

Brent Pilgrim

The Beck Group

The Integrated Estimating Workflow

A model-based collaboration framework,
built around *five* characteristics
that distinguish it from any other industry practice by
addressing the most common *adoption challenges*
encountered with previous workflows.
It sets clear expectations for *collaboration*
with a model.

The Integrated Estimating Workflow

Model Authoring Phase	1	Intentional Model Authoring <ul style="list-style-type: none">• Achieve Higher Model Quality• Eliminate Consistency Issues	Establishes baseline level of quality and introduces a simplified, standardized model structure.
	2	Qualifiable & Quantifiable Data <ul style="list-style-type: none">• Ensures Model Element Identification & Classification• Ensures Measurement & Quantification Issues	Ensures model objects can be intuitively identified and measured (quantified).
Cost Estimating Phase	3	Integrated Cost <ul style="list-style-type: none">• Avoids Manual Transfer Errors• Supports Automation	Establishes requirement for digital link between cost item quantity and source model geometry. Establishes distinguishing characteristic of the workflow.
	4	Estimating Standard <ul style="list-style-type: none">• Addresses LOD Variations in Models• Avoids Model Completeness Issues	Provides a basic estimating strategy and supports an “LOD flexible” approach to quantity takeoff.
	5	Automation/Augmentation Applied <ul style="list-style-type: none">• Reinforces the Need for Standardization	Establishes requirement for automation, and thereby reinforces the need for standardization.

5 Myths About Model-Based Estimating To Debunk Forever!

Myth #1

“You can’t use early-stage design models for model-based estimating because the low LOD doesn’t contain enough information for cost estimating purposes.”

Myth #2

“In order to be useful for model-based estimating, the design team has to take on a significant burden including modeling to a higher LOD and managing hundreds of parameters and meta data tags, and don’t have time (or get paid) for that.”

Myth #3

If the architect won't share their model, it's too expensive to build our own model for cost estimating purposes.

Myth #4

“Because design never stops, and models are constantly being updated, it is a fruitless exercise to link cost items to model objects. As soon as the design team updates their model with progress, we have to start the whole process over again.”

Myth #5

“There are no estimating standards available to deal with models that contain varying LOD.”



SUNDT

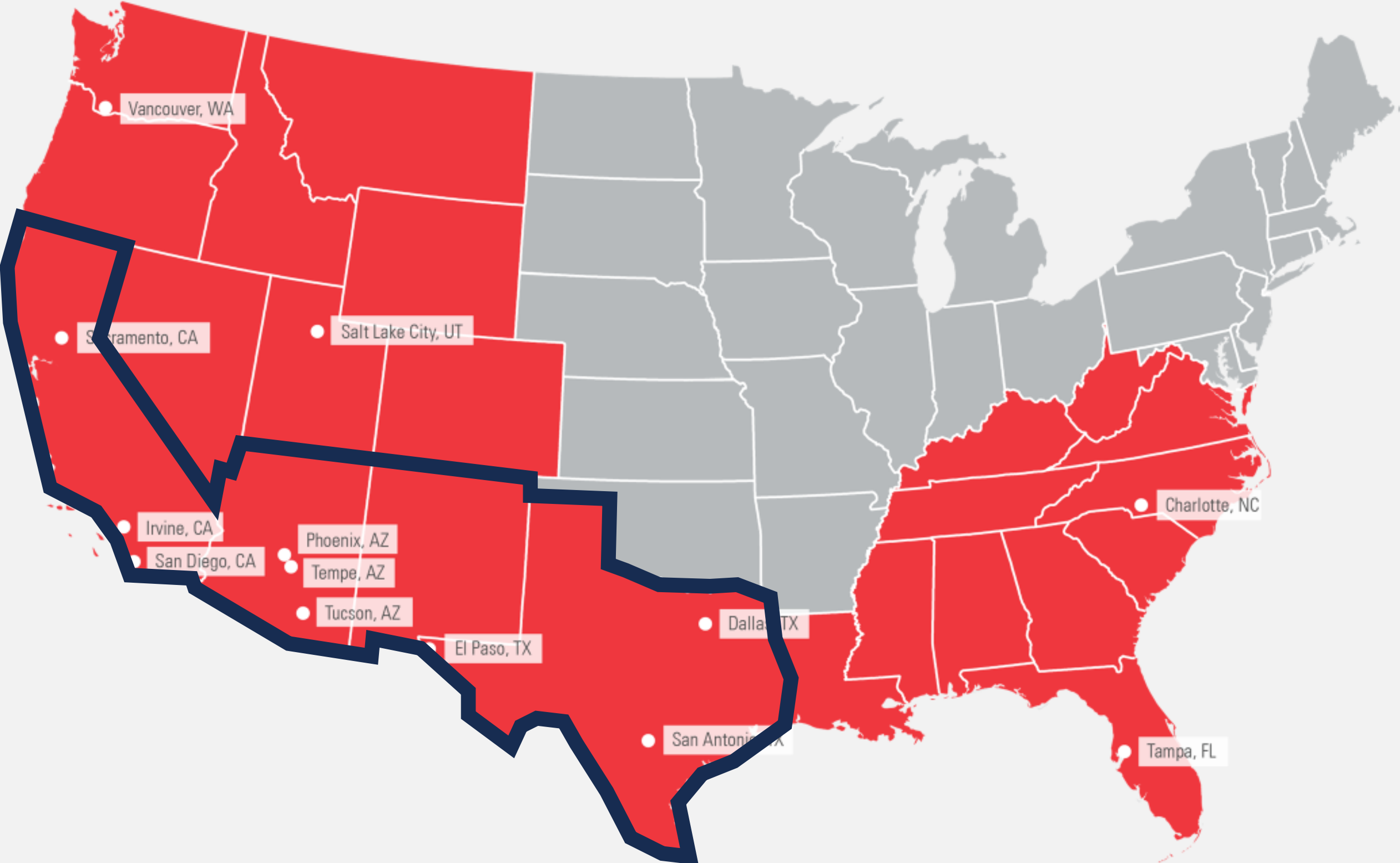
Jonathan Randall
Preconstruction Project Manager



