



Western Winter Workshop 2009



COST CONTROLS OF CAPITAL COSTS THROUGHOUT THE DESIGN PHASE

**Presented by
Planning & Management Services, Inc
Federal Way, WA (near Seattle)**

Who We Are



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Planning & Management Services, Inc “PMSI” Hreinn Thormar, President

At P&M, we specialize in project delivery and project controls including capital program and project solutions. We are involved in the project delivery from planning throughout design, permitting and construction.

We define, implement and staff Project Management Offices (PMOs), which include Tools and Procedures for Project Controls and Program Management. We provide Scheduling; Cost; Risk and Forensic Claims Management services.

Solutions From A-Z

Determining the client's precise needs is what our skilled consultants do in order to provide flexible, scalable and personalized project delivery solutions which is more than just standard solutions. This ensures a harmonic integration of new technology, people, and processes from A-Z.

Our project controls SQL/VB based proprietary software *Myriad* supports the owner, contractor and designer with project delivery and project controls.

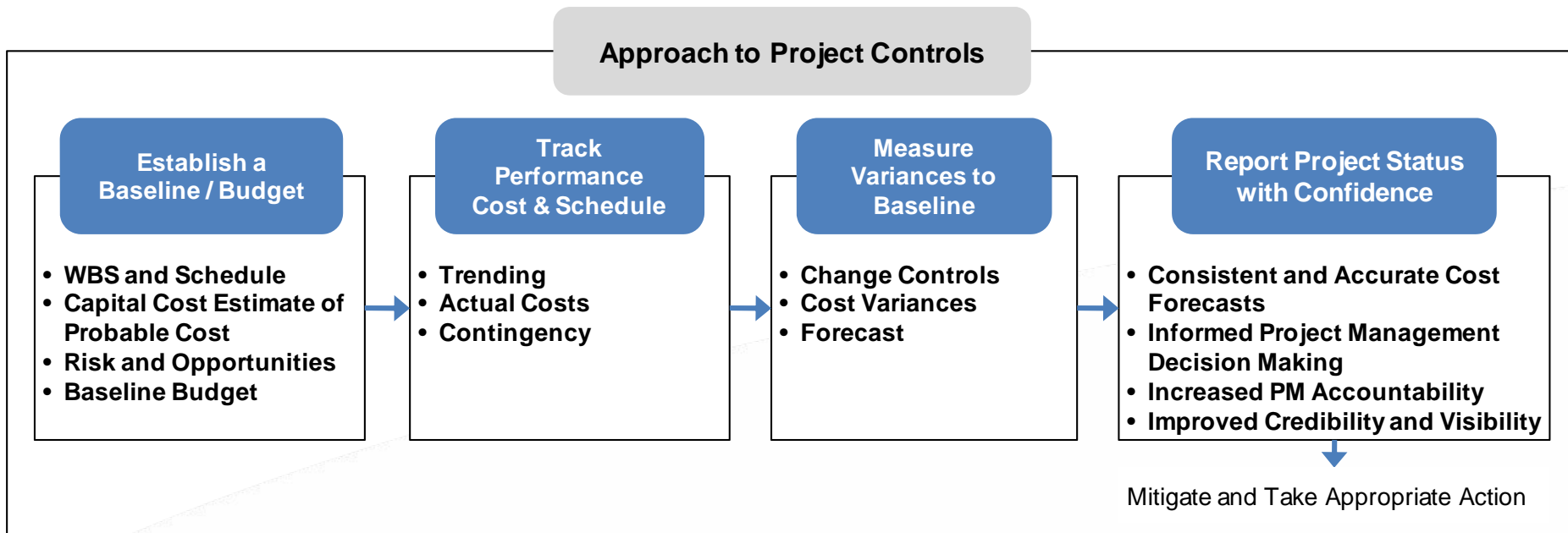
Agenda

- Goals
- Cost Controls in General
- Cost Controls Baseline
- Trending
- Forecasting

Goals

- ✓ Deliver Project On-Time and On-Budget
- ✓ Avoid Surprises & Crises
- ✓ Create Visibility & Credibility
- ✓ Facilitate Proactive Decision Making
- ✓ Minimize Cost and Time Impacts

