

Updating a Schedule

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Construction Management Association of America

Schedule Updating

- Determine Frequency of Updates
- Data Collection
- Status Schedule
- Calculate
- Check for Out-of-Sequence Work
- Verify Schedule
- Analysis – On Time Completion
- Historical Trending & Statistics
- Analysis – Late Completion
- Reporting - Internal
- Narrative – External Reporting

Schedule Updating

Determine Frequency of Updates

Schedule Updating

- Frequency of Updates
 - ◆ Based on schedule purpose
 - ◆ Management tool
 - ◆ Meeting a specification requirement
 - ◆ Internal reporting and predictions
 - ◆ Limited management use
 - ◆ Budget
 - ◆ Based on size of schedule
 - ◆ Large schedule requires frequent updates
 - ◆ Overview schedule allows fewer updates

Schedule Updating

Data Collection

Schedule Updating

- Data Collection
 - ◆ Field information – should be kept on a daily basis
 - ◆ Actual Start Dates
 - ◆ Actual Finish Dates
 - ◆ Predicted Finish for any activity started but not finished
 - ◆ Percent Complete if schedule is cost loaded
 - ◆ Use Remaining Duration, not Percent Complete, for time reporting
 - Superintendents cannot provide accurate Percent Complete
 - Superintendents cannot provide accurate Remaining Durations
 - ◆ Recommend Superintendents walk job with update report

Schedule Updating

- Standard Field Update Report

Downing Gross Cultural Arts Center		Norf - WM Sub Update Report by Trade					03-21-07 23:32			
Activity ID	Activity Name	Section Numbers	OD	RD	Start	Finish	Actual Start	Actual Finish	Expected Finish	
Administration			118	118	03-21-07	08-31-07				
Banquet Rm/Stage Addition Building Shell ...			5	5	03-21-07	03-27-07				
A2760	APPROVAL ON COP #67 - PENDING	01000	5	5	03-21-07*	03-27-07				
Interior Work Phase 4			5	5	03-21-07	03-27-07				
A4720	SITE INSPECTION - FLOOR LEVELS	01000	1	1	03-21-07	03-21-07				
A4500	RESPONSE TO RF#144	01000	5	5	03-21-07*	03-27-07				
Fabrication, Lead Times & Delivery										
NG-0070	Mobilize & lead time for glass & glazing system	8	10-15-05A	10-27-05	10-15-05					
NG-0240	Cable TV mobilize & lead time	5	12-21-05A	11-04-05	12-21-05					
NG-0170	HVAC equipment lead time	5	10-19-05	10-24-05						
NG-0190	Sprinkler mobilize & lead time	5	11-01-05	11-05-05						
NG-0230	Drywall mobilize & lead time	5	11-07-05	11-11-05						
NG-0270	Telephone mobilize & lead time	5	11-10-05	11-15-05						
Start Date	04-01-05	Irby Engineering & Construction, Inc.				For completed activities, please enter:				
Finish Date	06-28-06	SeaSpray Condominiums Repairs				1. Actual Start Date				
Data Date	10-19-05	Monthly Update Form				2. Actual Finish Date				
Run Date	03-07-06 15:32	Last updated: 10-19-05				For started activities, please enter:				
						1. Actual Start Date				
						2. Expected Completion Date				
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Schedule Updating

- Data Collection
 - ◆ Office information
 - ◆ Gather status of buyout process; purchase orders & subcontracts – what is not bought out
 - ◆ Gather Submittal & Approval status
 - ◆ Gather status of administrative tasks
 - Utility paperwork status
 - Permits – site, building, right-of-way, Health Department
 - Environmental releases, etc.
 - ◆ Gather status of materials fabrication and order time - “Lead Time”

Schedule Updating

- Data Collection
 - ◆ Owner information
 - ◆ Gather Status of Owner controlled activities
 - Owner utility applications & progress
 - Electricity
 - Gas service
 - Water & sewer
 - Telephone
 - Cable or data
 - Security system
 - Delivery dates for Owner furnished equipment
 - Other Owner contractual work
 - Verify coordination with Owner work

Schedule Updating

- Data Collection
 - ◆ Subcontractor information
 - ◆ Gather Status of subcontractor activities
 - Lead Times for subcontractors' materials
 - Lead Times for subcontractors' equipment
 - Lead Times for subcontractor mobilization on job (field?)
 - Are they committed to scheduled start date?
 - Are the other trades out of the work area?
 - What is the materials lay-down area availability?
 - Resource availability for subcontractors
 - Do the subcontractors have adequate workmen on site?

