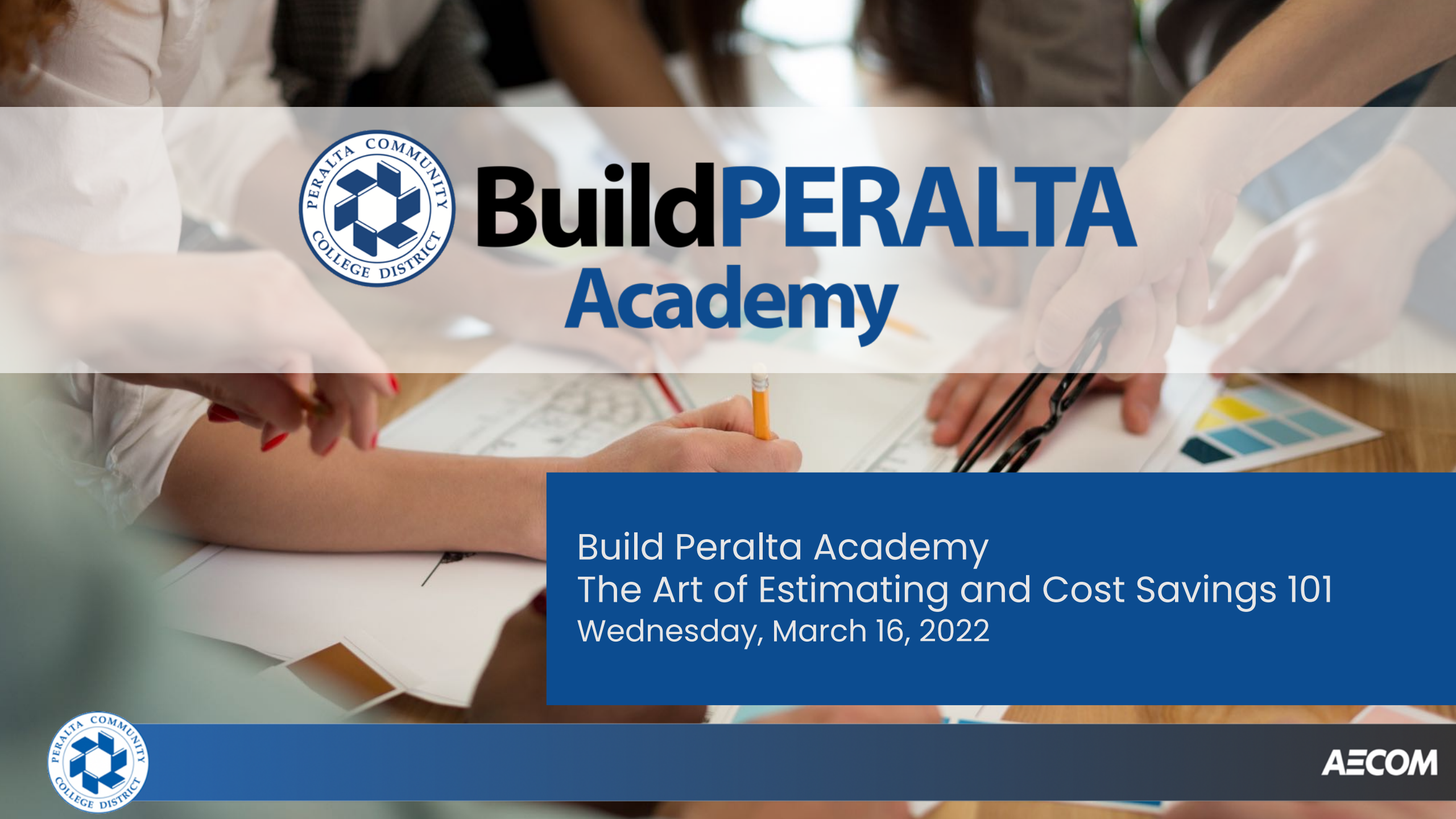

BuildPERALTA Academy

Build Peralta Academy
The Art of Estimating and Cost Savings 101
Wednesday, March 16, 2022

AECOM

Safety Tips - Fatigue and Work

Fatigue is the state of feeling very tired, weary or sleepy resulting from insufficient sleep, prolonged mental or physical work, shift work or extended periods of stress or anxiety. Staying awake for 24hours straight affects the human body almost exactly like a blood alcohol level of .10%, which exceeds The legal limit for driving.

Tips for workers

Eat a healthy diet that promotes longer lasting energy. Complex carbohydrates (Starch) are preferable to simple carbohydrates (sugar). Avoid fatty foods and junk food.

Adopt a steady exercise routine that includes cardiovascular, muscle strengthening and flexibility workouts.

Try to get at least 7.5-8.5 hours of sleep per night.

Stay positive. Make a conscious effort not to be overwhelmed by negative circumstances.

Avoid driving if you are tired, especially in inclement weather where vision is impaired.

Avoid Excessive noise.

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Agenda

- Welcome
- Introductions
- Bond Program Overview
- Commitment to Local Businesses
- Key Benefits of Build Peralta Academy
- Course – The Art of Estimating and Cost Savings
- Survey
- Q&A
- Closing

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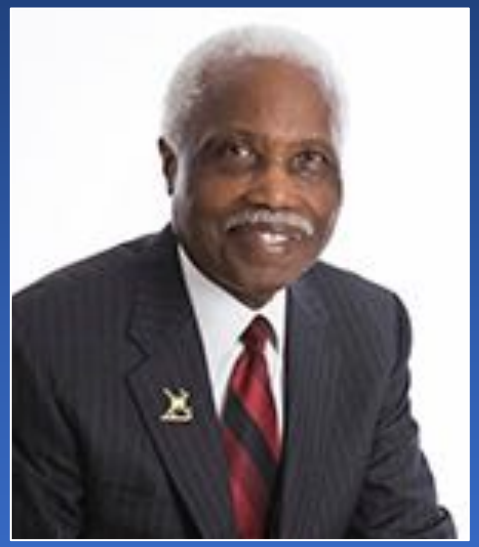
Introduction of Presenters