Cost Controls in General

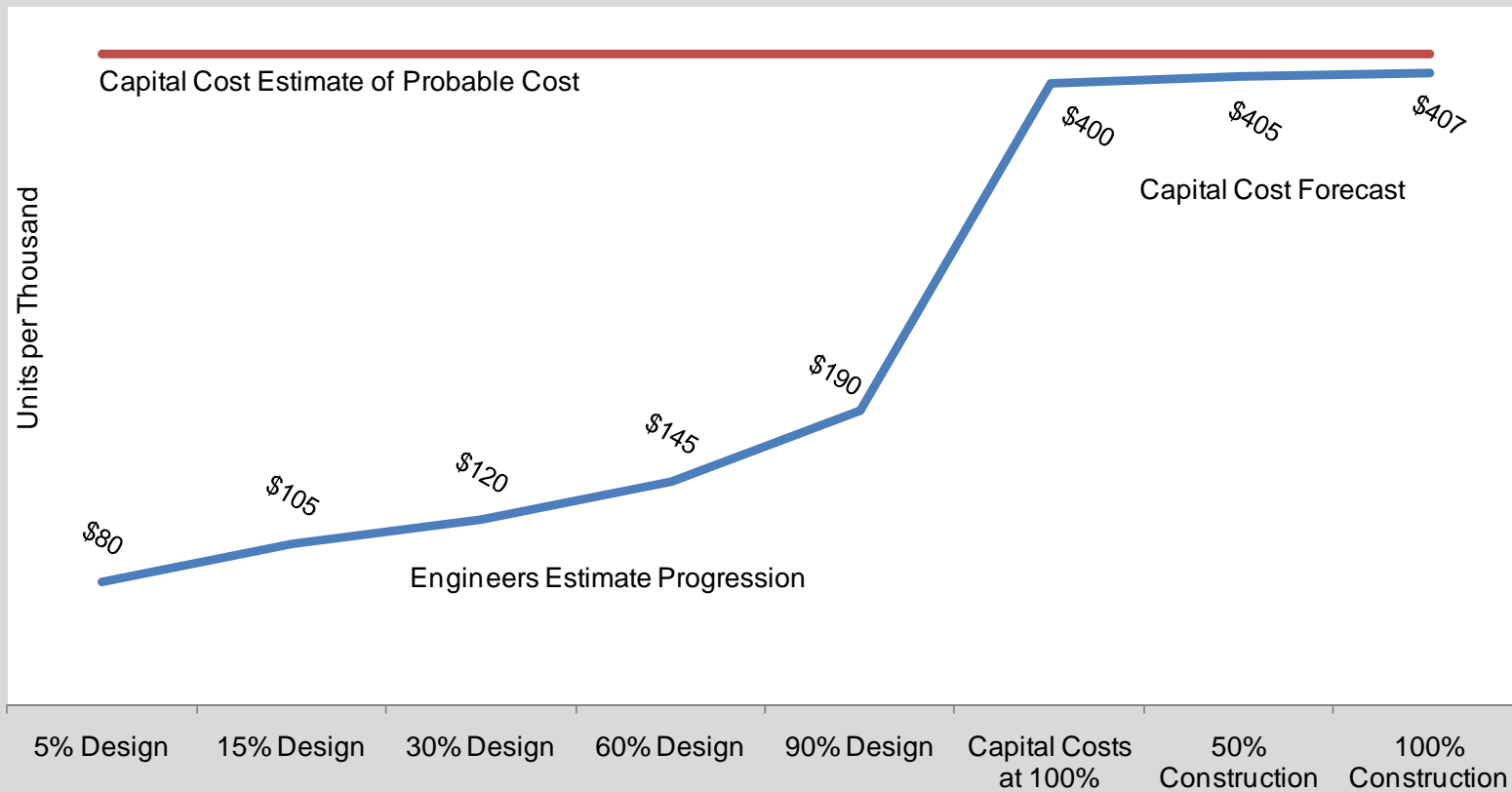


Estimates and Communication



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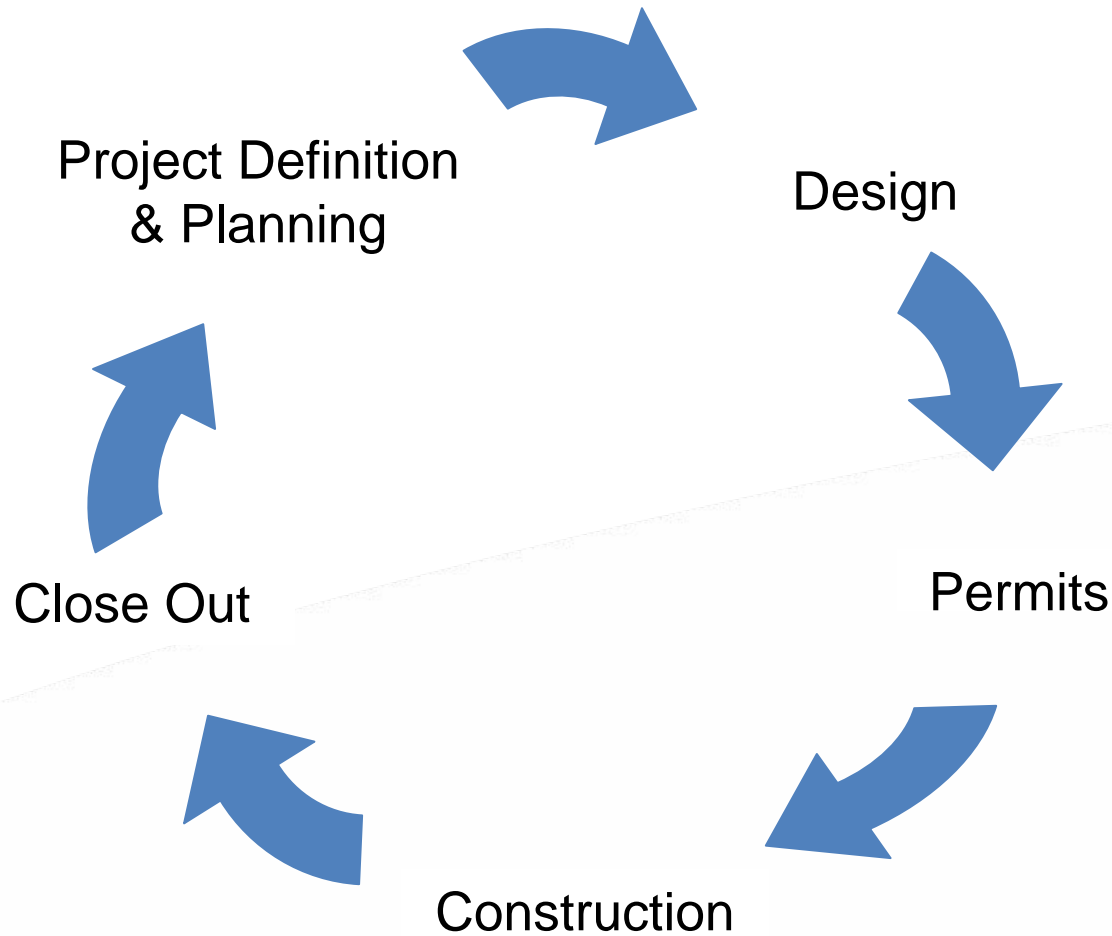
Construction Cost - Progression



Establish a Baseline / Budget

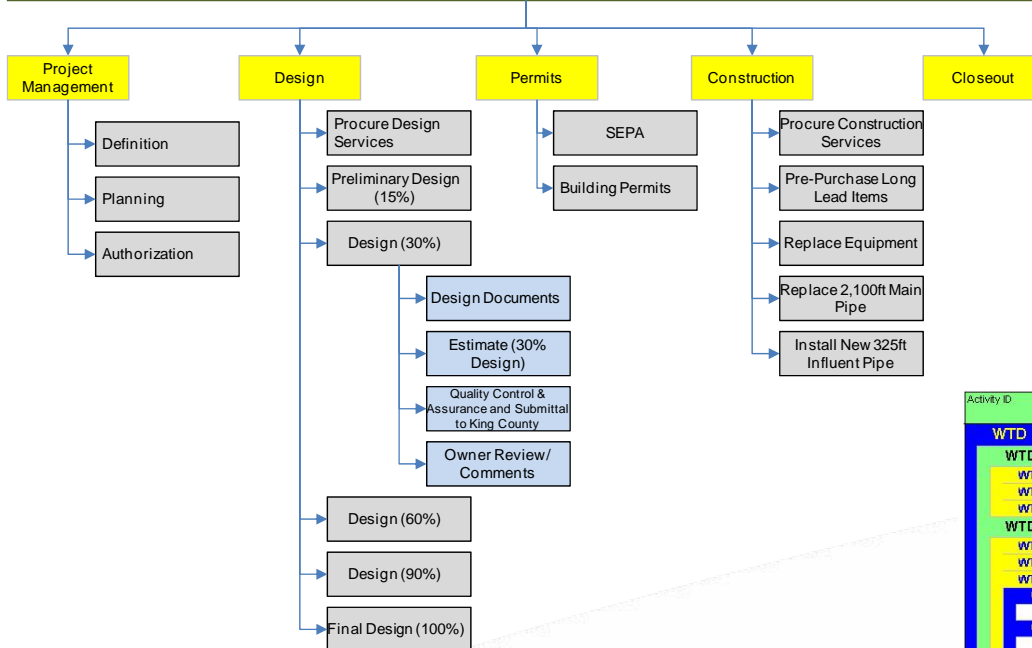
- WBS and Schedule
- Capital Cost Estimate of Probable Cost
- Risk and Opportunities
- Baseline Budget