Schedule Updating

Status Schedule

Schedule Updating

- Status Schedule
 - ◆ Simple progress stage of process
 - ◆ Make no logic changes during this stage, only progress
 - ◆ Use standard input layout to record progress
 - ◆ Input Actual Start and Finish Dates
 - ◆ Choose Data Date – use last actual dates provided
 - ◆ If activities are started, set Remaining Durations so predicted finish dates are met

Schedule Updating

Calculate Schedule & Check for Out-of-Sequence
Work

Schedule Updating

- Calculate Schedule
 - ◆ Ensure software setting is Retained Logic
 - ◆ Set Data Date to date chosen during Schedule Status stage
 - ◆ Calculate schedule
- Check for Out-of-Sequence Work
 - ◆ Change setting temporarily to Progress Override
 - ◆ If the completion date changes significantly, then there is a lot of out-of-sequence work needing correcting
 - ◆ If minimal change, no significant out-of-sequence work
 - ◆ Change the setting back to Retained Logic (default)

Schedule Updating

Verify Schedule

Schedule Updating

- Verify Schedule
 - ◆ Internal verification
 - ◆ Check that Early Finish dates match predicted finish dates provided by Superintendent
 - ◆ Check on any out-of-sequence work to see if those dates were input correctly
 - ◆ External verification
 - ◆ Change to verification layout
 - Two week look-ahead filter (only starts & finishes within 2W)
 - Send to Superintendent to verify that Early Start dates for planned activities for the next two weeks are accurate
 - Get feedback & correct any discrepancies

This is a reasonableness check, look it over

Schedule Updating

- Prepare for Schedule Analysis

Schedule Updating

- Prepare for Schedule Analysis
 - ◆ Use standard Layout with comparison to last update
 - ◆ Check for slippage in Substantial Completion date
 - ◆ If no slippage, project predicts on time completion
 - Perform Standard Analysis, use standard reports and publish
 - ◆ If slippage, go to Analysis of Slipped Schedule

Schedule Updating

Standard Schedule Analysis (On-Time Completion)

Schedule Updating

- Standard Schedule Analysis (On-Time Completion)
 - ◆ Three basic components
 - ◆ Critical Path progress
 - Slippage will directly delay work
 - ◆ Near Critical progress
 - Slippage could easily overtake Critical Path and delay work
 - ◆ Non-Critical (“mass volume”) work
 - Lack of progress will cause trade stacking and overcrowding of work space at a later date
 - Could easily allow too much work for areas available
 - Good place to use Earned Value for monitoring
 - Can use Float Dissipation to monitor
 - Can use other methods to monitor

Schedule Updating

- Standard Schedule Analysis (On-Time Completion)
 - ◆ Two types of paths to watch
 - ◆ Critical Path to end of project (Substantial Completion)
 - ◆ Critical Path to Interim Milestones
 - ◆ Critical Path
 - ◆ Ideally use Longest Path
 - ◆ Monitor minimum Total Float value Critical Path
 - ◆ Interim Milestones
 - ◆ One path per each Milestone to watch

Schedule Updating

- Standard Schedule Analysis (On-Time Completion)
 - ◆ Identify current period Critical Path (Longest Path)
 - ◆ Identify current period Near-Critical activities
 - ◆ Identify easily identified Milestones for between this update and next update
 - ◆ Concrete pours
 - ◆ Inspections
 - ◆ Trade mobilizations
 - ◆ Identify historical trends and statistics (mass volume)
 - ◆ Identify resource problems or concerns

