14,782,990
PRECONSTRUCTION	1 %	(% of Estimated Construction Costs [1% for			\$ 567,695
COMMISSIONING FEE	0.5 %	(0.5% simple; 1.0% moderate; 1.5% complex)			\$ 961,361
SPECIAL INSPECTIONS	1.25 %	(1.25% estimated)			\$ 2,403,411
SUSTAINABILITY	0 %	(3% LEED Gold, 2% LEED Silver)			\$
FURNITURE	LS				\$ 7,000,000
MOVING	LS				\$ 5,000,000
CONTINGENCIES	3 %	(% of Estimated Construction Costs [3%			\$ 5,506,300
<b>SUB-TOTAL ESTIMATED COSTS</b>					<b>\$ 229,374,471</b>
Fee + Advance Planning + Fixed Owner Costs					
Escalation	5% AIR = 0.40% per month	20	months	0.40% per month	
<b>ESCALATION COST INCREASE (Estimated Construction Costs x Escalation %)</b>					<b>\$15,381,866</b>
<b>TOTAL ESTIMATED PROJECT COSTS (Estimated Costs + Escalation Cost Increase)</b>					<b>\$ 244,756,337</b>

# TOP-DOWN METHOD

Name/Location/Description

Above-The-LINE

AKA Hard Costs

Quantities, GSF, Unit Costs

Estimated Construction Costs

Below-The-LINE

AKA Soft Costs

Percentage of Construction Costs

Health and Human Services-Phase I					23-Jun-20
DHHS Office Campus					
Raleigh, North Carolina					
Construct a new Phase I DHHS Office Campus to replace the space currently occupied at Dorothea Dix Property. 420,000 SF of general office space, 500 surface parking spaces, and 900 structured parking spaces. Buildings will consist of multiple mid-rise office buildings and one structured parking. A central utility plant is included for Phase I, to be expanded for future Phase II. Work will also include roadway and utilities site improvements. Site is State-owned land on Blue Ridge Road, Raleigh.					
SCOPE OF PROGRAM		QTY	UNIT	UNIT COST	TOTAL
Land	Land Requirement				
Site	Site Work	1	LS	\$ 3,500,000	\$ 3,500,000
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Life Safety	Life Safety & Emergency Power	420,000	GSF	\$ 1.10	\$ 462,000
Generator	Data Integrity & Back-up Power	1	System	\$ 2,000,000	\$ 2,000,000
Physical Plant		1	LS	\$ 13,000,000	\$ 13,000,000
	All IT, Data, Systems, Cabling & Fiber, PDI	1	System	\$ 15,000,000	\$ 15,000,000
<b>ESTIMATED CONSTRUCTION COSTS</b>					<b>\$ 192,273,328</b>
ADVANCE PLANNING	0.75 %	(Includes programming, feasibility, analysis)		\$ 879,375	
DESIGN FEE	7.5 %	(% of Est. Construction Costs)		\$ 14,420,990	
PRECONSTRUCTION	1 %	(% of Estimated Construction Costs [1% for		\$ 567,695	
COMMISSIONING FEE	0.5 %	(0.5% simple; 1.0% moderate; 1.5% complex)		\$ 961,367	
SPECIAL INSPECTIONS	1.25 %	(1.25% estimated)		\$ 2,403,417	
SUSTAINABILITY	0 %	3% LEED Gold, 2% LEED Silver		\$ -	
FURNITURE	LS			\$ 7,000,000	
MOVING	LS			\$ 5,000,000	
CONTINGENCIES	3 %	(% of Estimated Construction Costs [3%		\$ 5,506,300	
<b>SUB-TOTAL ESTIMATED COSTS</b>					<b>\$ 229,374,471</b>
Fee + Advance Planning + Fixed Owner Costs					
Escalation	5% AIR = 0.40% per month	20	months	0.40% per month	
<b>ESCALATION COST INCREASE (Estimated Construction Costs x Escalation %)</b>					<b>\$15,381,866</b>
<b>TOTAL ESTIMATED PROJECT COSTS (Estimated Costs + Escalation Cost Increase)</b>					<b>\$ 244,756,337</b>