Capital Costs

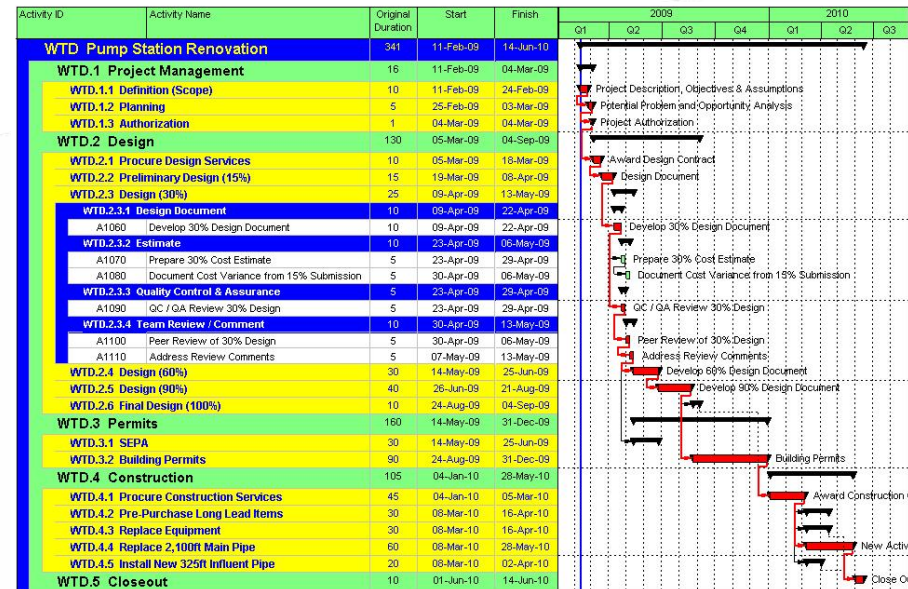


WBS & Master Schedule

Pump Station Renovation (Increase Peak Capacity from 6.2 to 9.3 mgd)



Determine mid-point construction and constructability



Detailed Construction Estimate



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Cost Code	Title	Qty	Unit	Unit Cost		Total Cost	
				Misc. Cost Mat'l, Equip, SC	Amount	GC, OH and Profit	Total
10332601200	Existing Maintenance Canopy Modifications	1	LS	55,000.00	55,000.00	0.00	55,000.00
10332601200	Kiosks, Guard Shacks, and Shelters	1	LS	140,000.00	140,000.00	0.00	140,000.00
10332601200	Longshore Building Remodel	1	LS	360,000.00	360,000.00	0.00	360,000.00
10332601505	Mobilization / Demobilization / Construction Phasing	1	LS	773,000.00	773,000.00	0.00	773,000.00
10332601722	Construction Survey Support	1	LS	70,000.00	70,000.00	0.00	70,000.00
10332602072	Existing Fender System Damage	1	FA	50,000.00	50,000.00	0.00	50,000.00
10332602141	Disposal of Contaminated Water	1	FA	90,000.00	90,000.00	0.00	90,000.00
10332602141	Removal of Free Product	1	FA	10,000.00	10,000.00	0.00	10,000.00
10332602211	Type A Soil Removal and Disposal	11500	TON	12.00	138,000.00	0.00	138,000.00
10332602211	Type I Soil Removal and Disposal	11500	TON	19.00	218,500.00	0.00	218,500.00
10332602211	Type II Soil Removal and Disposal	5820	TON	38.00	221,160.00	0.00	221,160.00
10332602220	Apron and Fender Demolition	1	LS	3,500,000.00	3,500,000.00	0.00	3,500,000.00
10332602220	Site Demolition	1	LS	500,000.00	500,000.00	0.00	500,000.00
Select Cost Code Delete							
					34,179,459	0	34,179,459

General

Author

Percentage Adjustments

Overhead [%]

Signatures

Name

Title

Estimate Classification and Accuracy



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	Primary Characteristic		Secondary Characteristic		
	LEVEL OF PROJECT DEFINITION	END USAGE	METHODOLOGY	EXPECTED ACCURACY RANGE	PREPARATION EFFORT
ESTIMATE CLASS	Expressed as % of complete definition	Typical Purpose of Estimate	Typical Estimating Method	Typical +/- range relative to best range indice of 1 (a)	Typical degree of effort relative to least cost indice of 1 (b)
5	0% to 2%	Concept Screening	Capacity Factored, Parametric Models, Judgment, or Analogy	L -20% to -50% H +30% to +100%	1
4	1% to 15%	Study or Feasibility	Equipment Factored, or Parametric Models	L -15% to -30% H +20% to +50%	2 to 4
3	10% to 40%	Budget, Authorization, or Control	Semi-Detailed Unit Costs w/Assembly Level Line Items	L -10% to -20% H +10% to +30%	3 to 10
2	30% to 70%	Control or Bid/Tender	Detailed Unit Cost w/ Forced Detailed Takeoff	L -5% to -15% H +5% to +20%	4 to 20
1	50% to 100%	Check Estimate or Bid/Tender	Detailed Unit Cost w/ Detailed Takeoff	L -3% to -10% H +3% to +15%	5 to 100

Risk Analysis

Project Risk

Construction projects are a **complex entity to manage** and each construction project has its own significant changes and challenges like:

- unforeseen conditions
- errors in documents and plans
- scope creep
- schedule delays, etc.

Owners who manage capital projects should have processes in place to manage:

- changes
- contingencies and
- forecasting of cost

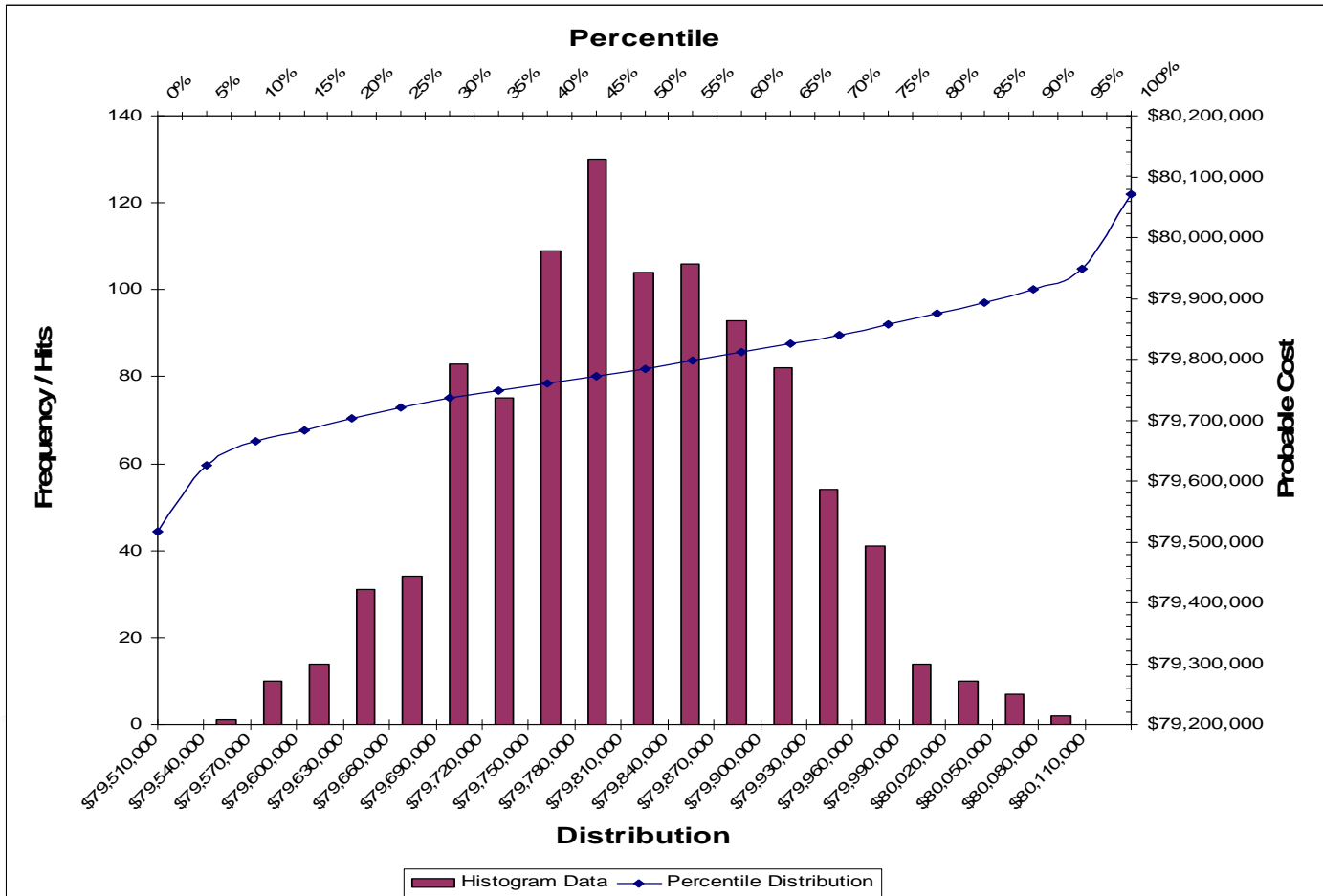
Risk Register for T30 T30 Apron Upgrade - Pre-construction Analysis

[Reports](#) [Help!](#) [View Risk](#) [Delete Risk](#) [Analyze With Excel](#) [Done](#)

#/ Type	Description	Cause	Action Plan	Sch./Cost Impact	Champion	Alarm Date	Closed	Urgency
01b	Labor or equipment disruptions, either in Phase 1 or 2.	Lack of skilled labor; error in equipment		0 0.00	Brian Sweet	10/15/2007	<input checked="" type="checkbox"/>	Medium
02	Permit delays that could impact start of Phase 1.	SMUP delay	-Information meeting with interested Contractors scheduled on 5/18/07 - Possibly issue full NTP before	0 0.00	Chun Lau	7/25/2007	<input checked="" type="checkbox"/>	High
02b	Permit delays that could impact start of Phase 1.	Building Permit Delay		0 0.00	Chun Lau	7/25/2007	<input checked="" type="checkbox"/>	
04	Availability of steel sheet piles when they are needed.	Late award / supply shortage	None determined, but discussed if Chun shall explore opportunity for the Port to pre-purchase the piles	0 0.00	Elmer Ozolin	5/31/2007	<input checked="" type="checkbox"/>	Low
11	New electrical gear procured and on-site at the required time for installation	Late Award date	None	0 0.00	Elmer Ozolin		<input checked="" type="checkbox"/>	Medium
17	Price Escalation		Discover opportunity for commodity price escalation provisions into bid documents	0 0.00	Brian Sweet	5/31/2007	<input checked="" type="checkbox"/>	

-To search, type in your criteria and press 'Enter'. To show all risks again, blank the search box and press 'Enter'. [Clear Filters](#) All All

Risk Analysis – Monte Carlo



Estimate of Probable Cost Report



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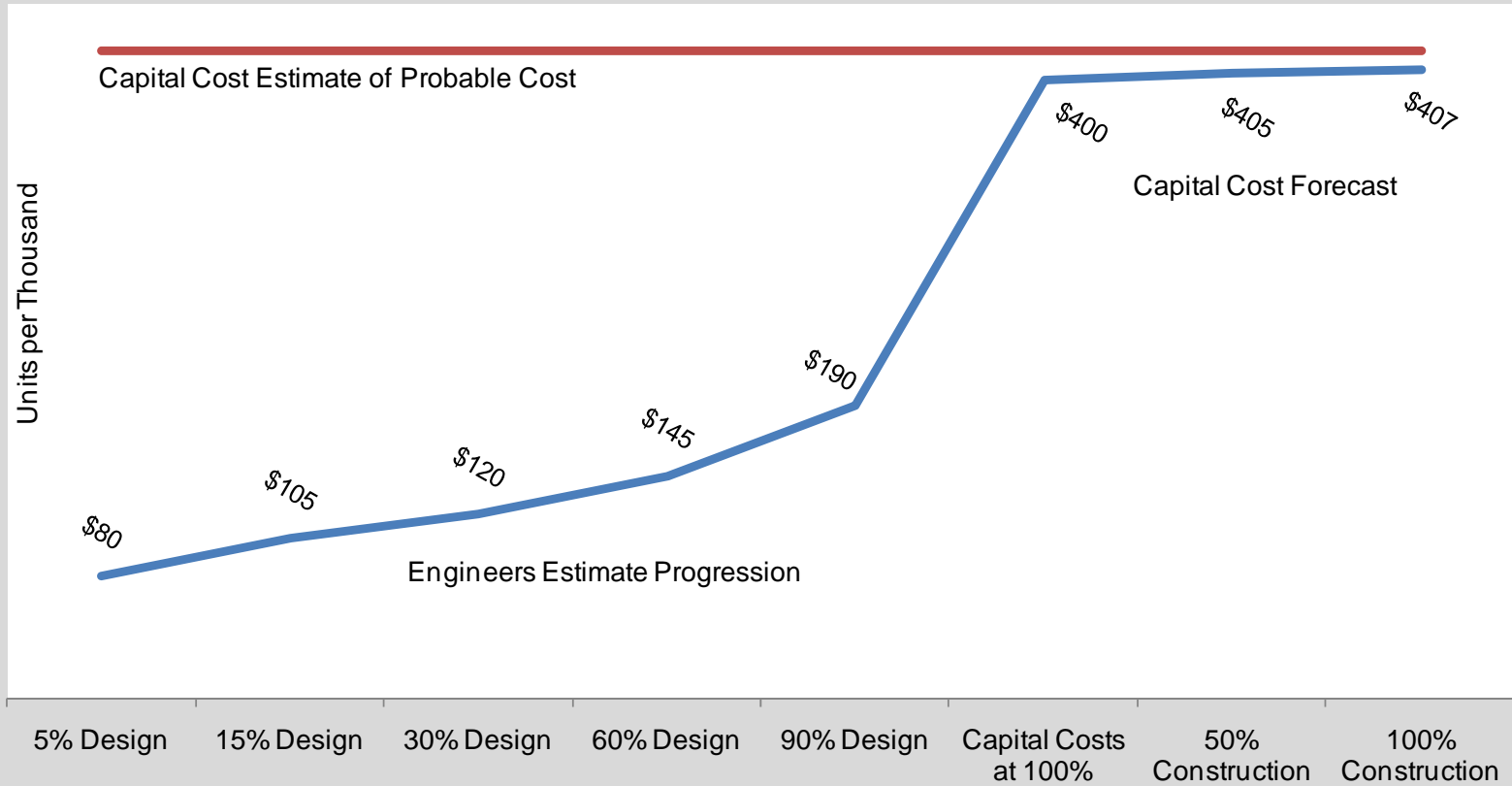
ESTIMATE OF PROBABLE COST		
Subtotal Estimated Construction Direct Costs <i>(incl GC, OH & P)</i>		\$195,000
Apprenticeship Program	0.5%	\$975
Design Contingency	20.0%	\$39,195
Design Evolution	0.0%	\$0
Unit Pricing	0.0%	\$0
Quantities	0.0%	\$0
Escalation @ 3% Annually <i>(to mid-point of construction)</i>	0.25% 19 Months	\$11,426
Subtotal Estimated Construction Bid Cost <i>(Total Estimated Constr. Bid w/ Constr. Contingencies & Sales Tax)</i>		\$246,596
Construction & RMM Contingency	8.0%	\$19,728
Scope Contingency / Management Reserve	2.0%	\$4,932
Subtotal Estimated Construction Costs w/ Constr. Contingencies		\$271,255
State Sales Tax	9.3%	\$25,227
Subtotal Estimated Construction Costs w/ Contingencies & Sales Tax		\$ 296,482
Soft Costs		
A & E Fees and Salaries	10.0%	\$29,648
Special Testing & Inspection, Safety & Commissioning	2.5%	\$7,412
Project Management	3.0%	\$8,894
Construction Management	6.0%	\$17,789
Project Survey	0.5%	\$1,482
Artwork	1.0%	\$2,965
Permits	0.8%	\$2,372
Oversight of RMM Projects	10.0%	\$29,648
Allocated Overhead	4.5%	\$13,342
Quality Program	0.5%	\$1,482
Administrative / General	0.0%	\$1
Subtotal Soft Cost Markup		38.8% \$115,036
TOTAL PROJECT ESTIMATED COST		\$ 411,518