Schedule Updating

Historical Trends

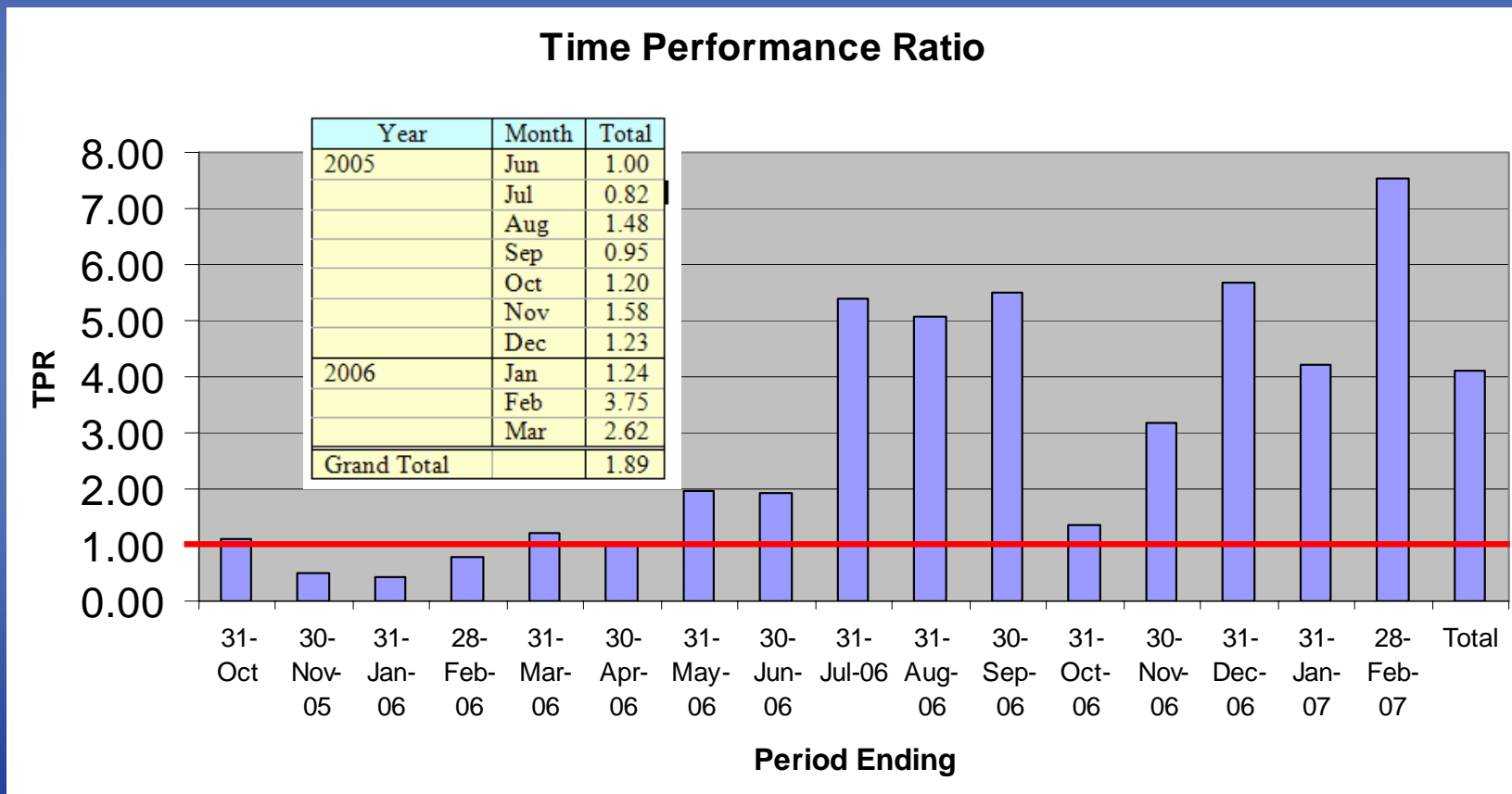
Schedule Updating

- Historical Comparisons & Statistics
 - ◆ Run Tipper (TPR) reports
 - ◆ Run Total Float dissipation (Erosion of Float) reports
 - ◆ Run Free Float dissipation reports (monitors disruption)
 - ◆ Review Out-of-Sequence work by trade
 - ◆ Which trade is causing most out-of-sequence work?
 - ◆ Are they working out-of-sequence due to other trade failures to complete?
 - ◆ Or working in open areas without regard for planning?
 - ◆ Run Resource reports
 - ◆ Are appropriate resources working?
 - ◆ Check against Tipper reports

Schedule Updating



Review (TPR) Time Performance Ratio trending
(AD/OD)



Schedule Updating



Review (TPR) Time Performance Ratio trending by Milestone by Responsible Contractor (AD/OD)