# TOP-DOWN METHOD

Name/Location/Description

Above-The-LINE

AKA Hard Costs

Quantities, GSF, Unit Costs

Estimated Construction Costs

Below-The-LINE

AKA Soft Costs

Hard Costs + Soft Costs =

**TOTAL ESTIMATED PROJECT COST**

Health and Human Services-Phase I					23-Jun-20
DHHS Office Campus					
Raleigh, North Carolina					
Construct a new Phase I DHHS Office Campus to replace the space currently occupied at Dorothea Dix Property. 420,000 SF of general office space, 500 surface parking spaces, and 900 structured parking spaces. Buildings will consist of multiple mid-rise office buildings and one structured parking. A central utility plant is included for Phase I, to be expanded for future Phase II. Work will also include roadway and utilities site improvements. Site is State-owned land on Blue Ridge Road, Raleigh.					
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Land	Land Requirement				
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Physical Plant		1	LS	\$ 13,000,000	\$ 13,000,000
	AVIT, Data, Systems, Cabling & Fiber, DIT	1	System	\$ 15,000,000	\$ 15,000,000
<b>ESTIMATED CONSTRUCTION COSTS</b>					<b>\$ 192,273,328</b>
ADVANCE PLANNING	0.75 %	(Includes programming, feasibility, analysis)		\$ 879,375	
DESIGN FEE	7.5 %	(% of Est. Construction)		\$ 14,782,990	
PRECONSTRUCTION	1 %	(% of Estimated Construction Costs [1% for		\$ 567,695	
COMMISSIONING FEE	0.5 %	(0.5% simple; 1.0% moderate; 1.5% complex)		\$ 961,361	
SPECIAL INSPECTIONS	1.25 %	(1.25% estimated)		\$ 2,403,411	
SUSTAINABILITY	0 %	(3% LEED Gold, 2% LEED Silver)		\$	
FURNITURE	LS			\$ 7,000,000	
MOVING	LS			\$ 5,000,000	
CONTINGENCIES	3 %	(% of Estimated Construction Costs [3%		\$ 5,506,300	
<b>SUB-TOTAL ESTIMATED COSTS</b>					<b>\$ 229,374,471</b>
Fee + Advance Planning + Fixed Owner Costs					
Escalation	5% AIR = 0.40% per month	20	months	0.40% per month	
ESCALATION COST INCREASE (Estimated Construction Costs x Escalation %)					<b>\$15,381,866</b>
<b>TOTAL ESTIMATED PROJECT COSTS</b> (Estimated Costs + Escalation Cost Increase)					<b>\$ 244,756,337</b>