Estimates and Communication



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Construction Cost - Progression



Track Performance Cost & Schedule

- Trending
- Actual Costs
- Contingency

- Trends are:
 - ✓ Scope Change
 - ✓ Design Evolution
 - ✓ External Constraint Issues
 - ✓ Other

- Trends are inevitable and expected
- Trends identify opportunities and risks
- Trends help manage changes
- Trends facilitate final project cost forecasting

Trending

- Trends are typically identified from:
 - ✓ Issue management logs
 - ✓ Risk registers
 - ✓ Discussion with project team members
 - ✓ Change review board
 - ✓ Regulatory requirement
 - ✓ Industry & Market trends
 - ✓ Other

Trending Justification Categories



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Change management is thus, one of the keys to project delivery success. To facilitate a broader understanding and more appropriate evaluation of change, trends are categorized as to type in a manner similar to the following.

- Owner directed Engineering / Design changes (possible scope change).
- Tenant change requests (possible scope change).
- Construction changes – varying site conditions, design errors and/or omissions, quantity variations, misc. minor change orders, etc.
- Regulatory requirement changes.
- Refinement of Design Basis (Design Development).
- Program wide (scope) change.
- Major schedule changes and project interrelated impacts.
- Budget transfers.
- Contract award – variance between the final estimate and the award amount.

Trend Identification Checklist



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TREND IDENTIFICATION CHECKLIST

TASK LEADER:

date:

Active estimate baseline: Uplands 30%

Last Update:

1/3/2009

Potential (Y or N)	Approved (Y or N)
-----------------------	----------------------

Questions:

Have there been any new owner directed engineering or design changes this period?

Have there been any new tenant requested engineering or design changes this period?

Have there been any new design changes this period?

Varying Site Conditions

Quantity variations

Unit cost variances

Other design developments

Have there been any new regulatory requirements identified that influence the design?

Have there been any changes in other projects that may create a design change?

Have there been any schedule impacts that may cause a design change?

Have there been any changes to previously listed trends this period?

(See attached list of trends assigned to this task leader)

If "Yes" to any of the above, describe trend in detail.

Primary Budget Element Affected:

Estimated Cost Impact:

Trend ID Assigned:

Trend Log



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Status	Title	Date	Number	Budget Element	Status	Value (\$)	Priority	Justification Code
Approved (Status)								
	Ship To Shore Power CY Portion	30-Nov-08	00125	C05 Container Yard (CY) Electrical: In Terminal Services	Approved	1,362,430	Normal	4. Scope Changes
	Pile Removal Allowance Added	30-Nov-08	00131	W03 Berth & Dredge (Wharf) Dredging	Approved	1,155,000	Normal	1. Design Development
	Bollard Demolition in 60% Wharf	30-Nov-08	00132	W01 Berth & Dredge (Wharf) Demo & Site Prep	Approved	334,950	Normal	1. Design Development
	Temporary & Mooring Bollards	30-Nov-08	00133	W05 Berth & Dredge Wharf Structure	Approved	273,350	Normal	1. Design Development
	Sheetpile Wall 60% Wharf Items	30-Nov-08	00134	W05 Berth & Dredge Wharf Structure	Approved	370,872	Normal	1. Design Development
	Fender Design Items	30-Nov-08	00136	W05 Berth & Dredge Wharf Structure	Approved	603,680	Normal	1. Design Development
	Crane Beam/Rail/Wharf Structure	30-Nov-08	00137	W05 Berth & Dredge Wharf Structure	Approved	462,800	Normal	1. Design Development
Subtotals						4,563,082		
Cancelled (Status)								
	Design Vessel Reduction Fender Sys	3-Aug-08	00070	W05 Berth & Dredge Wharf Structure	Cancelled	0	Normal	4. Scope Changes
	Bldg Demo Asbestos Abatement	2-Sep-08	00111	C11 Container Yard (CY) Building Demo by POT (Ext)	Cancelled	0	Normal	7. Other
Subtotals						0		
Disapproved (Status)								
	Wharf Width Reduction to 124'	3-Aug-08	00072	W05 Berth & Dredge Wharf Structure	Disapproved	-712,635	Normal	1. Design Development
	Bow Thruster Zone Limits	3-Aug-08	00074	W04 Berth & Dredge (Wharf) Slope Protection	Disapproved	-666,050	Normal	1. Design Development
	CY Pave Wheel Load Limits	3-Aug-08	00075	C04 Container Yard (CY) Site Utilities Incl. Storm Drainage	Disapproved	-2,660,350	Normal	4. Scope Changes
	Sheet Pile Deflector Wall	5-Aug-08	00078	W04 Berth & Dredge (Wharf) Slope Protection	Disapproved	255,640	Normal	1. Design Development
	Pervious Pavement Reduction	5-Aug-08	00079	C02 Container Yard (CY) Earthwork & Site Paving	Disapproved	0	Normal	1. Design Development
Subtotals						-3,783,395		
Potential (Status)								
	Power System Redundancy	17-Jul-08	00069	C04 Container Yard (CY) Site Utilities Incl. Storm Drainage	Potential	-613,399	Normal	1. Design Development
	Combined Water/Fire System	1-Sep-08	00113	I04 Intermodal Yard (IY) Water Dist System	Potential	-693,000	Normal	1. Design Development
	Terminal Operations Mode	30-Oct-08	00120	C03 Container Yard (CY) Terminal Improvements	Potential	0	Normal	4. Scope Changes
	CY Pavement Refinement	30-Oct-08	00121	C02 Container Yard (CY) Earthwork & Site Paving	Potential	1,925,000	Normal	1. Design Development
Subtotals						618,601		
Log Totals:						-3,783,395		