Keith Kajiya, AECOM

Keith Kajiya
AECOM



Dr. Bonnie James
BRJ & Associates

Shonda Scott
360 Total Concept

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Meet The Team

Keith Kajiya

Program Manager
AECOM

BuildPERALTA Academy

Program Overview

Keith Kajiya, AECOM

BuildPERALTA Academy

$77 Million
State Funding in Place

$129 Million
Contract Commitments

$115 Million
Bonds Issued

$62.2 Million
Expended

15
Major Projects Underway

56
Infrastructure Packages Underway

Laney College

Berkeley City College

Merritt College

College of Alameda

Meet The Team

Shonda Scott

CEO, Founder
360 Total Concept

BuildPERALTA Academy

Commitment to Local Businesses

Shonda Scott, 360 Total Concept

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- PCCD Small Business Policy
  - 25% Small Local Business Participation
- Certification (small business located in 6 cities in Peralta District: Alameda, Albany, Berkeley, Emeryville, Oakland and Piedmont)
  - SLBE: Revenue size has not exceeded gross annual revenue for the past 3 consecutive years
    - Construction Firms: $8.5M > under
    - Goods Non-Professional Services Firms $6M > under
    - A/E and Professional Services $3M > under
  - SELBE
    - For businesses that have not exceeded revenue of $1.5M past 3 consecutive years

Methods of Outreach Communications

- Peralta Website
- Build Peralta Site
- Peralta College Marketing
- Laney Construction Management Program

- Social Media: #buildperalta
  - Instagram
  - Twitter
  - Facebook
  - YouTube
  - LinkedIN

BuildPERALTA

EXTERIOR PERSPECTIVES

Rendering by:
XL Construction + Ratcliff

Meet The Team

Dr. Bonnie James

President

BRJ & Associates

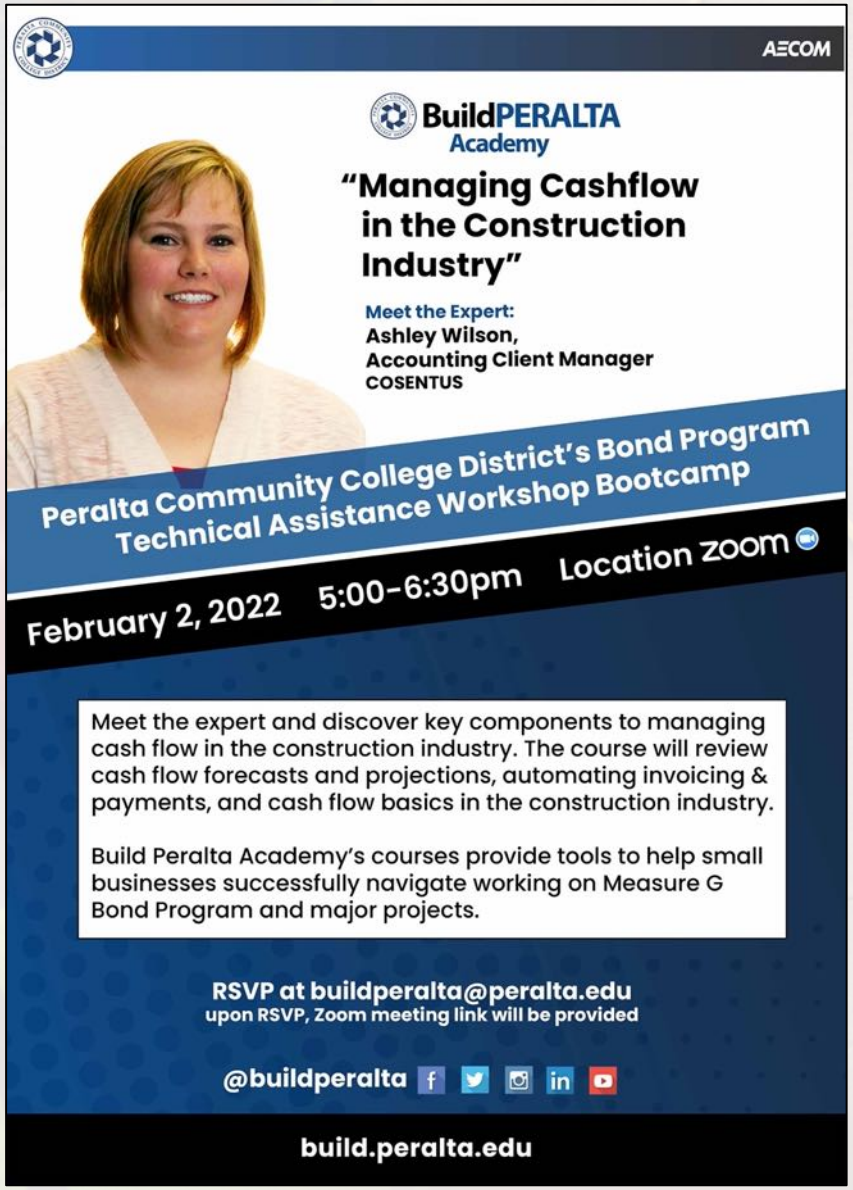
BuildPERALTA Academy

BuildPERALTA Academy

Dr. Bonnie James, BRJ & Associates

Key Benefits of Build Peralta Academy

- Instructional assistance workshop/ bootcamp
- Learn from industry experts
- Help small businesses build capacity



Meet The Expert

Peter Morris

AECOM

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How to Prepare an Estimate

Peter Morris

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Goals

The purpose of this session is to

- Work through preparing an estimate
  - How to structure the estimate
  - How to develop prices, allowances and contingencies
  - How to put together actionable information

So that, you will be able to:

- Build good estimates
- Become a trusted advisor as part of the team
- Deliver success for the project, the community – and yourself

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What is an estimate for?