# ESCALATION

Annual Inflation Rate / 12 Months

X

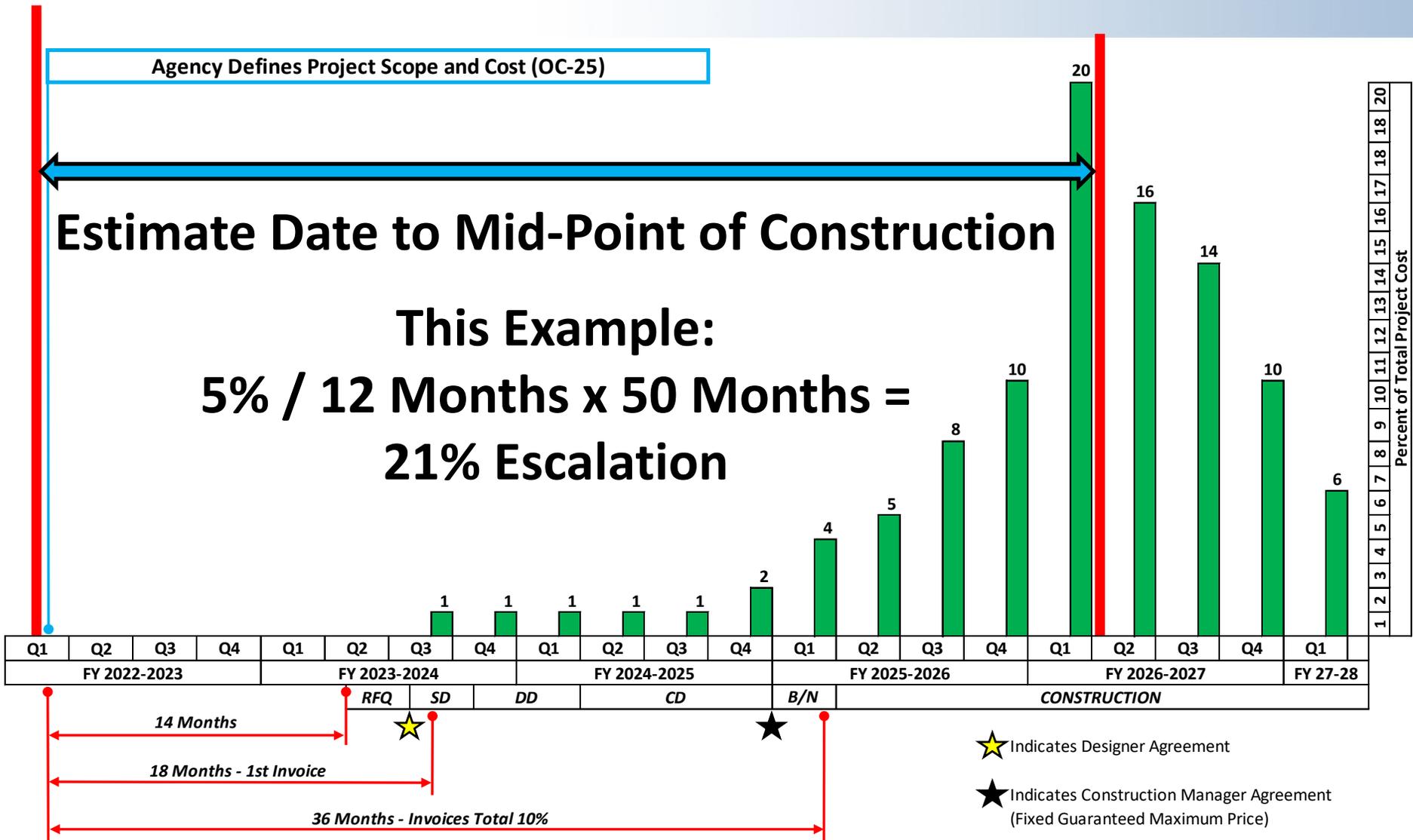
Number of Months from ESTIMATE to  
Mid-Point of Construction

X

Estimated Construction Cost

Health and Human Services-Phase I					23-Jun-20	
DHHS Office Campus						
Raleigh, North Carolina						
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SCOPE OF PROGRAM		QTY	UNIT	UNIT COST	TOTAL	
Land	Land Requirement					
Site	Site Work	1	LS	\$ 3,500,000	\$ 3,500,000	
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Physical Plant		1	LS	\$ 13,000,000	\$ 13,000,000	
All IT, Data, Systems, Cabling & Fiber, DIT		1	System	\$ 15,000,000	\$ 15,000,000	
<b>ESTIMATED CONSTRUCTION COSTS</b>					<b>\$ 192,273,328</b>	
ADVANCE PLANNING	0.75 %	(Includes programming, feasibility, analysis)			\$ 879,375	
DESIGN FEE	7.5 %	(% of Est. Construction)			\$ 14,782,990	
PRECONSTRUCTION	1 %	(% of Estimated Construction Costs [1% for			\$ 567,695	
COMMISSIONING FEE	0.5 %	(0.5% simple; 1.0% moderate; 1.5% complex)			\$ 961,367	
SPECIAL INSPECTIONS	1.25 %	(1.25% estimated)			\$ 2,403,417	
SUSTAINABILITY	0 %	(3% LEED Gold, 2% LEED Silver)			\$ -	
FURNITURE	LS				\$ 7,000,000	
MOVING	LS				\$ 5,000,000	
CONTINGENCIES	3 %	(% of Estimated Construction Costs [3%			\$ 5,506,300	
<b>SUB-TOTAL ESTIMATED COSTS</b>					<b>\$ 229,374,471</b>	
Fee + Advance Planning + Fixed Owner Costs)						
Escalation	3% AIR = 0.40% per month	20	months	0.40% per month		
<b>ESCALATION COST INCREASE (Estimated Construction Costs x Escalation %)</b>					<b>\$15,381,866</b>	
<b>TOTAL ESTIMATED PROJECT COSTS (Estimated Costs + Escalation Cost Increase)</b>					<b>\$ 244,756,337</b>	