Detail Trend Report



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Detail Trend Report by Justification Code

Job No:

Date: 2/18/2009

Project No:

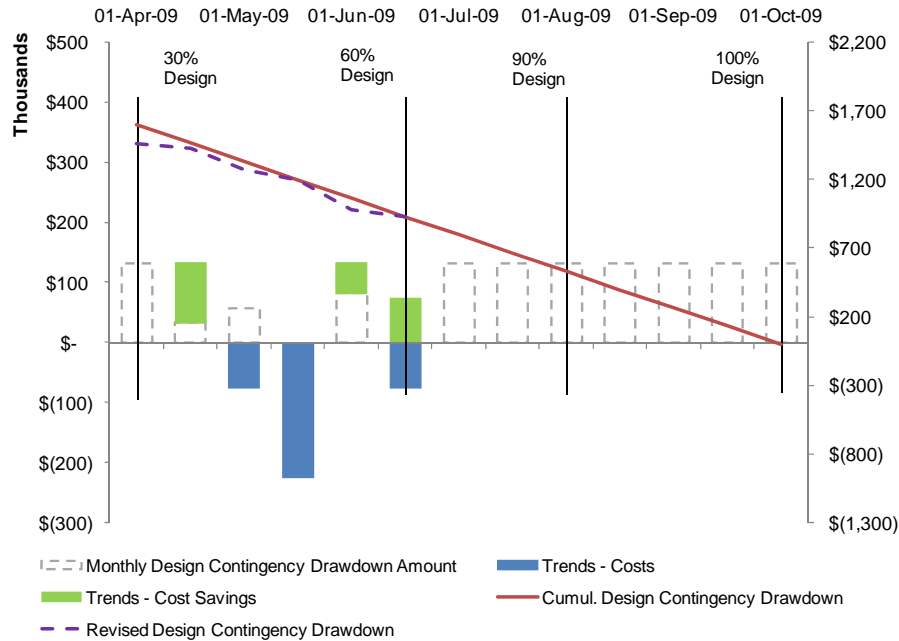
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Date	Number	Title	Budget Element	Justification Code	Status	Value	Issue #
4/30/2008	00001	Stone Column Quantity	W02 Berth & Dredge (Wharf) Ground Improvements	1. Design Development	ACC	\$2,271,000.00	
<p>Identified and reported during 30% Conformed Estimate review. Variance as shown from BOD. Finite element analysis showed additional column quantity required to limit wharf movement under design seismic shaking. As a result of the 30% design seismic analysis, the quantity of stone columns was increased from 80,000 linear feet to 176,500 linear feet to meet the design criteria.</p>							
4/30/2008	00002	Early 400' Wharf Grnd Impr Premium	W02 Berth & Dredge (Wharf) Ground Improvements	1. Design Development	ACC	\$680,000.00	
<p>Identified and reported during 30% Conformed Estimate review. Variance as shown from BOD. Premium associated with early build out of 400' wharf section. This item is for GROUND IMPROVEMENTS only. See Wharf section for additional premium build out costs for wharf only. Additional cost associated with installing stone columns using water-based equipment during the period when TOTE occupies their existing terminal.</p>							
4/30/2008	00003	Clean Dredge Mat'l In-Water Disposa	W03 Berth & Dredge (Wharf) Dredging	1. Design Development	ACC	\$2,750,000.00	
<p>Identified and reported during 30% Conformed Estimate review. Variance as shown from BOD. Total dredge volume increased (from 650,000 to 950,000 cubic yards) due to: 1. Revised quantity based on additional soundings information. 2. Bottom of underwater slope moved inboard. 3. Dredging of the berth to accommodate future depth of elevation -55. 4. Addition of transition zone at the south end of the dredge area. The unit cost per cubic yard of dredging increased from \$6 to \$7.</p>							
4/30/2008	00004	Dredge Material Savings	W03 Berth & Dredge (Wharf) Dredging	1. Design Development	ACC	(\$281,000.00)	
<p>Identified and reported during 30% Conformed Estimate review. Variance as shown from BOD. Net cost change of other dredge items such as upland disposal, unclean material disposal, etc.</p>							
4/30/2008	00005	Slope Protection Filter Blanket	W04 Berth & Dredge (Wharf) Slope Protection	1. Design Development	ACC	\$992,603.00	
<p>Identified and reported during 30% Conformed Estimate review. Variance as shown from BOD. RE: Slope Protection system in general-- 1. Proposed slope protection section was increased from 6' in BOD to 8.5' at 30% design. 2. The slope protection section was increased to armor the slope against a significantly larger design vessel (with different bow thruster characteristics) than was anticipated in the BOD. 3. 30% design unit costs are higher than unit costs used in BOD.-The rock quantities may significantly change based on results of the yet-to-be-completed Slope Scour Analysis.</p>							
<p>Re: Filter Blanket--The unit cost per cubic yard of the filter blanket increased from \$20 to \$24. The quantity increased from 47,460 cubic yards to 79,943 cubic yards.</p>							
4/30/2008	00007	Slope Protection Materials	W04 Berth & Dredge (Wharf) Slope Protection	1. Design Development	ACC	\$328,446.00	
<p>Identified and reported during 30% Conformed Estimate review. Variance as shown from BOD. RE: Slope Protection system in general-- 1. Proposed slope protection section was increased from 6' in BOD to 8.5' at 30% design. 2. The slope protection section was increased to armor the slope against a significantly larger design vessel (with different bow thruster characteristics) than was anticipated in the BOD. 3. 30% design unit costs are higher than unit costs used in BOD.-The rock quantities may significantly change based on results of the yet-to-be-completed Slope Scour Analysis.</p>							