"The Peralta Community College District provides **accessible**, **high quality**, **educational programs** and **services** to **meet the needs** of our **multi-cultural communities**"

How

Meet Community Needs

Accessible, High Quality Educational Programs and Services

Beautiful, State of the Art Facilities

Value Orientated Design and Construction

Value Focused Delivery Team

Effective Cost Estimates

Why

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What is an estimate for?

An Estimate is:

- A tool to support the mission of the client
  - Deliver Success
  - Maximize Value

- A tool that allows
  - a decision maker
  - to make an informed decision,
  - within the context of their own values and opinions

- A tool for communicating complex and specialist inputs in a clear and concise manner

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Best Practice

Delivering Excellence

- Doing the Right Job
  - Understand/Confirm the instructions
  - Understand the client desires, passions, expectations

- Doing the Job Right
  - Develop the workplan – Fee distribution, tasks assignments, major steps, research, report structure
  - Establish the quality review plan and allow time
  - Work methodically and logically
  - Make sure you understand the work – discuss within the team

- Making Sure We did the Job Right
  - Self check – Control Quantities, Triangulate, Sanity Check
  - Technical Quality Review (TQR)
  - Report review – Format, Grammar,
  - Leadership Review/Sign-off

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Setting up the estimate

Setting up the estimate

Getting Started

- What do we need to get started?
- What do we want to ask the team?
- What do we want to ask ourselves?

Mural

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Setting up the estimate

Reference Documents

This Preliminary Cost Model is based on the following documents:

	Dated	Received
Drawings		
60% Progress set (Review-06-13-2019_Optimized.pdf)	4/19/2019	6/14/2019
Specifications		
NA		
Statement of Work	2/15/2019	
Discussions with project design team		

	Do we have a clear set of documents?
	Date received?

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Setting up the estimate

Project Description

The project comprises seismic improvements to the existing building

The existing building is a high bay industrial building, with partial mezzanines. The building is steel framed, with precast cladding The interior structure is largely exposed The building was built in the 1960s.

The work comprises addition of new vertical and horizontal bracing elements. Bracing is OCBF, tube and WT framing, with new gusset plates welded to existing structure. New foundations are provided at four new buttresses and at to new interior shear walls, otherwise foundations remain as constructed. Work also includes addition of new hold-down elements for the precast concrete cladding panels

The work includes removal and replacement of non-structural elements, and user FF&E by the contractor. The majority of the structure is exposed, and non-structural work is minimal. Lead based paint and Asbestos Containing Material are expected to be present

The building will remain occupied and operational at all times during the work. The contractor is responsible for all temporary protection and coordination with users.

Do we really understand the scope?
Can we clearly articulate it?
This is also used to communicate our
understanding to the team – even if they
don't have the answers

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Setting up the estimate

Basis For Pricing

This estimate reflects the fair construction value for this project and should not be construed as a prediction of low bid. Prices are based on local prevailing wage construction costs at the time the estimate was prepared. Pricing assumes a procurement process with competitive bidding for all subtrades of the construction work, which is to mean a minimum of 3 bids for all subcontractors and materials/equipment suppliers.

This cost estimate is based on standard industry practice, professional experience and knowledge of the local construction market costs. AECOM have no control over the material and labor costs, contractors methods of establishing prices or the market and bidding conditions at the time of bid. AECOM does not guarantee that the bids received will not vary from this cost estimate.

	Do we know the procurement methodology?

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Setting up the estimate

Conditions of Construction

- The building will be occupied and remain operational at all times during the execution of the construction project
  - Noisy work, such as drilling, demolition, saw-cutting, grinding, etc. will be performed outside the hours of 8:00 am to 4:00 pm weekdays
  - All dust or fume producing work shall be directly exhausted to the building exterior
  - Work areas shall be protected with solid barriers to maintain building occupant safety
  - Contractor shall provide full time Safety Officer, on site, at all times work is proceeding, and shall provide fire watch at all times welding or high heat producing work is in progress. Fire watch shall continue until all work has cooled, and all risk of concealed combustion is past
- Contractor shall be responsible for moving and reinstalling all building elements, fixtures, furniture and equipment as required for the successful installation of the work, and for protecting all elements to remain
- Hazardous materials included in the cost model are:
  - Lead based paint on all painted surfaces, including existing steelwork
  - Asbestos containing mastic and taping compounds in architectural elements to be removed
  - Existing soils at new foundation locations are assumed to be lightly contaminated, and shall not be reused on site
- Abatement of hazardous material is limited to removal of any material directly affected by the work. Undisturbed hazardous material shall remain in place with no treatment
- Contractor will be required to pay prevailing wages at a minimum.
- Sales tax will be paid on all materials incorporated into the project

Do we really understand the condition?

We need to have a basis for our pricing

- even if they are our assumptions, we need to make them clear

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Setting up the estimate

Unit Rates

Labor rates include all labor burden, including Payroll Tax and Insurance, Fringe, and Overhead. Material prices include Delivery, Handling, and Sales Tax, unless noted otherwise.

Subcontractor's markups have been included in each line item unit price. Markups cover the cost of field overhead, home office overhead and subcontractor's profit. Subcontractor's markups typically range from 15% to 25% of the unit price depending on market conditions

General Conditions, Overhead & Profit

General Contractor's/Construction Manager's Site Requirement costs are calculated on a percentage basis. General Contractor's/Construction Manager's Jobsite Management costs are calculated on a percentage basis.

There is no phasing.

General Conditions percentages used are:

Site Requirements	11.0%
Jobsite Management	0.0%
Phasing	None

General Contractor's/Construction Manager's overhead and fees are based on a percentage of the total direct costs plus general conditions, and covers the contractor's bond, insurance, site office overheads and profit.

General Contractor Overhead and Fees

Insurance and Bonding	1.6%
GC Home Office Overhead and Profit	6.5%

	What is the basis for our GC/GR scope?
	Can we clearly articulate it?