# BEST PRACTICE - Escalation



# BOTTOM - UP METHOD

**KNOWN: Total Project Cost**  
(Total Funding)

Use

**BOTTOM - UP**

Cost Estimating Method  
To Develop

**UNKNOWN: Scope of Program**

Health and Human Services-Phase I				23-Jun-20	
DHHS Office Campus					
Raleigh, North Carolina					
Construct a new Phase I DHHS Office Campus to replace the space currently occupied at Dorothea Dix Property. 420,000 SF of general office space, 500 surface parking spaces, and 900 structured parking spaces. Buildings will consist of multiple mid-rise office buildings and one structured parking. A central utility plant is included for Phase I, to be expanded for future Phase II. Work will also include roadway and					
<b>Scope of Program.....UNKNOWN</b>					
Site	Site Work		LS	\$ 3,500,000	\$ 3,500,000
Site	Surface Parking		space	\$ 2,350	\$ 1,175,000
Site	Site		LS	\$ 6,000,000	\$ 6,000,000
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Physical Plant			LS	\$ 13,000,000	\$ 13,000,000
All IT, Data, Systems, Cabling & Fiber, DIT				System	\$ 15,000,000
<b>ESTIMATED CONSTRUCTION COSTS</b>					<b>\$ 192,273,328</b>
ADVANCE PLANNING	0.75 % (Included in programming, feasibility, analysis)				\$ 879,375
DESIGN FEE	7.5 % (% of Construction)				\$ 14,782,990
PRECONSTRUCTION	1 % (% of Estimated Construction Costs [1% for				\$ 567,695
COMMISSIONING FEE	0.5 % (0.5% moderate; 1.5% complex)				\$ 961,367
SPECIAL INSPECTIONS	1.25 % (1.25% (included)				\$ 2,403,417
SUSTAINABILITY	0 % (3% LEED Silver, 2% LEED Silver)				\$ -
FURNITURE	LS				\$ 7,000,000
MOVING	LS				\$ 5,000,000
CONTINGENCIES	3 % (% of Estimated Construction Costs [3%				\$ 5,506,300
<b>SUB-TOTAL ESTIMATED COSTS</b>					<b>\$ 229,374,471</b>
Fee + Advance Planning (Owner Costs)					
<b>Total Project Cost.....KNOWN</b>					

# BEST PRACTICE - 70 / 30 Rule

TYPICAL STATE PROJECT:

70% Total Project Cost =  
ESTIMATED CONSTRUCTION COSTS

30% Total Project Cost =  
SOFT COSTS

Health and Human Services-Phase I					23-Jun-20
DHHS Office Campus					
Raleigh, North Carolina					
Construct a new Phase I DHHS Office Campus to replace the space currently occupied at Dorothea Dix Property. 420,000 SF of general office space, 500 surface parking spaces, and 900 structured parking spaces. Buildings will consist of multiple mid-rise office buildings and one structured parking. A central utility plant is included for Phase I, to be expanded for future Phase II. Work will also include roadway and utilities site improvements. Site is State-owned land on Blue Ridge Road, Raleigh.					
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Land	Land Requirement				
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Life Safety	Life Safety & Emergency Power	20,000	GSF	\$ 1.10	\$ 462,000
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Physical Plant				\$ 13,000,000	\$ 13,000,000
AVIT, Data, Systems, Cabling & Fiber, DIT		1	System	\$ 15,000,000	\$ 15,000,000
<b>ESTIMATED CONSTRUCTION COSTS</b>					<b>\$ 192,273,328</b>
ADVANCE PLANNING	0.75 %	(Includes programming, feasibility, analysis)		\$ 879,375	
DESIGN FEE	7.5 %	(% of Est. Construction)		\$ 14,782,990	
PRECONSTRUCTION	1 %	of Estimated Construction Costs [1% for		\$ 567,695	
COMMISSIONING FEE	0.5 %	(% of Est. Construction) [0.5% for simple, 1.0% for moderate, 1.5% for complex]		\$ 961,361	
SPECIAL INSPECTIONS	1.25 %	25% (estimated)		\$ 2,403,411	
SUSTAINABILITY	0 %	LEED Gold 2% LEED Platinum		\$	
FURNITURE	LS			\$ 7,000,000	
MOVING	LS			\$ 5,000,000	
CONTINGENCIES	3 %	(% of Estimated Construction Costs [3%		\$ 5,506,300	
<b>SUB-TOTAL ESTIMATED COSTS</b>					<b>\$ 229,374,471</b>
Fee + Advance Planning + Fixed Owner Costs					
Escalation	5% AIR = 0.40% per month	20	months	0.40% per month	
<b>ESCALATION COST INCREASE (Estimated Construction Costs x Escalation %)</b>					<b>\$15,381,866</b>
<b>TOTAL ESTIMATED PROJECT COSTS (Estimated Costs + Escalation Cost Increase)</b>					<b>\$ 244,756,337</b>