Contingency Drawdown



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ESTIMATE OF PROBABLE COST			
Subtotal Estimated Construction Direct Costs <i>(incl GC, OH & P)</i>			\$195,000
Apprenticeship Program	0.5%		\$975
Trends			\$15,000
Design Contingency		20.0%	\$42,195
Design Evolution	0.0%		\$0
Unit Pricing	0.0%		\$0
Quantities	0.0%		\$0
Escalation @ 3% Annually <i>(to mid-point of construction)</i>	0.25%	19	Months
			\$12,253
Subtotal Estimated Construction Bid Cost <i>(Total Estimated Constr. Bid w/o Constr. Contingencies & Sales Tax)</i>			\$265,423
Construction & RMM Contingency	8.0%		\$21,234
Scope Contingency / Management Reserve	2.0%		\$5,308
Subtotal Estimated Construction Costs w/ Constr. Contingencies			\$291,965
State Sales Tax	9.3%		\$27,153
Subtotal Estimated Construction Costs w/ Contingencies & Sales Tax			\$319,118
Soft Costs			
A & E Fees and Salaries	10.0%		\$31,912
Special Testing & Inspection, Safety & Commissioning	2.5%		\$7,978

Measure Variances to Baseline

- Change Controls
- Cost Variances
- Forecast

Change Management of Trends



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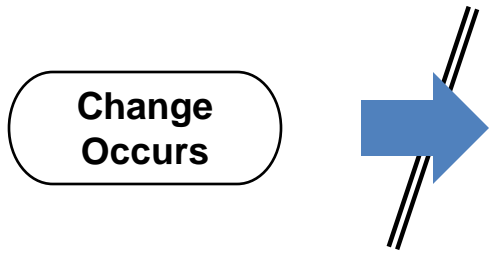
Changes to the design could be thoroughly tracked and managed using a “Gateway” process featuring a review “board”.

The gateway review process assures that changes are:

- captured,
- properly reviewed,
- analyzed, and
- approved prior to incorporation into the design.

This process also allows incorporation of incremental impacts on the engineer’s cost estimate and construction schedules, rather than waiting until design milestones are reached before knowing the full impact of changes.

Change Management (DCRB)



Design Change Review Board (DCRB)

Board verifies source of change and whether client was source or whether client needs to be notified of change.

Board characterizes change as required or potential alternate.

Board characterizes change criteria. Ex. Change is owner required, regulatory requirement, discretionary, non-discretionary, etc.

Board assesses change for impacts to design production scope, schedule, cost, and interdependencies with other changes or other design elements.

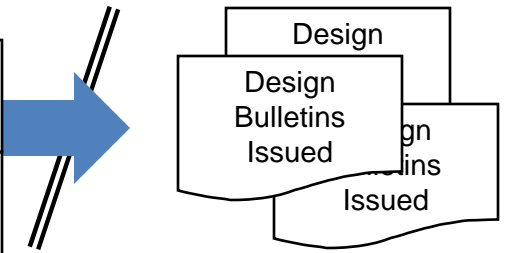
Board formally approves or disapproves of change.

Board communicates approved changes to appropriate team members.

Approved changes are incorporated into design, cost estimates, and schedule.

Board review process results in documentation of changes.

Board pursues amendments to design contract where warranted.



DCRB Toolkit:

Change Management System:

documents & catalogs changes, impacts, and change criteria

Myriad: for tracking construction cost estimate changes associated with Design Bulletins

DCRB Members (might include):

Project Manager

Key Design Leads (as needed)

Project Controls

Provisional ROM estimates for changes can be captured in between design milestones to anticipate probable construction cost impacts sooner and allow for cost mitigation efforts.

- Assures integration of multiple and complex design changes
- Provides formal documented record of changes for verification during peer review
- Assures proper approval and acceptance of changes
- Assures design contract is amended if appropriate
- Assures all affected designers are notified of change
- Provides proactive “trending” of cost and schedule impacts to maintain “design to cost” targets

Forecasting

- Identifies Changes in Project Bottom Line
- Reflects Impacts of Trends
- Monitors Contingency Drawdown

Forecasted costs are used to assemble the “estimated cost at completion” and are updated as often as necessary to reflect projected final costs.

Forecasts include actual costs; commitments or contracted costs; trends that are deemed appropriate to forecast; contingencies, and other “soft” cost elements. Forecast analysis may also provide evaluation of remaining costs, earned value, risk elements (including potential problems and opportunities that may occur and affect the costs of the project), cash flow projections, and burn rate estimates.

Forecast / Budget Variances



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Forecast Variance for 103329 T91 Redevelop New Cruise Terminal

[First](#) < [Delete](#) > [Last](#) [Add](#)

Variance Number
Variance Name
Date
Revision #

Comments

Approved **Locked**

Cost Code	Old Forecast	New Forecast	Difference	Comments
CT16 Quality Dept Services	221,448.00	146,448.00	-75,000.00	Transferring to D507
D507 Design Fees & Services	4,307,629.00	4,332,957.00	25,328.00	Transfer in of \$75k and out to 103328 of \$49,672
	4,529,077	4,479,405	-49,672	Delete Line Item