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Setting up the estimate

Z21 General and Special Conditions	Quantity	UM	Labor		Material		Equipment		Total	
			Rate	Extension	Rate	Extension	Rate	Extension	Rate	Extension
Z2110 Special Conditions				*11,000*		*2,000*		*8,000*		*21,000*
Temporary Protection										
Temporary dust barriers - interior	3	MO	2,000.00	6,000			2,000.00	6,000	4,000.00	12,000
Temporary dust barriers/weather protection	1	LS	5,000.00	5,000	2,000.00	2,000	2,000.00	2,000	9,000.00	9,000
Access and scaffolding										
Hoists and lifts, rental										Included with work items
Z2120 General Conditions				*315,958*		*10,000*		*16,200*		*342,158*
Site Establishment										
Project Superintendent	12	WK	6,250.00	75,000					6,250.00	75,000
Project Engineer	12	WK	4,500.00	54,000					4,500.00	54,000
Site Safety/QA	12	WK	4,500.00	54,000					4,500.00	54,000
Daily clean-up	60	Day	800.00	48,000					800.00	48,000
Field office										Not required
Small tools	1	LS			5,000.00	5,000			5,000.00	5,000
Pre-work field inspection	40	HR	120.00	4,800					120.00	4,800
Preparation of required field safety and project management plans, project documentation, etc.	1	LS			5,000.00	5,000			5,000.00	5,000
Special inspections and material testing	1	LS					15,000.00	15,000	15,000.00	15,000
Fencing & Security										
Flagging/fire watch	120	HR	65.00	7,800			10.00	1,200	75.00	9,000
Shift and Overtime premiums										
Excluded										
Allowance for reduced productivity due to COVID-19 protocols	$269,433		25%	67,358					0.25	67,358
Site operative security clearance										
Temporary badging	1	LS	5,000.00	5,000					5,000.00	5,000
				326,958		**12,000**		**24,200**		**363,158**

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Setting up the estimate

Schedule & Escalation		
Recommended Escalation Rate	5.50%	
Date of Estimate	3/5/2020	
Cost Data Date	**3/5/2020**	
Anticipated Start of Construction	**7/1/2021**	
Anticipated Duration	547.5	calendar days
Anticipated Completion of Construction	**12/30/2022**	
Estimated Mid-point of Construction	8/2/2021	
Recommended Escalation	7.83%	

- What is the schedule?
- How are we figuring escalation?

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Setting up the estimate

Exclusions

- Design Phase Services
- Site surveys, existing condition reports and soils investigation costs, unless otherwise noted in estimate
- Land acquisition
- Financing, Legal or Accounting costs
- All professional fees and insurance, except as noted
- Utility company charges, including work required off-Site and utilities rates
- Permits
- Owners contingency
- Furniture, fixtures and equipment (FF&E)

What is excluded?
Our exclusions are someone else's inclusions!

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Setting up the estimate

It is our responsibility

- Its up to us to:
  - ask the right questions
  - understand the vision
  - confirm our instructions
  - confirm the scope
  - set out on the right path

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Creating the Estimate: Understanding the market

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Understanding the market

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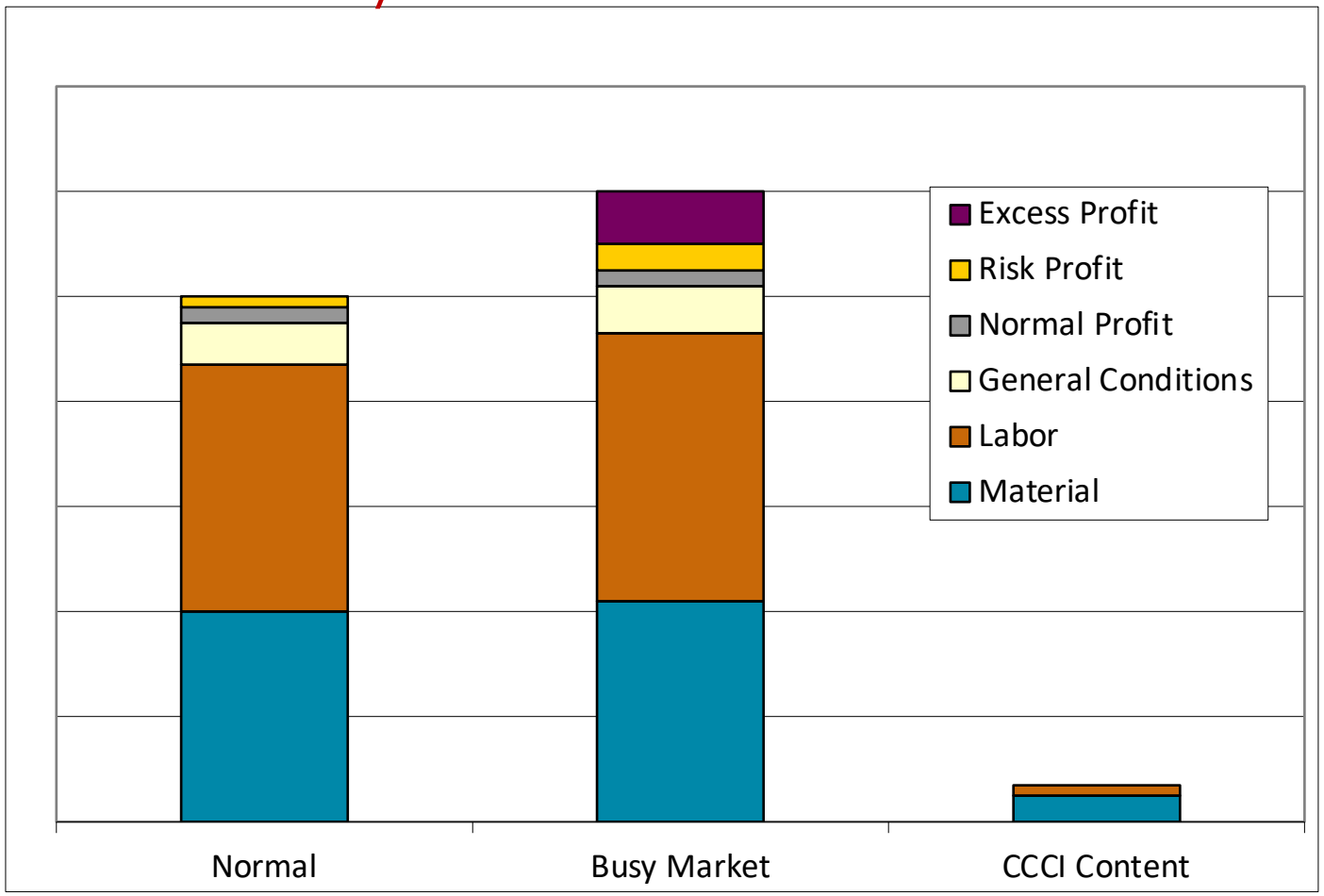
Market Elasticity:



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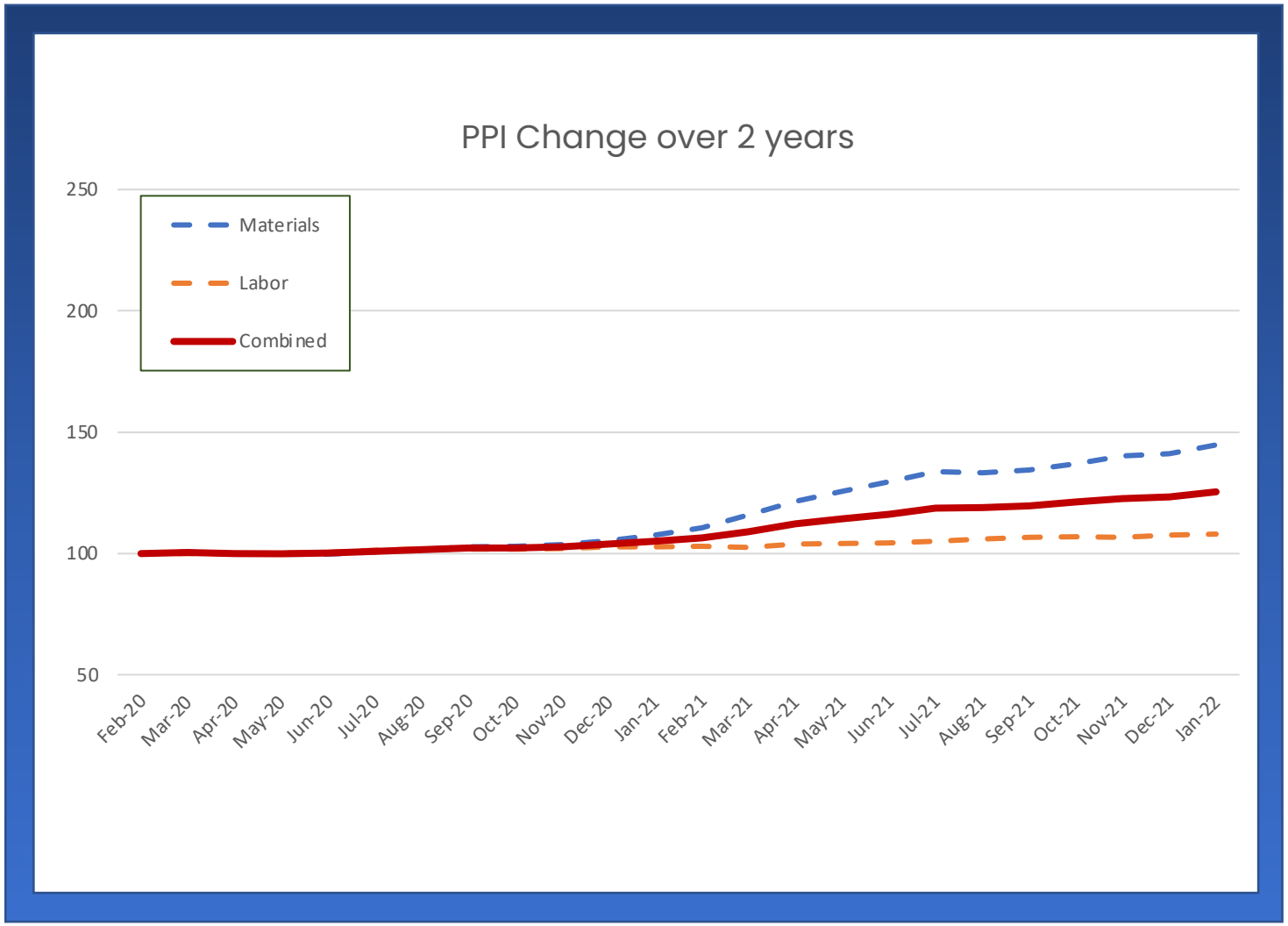
Understanding the market



PPI 2-year increase

Material – 45%

Labor – 8%

Combined – 25%

ENR – SF (20 City)

BCI – 20% (20%)

CCI – 12% (11%)

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Understanding the market

Building Cost Index History

68.38 hours of skilled labor at the 20-city average of bricklayers, carpenters and structural ironworkers rates, plus 25 cwt of standard structural steel shapes at the mill price prior to 1996 and the fabricated 20-city price from 1996, plus 1.128 tons of portland cement at the 20-city price, plus 1,088 board-ft of 2 x 4 lumber at the 20-city price

Construction Cost Index History

200 hours of common labor at the 20-city average of common labor rates, plus 25 cwt of standard structural steel shapes at the mill price prior to 1996 and the fabricated 20-city price from 1996, plus 1.128 tons of portland cement at the 20-city price, plus 1,088 board-ft of 2 x 4 lumber at the 20-city price