70%

30%

# BEST PRACTICE - 70 / 30 Rule

## TRIAL and ERROR STEPS:

1. Hard Costs: Identify **Scope of Program**  
Line Items Equal to 70%
2. Soft Costs: Identify **Lump Sums**  
Until Equal to 30%
3. Identify Months of **Escalation**
4. Lather, Rinse, Repeat

Health and Human Services-Phase I					23-Jun-20	
DHHS Office Campus						
Raleigh, North Carolina						
Construct a new Phase I DHHS Office Campus to replace the space currently occupied at Dorothea Dix Property. 420,000 SF of general office space, 500 surface parking spaces, and 900 structured parking spaces. Buildings will consist of multiple mid-rise office buildings and one structured parking. A central utility plant is included for Phase I, to be expanded for future Phase II. Work will also include roadway and utilities site improvements. Site is State-owned land on Blue Ridge Road, Raleigh.						
SCOPE OF PROGRAM		QTY	UNIT	UNIT COST	TOTAL	
Land	Land Requirement					
Site	Site Work	1	LS	\$ 3,500,000	\$	3,500,000
Site	Surface Parking	500	space	\$ 2,350	\$	1,175,000
Site	Site	1	LS	\$ 6,000,000	\$	6,000,000
Construction	Structured Parking	900	space	\$ 20,000	\$	18,000,000
Construction	New Office Space	420,000	GSF	\$ 305	\$	128,100,000
Construction	Elevators	9	EA	\$ 475,000	\$	4,275,000
Life Safety	Life Safety & Emergency Power	420,000	GSF	\$ 1.10	\$	462,000
Generator	Data Integrity & Back-up Power	1	System	\$ 2,000,000	\$	2,000,000
Physical Plant		1	LS	\$ 13,000,000	\$	13,000,000
ALLIT, Data, Systems, Cabling & Fiber, DIT		1	System	\$ 15,000,000	\$	15,000,000
<b>ESTIMATED CONSTRUCTION COSTS</b>						<b>\$ 192,273,328</b>
ADVANCE PLANNING	0.75 %	(Includes programming, feasibility, analysis)			\$	879,375
DESIGN FEE	7.5 %	(% of Est. Construction)			\$	14,782,990
PRECONSTRUCTION	1 %	(% of Estimated Construction Costs [1% for			\$	567,695
COMMISSIONING FEE	0.5 %	(0.5% simple; 1.0% moderate; 1.5% complex)			\$	961,367
SPECIAL INSPECTIONS	1.25 %	(Estimated)			\$	2,403,417
SUSTAINABILITY	0 %	(3% LEED Gold, 2% LEED Silver)			\$	-
FURNITURE	LS				\$	7,000,000
MOVING	LS				\$	5,000,000
CONTINGENCIES	3 %	(Estimated Construction Costs [3%			\$	5,768,300
<b>SUB-TOTAL ESTIMATED COSTS</b>						<b>\$ 229,374,471</b>
Free + Advance Planning + Fixed Owner Costs)						
Escalation	5% AIR = 0.40% per month	24 months	0.40% per month			
<b>ESCALATION COST INCREASE (Estimated Construction Costs x Escalation %)</b>						<b>\$15,381,866</b>
<b>TOTAL ESTIMATED PROJECT COSTS (Estimated Construction Costs + Escalation Cost Increase)</b>						<b>\$ 244,756,337</b>