Select Forecast Variance

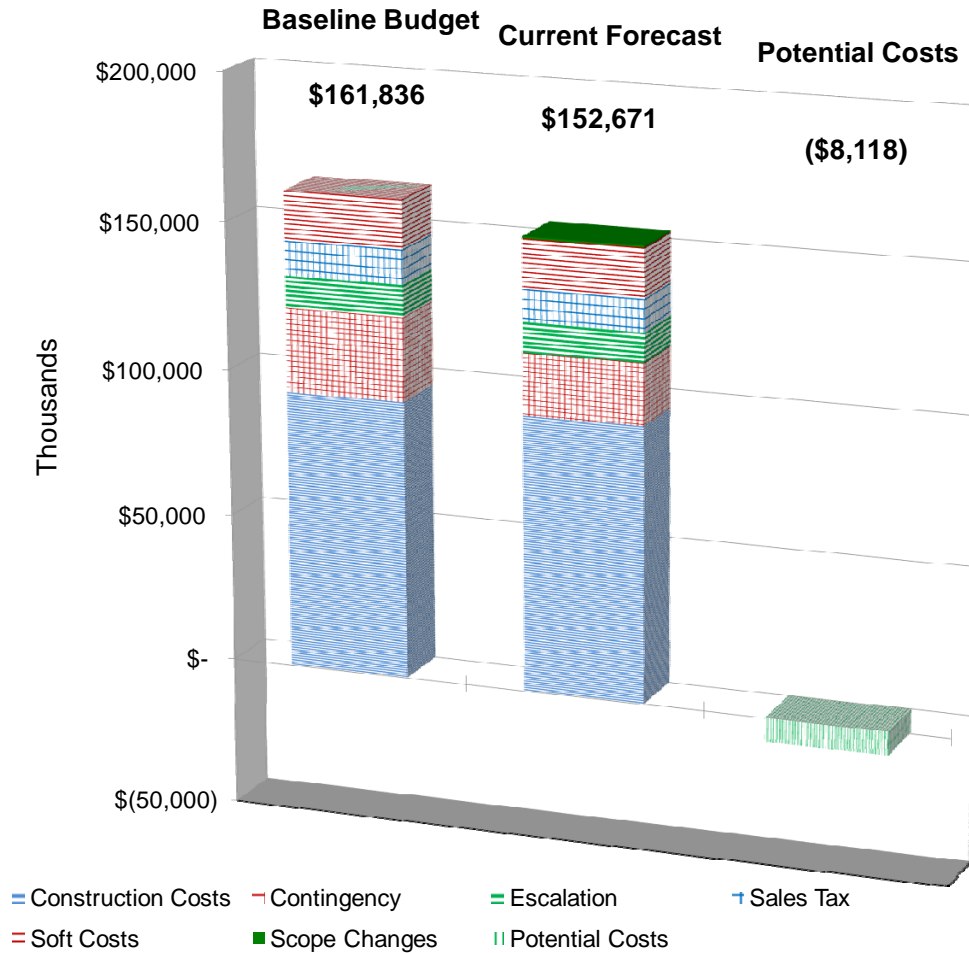
Name	Signatures	Title

Budget and Forecast Report



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Estimate of Probable Cost



Estimate of Probable Costs Summary



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ESTIMATE OF PROBABLE COST	30% Design		60% Design		90% Design		100% Design	
Subtotal Estimated Construction Direct Costs <i>(incl GC, OH & P)</i>	\$ 150,000		\$ 165,000		\$ 174,500		\$ 183,500	
Apprenticeship Program	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -
Design Contingency	20.0%	\$ 30,000	10.0%	\$ 16,500	5.0%	\$ 8,725	0.0%	\$ -
Design Evolution	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -
Unit Pricing	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -
Quantities	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -
Escalation @ 3% Annually 0.25% Months 19		\$8,745	15	\$6,927	12	\$5,573	6	\$2,770
Subtotal Estimated Construction Bid Cost <i>(Total Estimated Constr. Bid w/o Constr. Contingencies & Sales Tax)</i>	\$ 188,745		\$ 188,427		\$ 188,798		\$ 186,270	
Construction & RMM Contingency	6.7%	\$ 12,583	7.3%	\$ 13,727	7.6%	\$ 14,381	8.0%	\$ 15,100
Scope Contingency / Management Reserve	1.7%	\$ 3,146	1.8%	\$ 3,432	1.9%	\$ 3,595	2.0%	\$ 3,775
Subtotal Estimated Construction Costs w/ Constr. Contingencies	\$ 204,474		\$ 205,585		\$ 206,774		\$ 205,144	
State Sales Tax	9.3%	\$ 19,016	9.3%	\$ 19,119	9.3%	\$ 19,230	9.3%	\$ 19,078
Subtotal Estimated Construction Costs w/ Contingencies & Sales Tax	\$ 223,490		\$ 224,705		\$ 226,004		\$ 224,223	
Soft Costs								
A & E Fees and Salaries	10.0%	\$ 22,349	10.0%	\$ 22,349	10.0%	\$ 22,349	10.0%	\$ 22,349
Special Testing & Inspection, Safety & Commissioning	2.5%	\$ 5,587	2.5%	\$ 5,587	2.5%	\$ 5,587	2.5%	\$ 5,587
Project Management	3.0%	\$ 6,705	3.0%	\$ 6,705	3.0%	\$ 6,705	3.0%	\$ 6,705
Construction Management	6.0%	\$ 13,409	6.0%	\$ 13,409	6.0%	\$ 13,409	6.0%	\$ 13,409
Project Survey	0.5%	\$ 1,117	0.5%	\$ 1,117	0.5%	\$ 1,117	0.5%	\$ 1,117
Artwork	1.0%	\$ 2,235	1.0%	\$ 2,235	1.0%	\$ 2,235	1.0%	\$ 2,235
Permits	0.8%	\$ 1,788	0.8%	\$ 1,788	0.8%	\$ 1,788	0.8%	\$ 1,788
Oversight of RMM Projects	10.0%	\$ 22,349	10.0%	\$ 22,349	10.0%	\$ 22,349	10.0%	\$ 22,349
Allocated Overhead	4.5%	\$ 10,057	4.5%	\$ 10,057	4.5%	\$ 10,057	4.5%	\$ 10,057
Quality Program	0.5%	\$ 1,117	0.5%	\$ 1,117	0.5%	\$ 1,117	0.5%	\$ 1,117
Administrative / General	0.0%	\$ 1	0.0%	\$ 1	0.0%	\$ 1	0.0%	\$ 1
Subtotal Soft Cost Markup	38.8%	\$ 86,715	38.6%	\$ 86,715	38.4%	\$ 86,715	38.7%	\$ 86,715
TOTAL PROJECT ESTIMATED COST	\$ 310,205		\$ 311,420		\$ 312,719		\$ 310,938	

Report Project Status with Confidence

- Consistent and Accurate Cost Forecasts
- Informed Project Management Decision Making
- Increased PM Accountability
- Improved Credibility and Visibility

Cost Status Report



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Project Cost Status Report

103326 T30 Upgrade

Cost Code Number	Description	Original Budget	Revised Budget	Current Forecast	Actual Cost To Date	% Actual Cost / Forecast	Projected Trends	Available Forecast	Balance of Costs to Expend
CL09	Claims Admin & General Closeout	0	0	0	0	0.00%	0	0	0
CT01	Direct Construction Costs (Incl. PCS/M	35,449,767	35,310,484	35,535,484	14,786,867	41.61%	35,535,484	0	20,748,617
CT04	Construction Contingency Overrun	0	0	0	0	0.00%	0	0	0
CT06	WA State Sales Tax	3,066,476	3,068,829	3,066,476	1,250,705	40.79%	3,066,476	0	1,815,771
CT08	Testing, Inspection, Safety, & Commiss	794,649	794,649	794,649	59,150	7.44%	794,649	0	735,499
CT10	Construction Management & Contract	1,191,974	1,191,974	1,191,974	264,684	22.21%	1,191,974	0	927,290
CT11	POS Const Survey Services Dept 1640	198,662	138,662	138,662	60,486	43.62%	138,662	0	78,176
CT16	Quality Dept Services	198,662	78,662	78,662	0	0.00%	78,662	0	78,662
CT17	Miscellaneous Construction Costs Uns	709,868	359,868	359,868	12,383	3.44%	359,868	0	347,485
DS07	Design Fees & Services	2,770,319	2,282,995	2,565,328	2,389,438	93.14%	2,565,328	0	175,890
EP13	Environmental Permitting Fees & Servic	56,648	506,648	657,888	494,825	75.21%	657,888	0	163,063
GN15	Allocated Overhead - All Departments	1,196,873	1,096,127	1,096,127	475,584	43.39%	1,096,127	0	620,543
PM09	Project Management Support Services	1,130,294	1,105,294	714,947	265,044	37.07%	714,947	0	449,903
		46,764,192	45,934,192	46,200,065	20,059,167	43%	46,200,065	0	26,140,898
Grand Total		46,764,192	45,934,192	46,200,065	20,059,167	43%	46,200,065	0	26,140,898

The End



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Feel free to visit us at our Vendor Booth to talk more about this presentation or other interesting approaches to Project Controls