What We Do
**WHAT
WE BUILD**



OFFICE LOCATIONS





WORKFLOWS



SIT DOWN
WITH
DESIGN TEAM

MODEL QC/
CONDITIONING

CONSUME MODEL
DATA

ANALYZE AND
REPORT OUT
CHANGES

FEEDBACK
LOOP

	Name	Quantity
	Fiber Cement Siding	31
	James Hardie Board	31
	Masonry	74
	Stone Veneer	74
	Stucco	31
	3-Coat Stucco	31

DESTINI Estimator - MBE Case Study [Version 02]

Home Project **Estimate** Rates & Resources Dashboard Insert View Comparison Takeoff Update

Save 2 Changes Refresh Create One-off Line Item Remove Cost Copy Line Item Set Escalation Productivity Adjustment Fees WBS Properties Highlight Rules Audit Trail From Estimate View Excel Report Rate Tables Upload to Financials Procure Create Project Bid Day Push Items Pull Items

Filter

Group

Integrated Estimating

<All Items>

<unknown>

Office Building

0200 Sitework

0300 Substructure

ARCH 9" Concrete Slab

ELEVATOR

0400 Superstructure

0500 Exterior Closure

0700 Roofing

0900 Interior Construction

0950 Interior Finishes

1000 Specialties

1200 Furnishings

1400 Conveying Systems

1530 Fire Protection

1540 Plumbing

1580 HVAC

1600 Electrical

1700 Communications & Security

Sitework

Estimate

System (Location 1) Assembly Systems Format

Is Mapped Description Formula Quantity Unit... Unit... Aggregate Cost Cost

Office Building

Substructure - Foundations - At Grade - SOG & Standard - Parametric (#ASM5)

0300 Substructure

SOG Rebar

Continuous Wall Footings - Rebar

Continuous Wall Footings

Grade Beam Reinforcing

CIP Grade Beams

SOG Welded Wire Mesh

Slab On Grade (9 in); incl vapor barrier

Direct Cost: \$483,241.74, \$8.08 / SF

Project Estimate Rates & Resources Dashboard Comparison

Takeoff

RIGHT BACK

Cost Information

WBS

QTO Prop

Asm Items

Automatic Pricing ON

WBS Property Name Value

Bid Package

System (Location 1) Office Building

Alternate Name 00 Base Bid

Alternate Status 00 Base Bid

Assemblies

Assembly Method

Assembly Room

CA Cost Revision D... 2020 02

CA Cost Source Southern CA

CA Pricing 0

Collection Classific...

Name:

Properties

Name Value Unit of Measure

Count 3.00

Area 29,862.95 Sq. Feet

Perimeter 1,325.15 Feet

Thickness 0.75 Feet

Volume 22,397.21 Cu. Feet

Number of Components: 3

Item

Material Cost: \$0.00 f(x)

Equipment Cost: \$0.00 f(x)

Sub Cost: \$0.00 f(x)

Other Cost: \$0.00 f(x)

Number of Cost Components: 1

Update Duplicate

SUM= 462,898.24

Perspectives from Preconstruction

Main Takeaways:

1. Significant Improvement in ability to comprehend design intent for the project
2. Significant Decrease in the amount of time to perform quantity take-off activities related to estimating
3. Highly Scalable in terms of a formalized estimating standard or strategy for QTO
4. Exceptional Improvement to the efficiency of the estimating process
5. Significant Improvement to managing change between design phases
6. Significant Improvement to the underlying model quality
7. Significant Improvement to the underlying estimate quality
8. Highly Scalable in terms of the potential for industry adoption



Preconstruction/Estimator
Jonathan Randall
Sundt Construction