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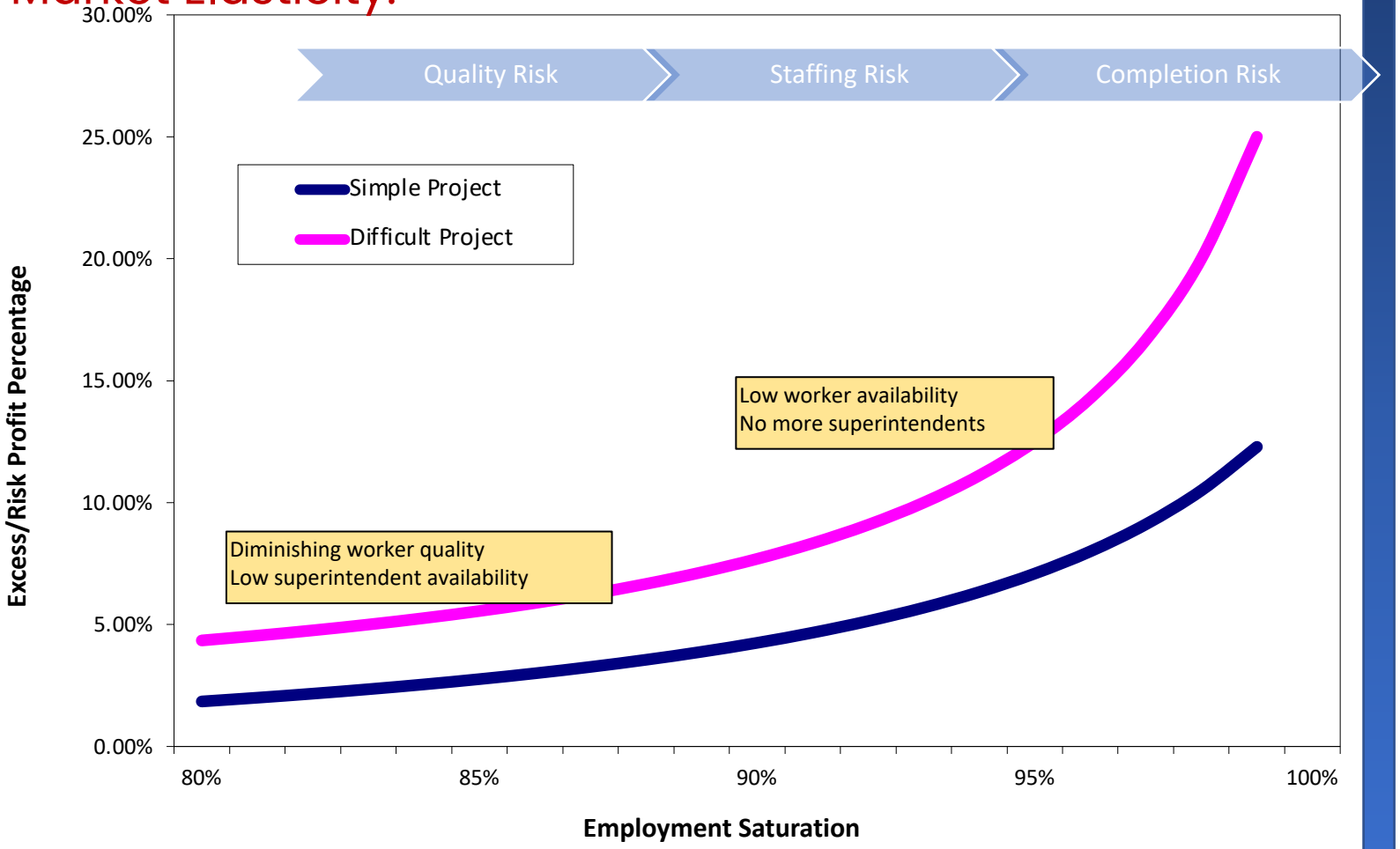
Understanding the market

Market Elasticity:



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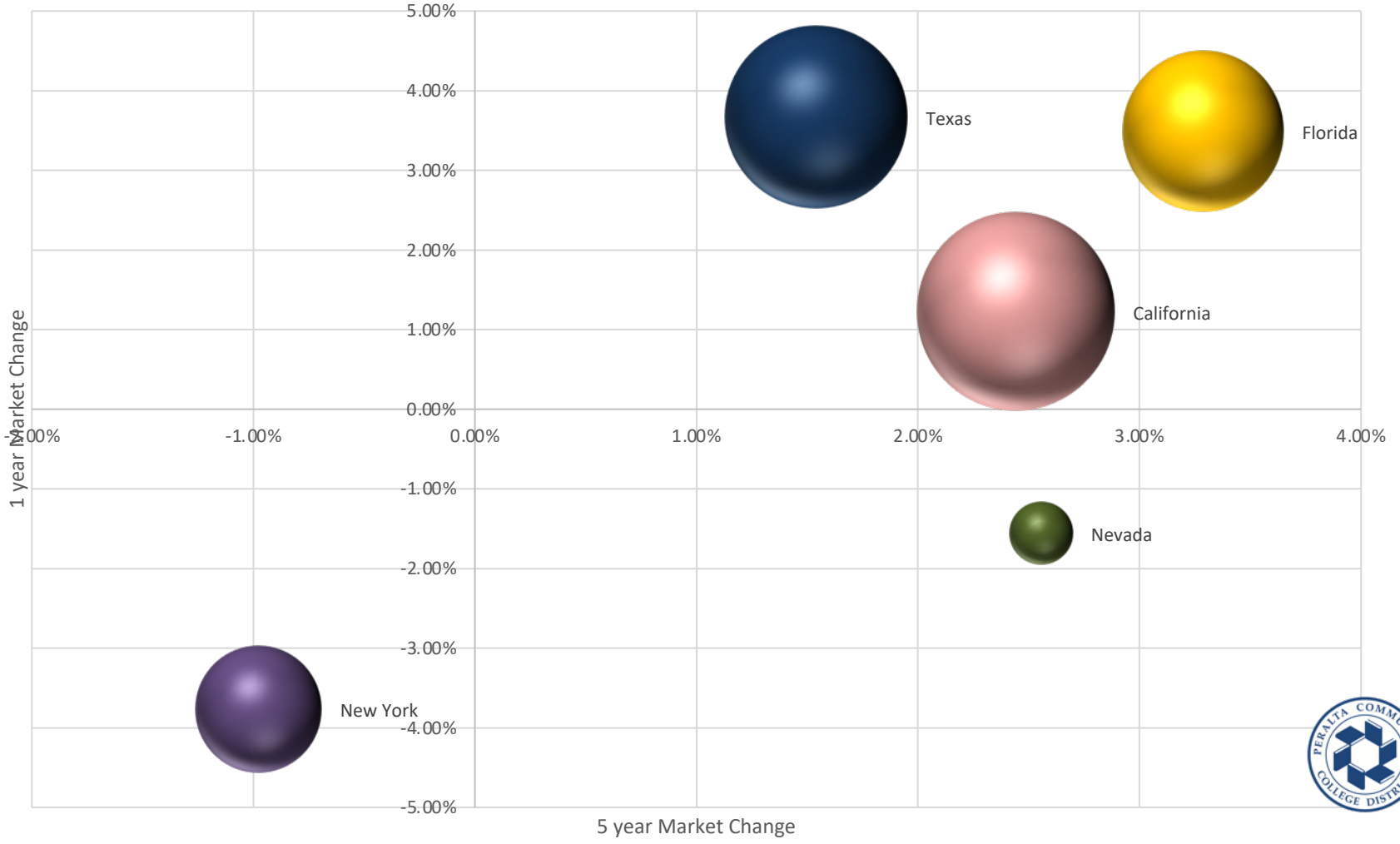
Understanding the market



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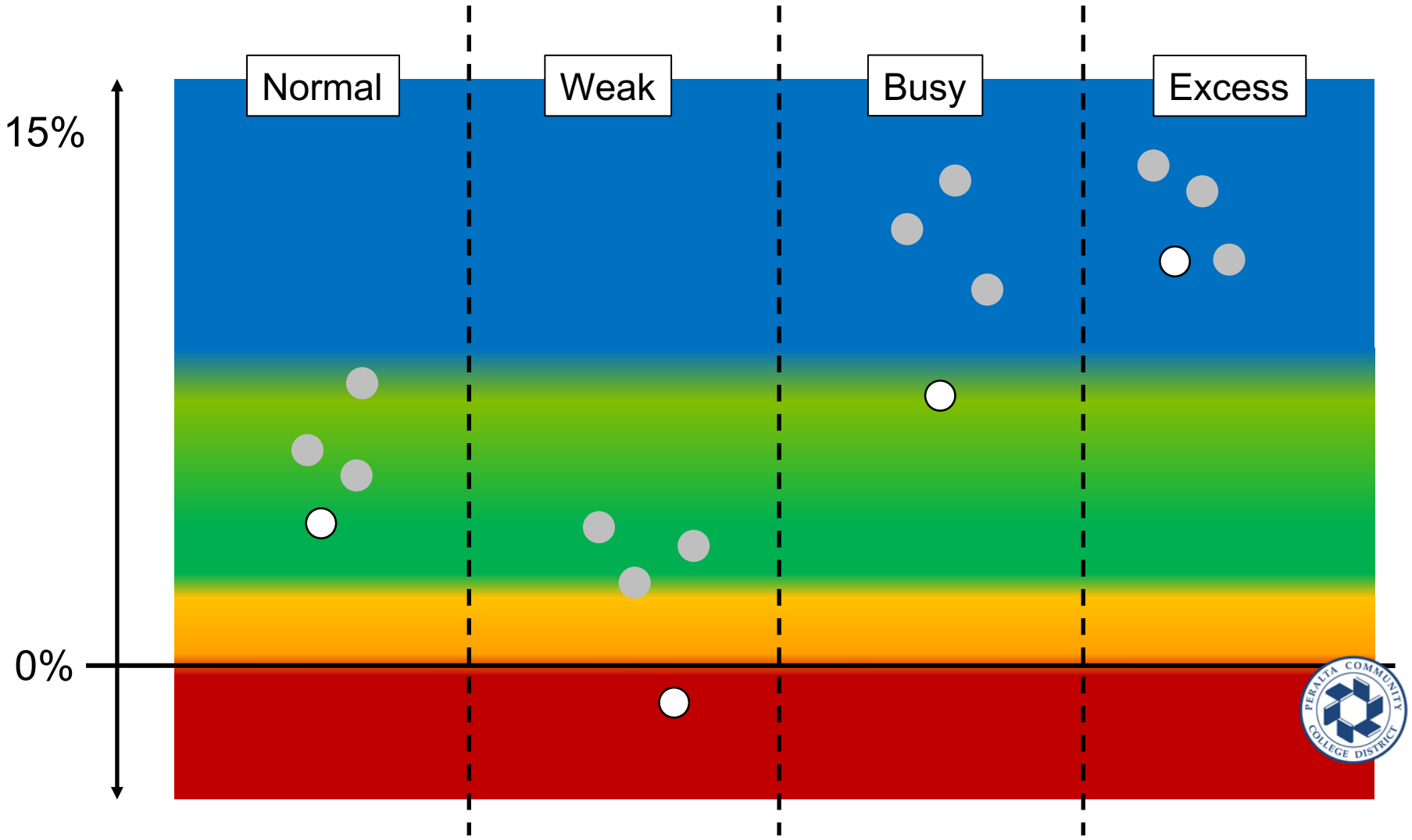
Understanding the market



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Understanding the market

Factor	Rate	Weight	Value
Degree of risk	20		
Relative difficulty of work	15		
Size of job	15		
Period of performance	15		
Contractor's investment	5		
Assistance by Government	5		
Subcontracting	25		
TOTAL	100%		

Weighted Profit Guidelines
(DFARS 215.404-71)

Weights range from 0.03 to 0.12

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Understanding the market

Summary:

- There is no such thing as an objective price

- There are many factors that impact a price
  - Supply and demand
  - Fixed and Variable costs
  - Direction of market change
  - Market saturation (hunger)

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Understanding uncertainty

Basic Principles

- Identify
- Evaluate
  - Characterize
  - Quantify
- Plan
  - Mitigate
  - Contingency
- Implement and monitor

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Creating the Estimate: Practice of Pricing

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Practice of Pricing

An estimate is:

- A judgment based on considerations of probability
- Our individual professional opinion – even if our opinion is that a published price is right

We need to understand:

- Condition of construction
  - How will it be built?
  - What is the market?
  - How many bidders?
- Even if we are using lump sum prices or parametric models

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Principles of Pricing

Cost Build-Up: Direct Cost

- Labor
  - Direct “Value Added” labor
  - Required non-value-added: safety, supervision, staging, travel
  - Correlated labor costs: Worker’s comp, PRTI, dues, etc.

- Material
  - Material incorporated
  - Temporary material: formwork, shoring, protection
  - Waste, attic stock, etc.

- Equipment
  - Equipment, tools, machinery: hoists, excavators, trucks
  - Mobilization/Demobilization/Idle Time
  - Usually limited to direct trade equipment

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Principles of Pricing

Cost Build-Up: Mark-Ups

- General Conditions/Requirements
  - Cost of running the project
  - CSI Division 01
  - Largely defined by the Specifications or Contract (READ the Specs!)

- Overhead (Field and Home Office)
  - Cost of running the business
  - Depends on bidders
  - Not project specific, but project dependent

- Profit
  - Cost of running the risk

Fee is a term often combining Home Office Overhead and Profit

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Presenting the Estimate: Communication

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Presenting the Estimate

Reports

- Bottom Line Up Front (BLUF)
- Clarity of thought/Simple language
- Consistency of format
  - Key findings/Key basis of reasoning
  - Project Description
  - Basis of estimate (Inclusions/Conditions of construction/Exclusions)
  - Risk/uncertainty assessment/Contingencies
  - Schedule and escalation assessment
- Cost Summaries
  - Appropriate rounding
- Cost Back-up

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Presenting the Estimate

Reports

- Quality Control
  - Math Check
  - Spell Check
  - Grammar Check
  - Sanity Check
  - Visual Check
  - Third Party Review

- Clear graphic appearance
  - Neatness of product reflects clarity of thought
  - Neatness of product reflects care and attention

- Follow-up
  - Check it has been received and understood

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How to Prepare an Estimate

Review

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Goals

The purpose of this session is to

- Work through preparing an estimate
  - How to structure the estimate
  - How to develop prices, allowances and contingencies
  - How to put together actionable information

So that, you will be able to:

- Build good estimates
- Become a trusted advisor as part of the team
- Deliver success for the project, the community – and yourself

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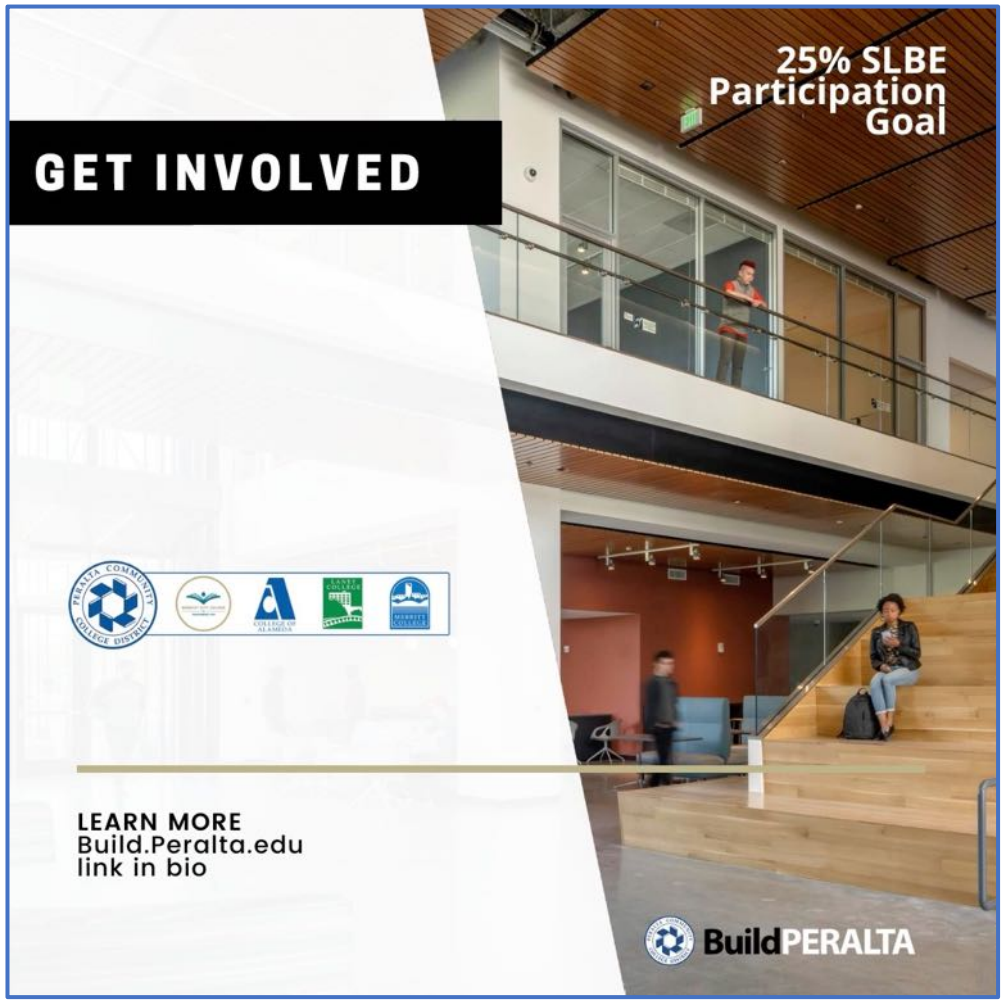
QUESTIONS?

Build Peralta Bond Program Contact Information



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