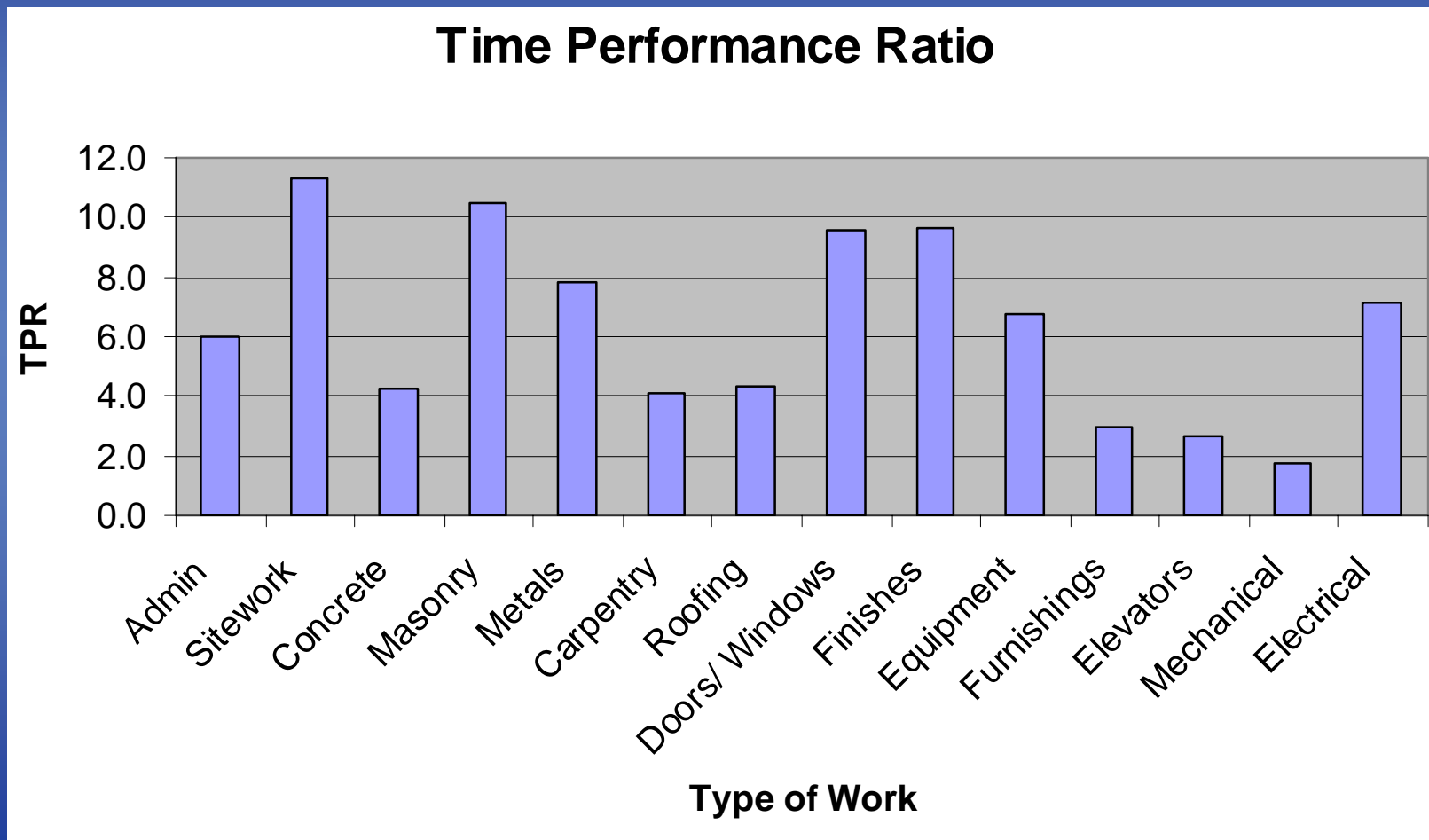
Table #3a, TPR Responsibility Summary

Milestone	<u>HB</u>	<u>HBRC</u>	<u>HRI</u>	<u>JCD</u>	<u>WCE</u>	WM	Grand Total
1	0.78	3.00	30.00	1.00	2.30		4.49
3	1.77		10.75				8.51
4	1.67		1.00	0.83			1.03
5	5.83			0.50		1.00	2.33
70	0.86	1.00			1.00		0.99
90			1.00				1.00
7A	8.40	0.15	1.20	1.45			1.87
7B	3.96	0.05	1.40				2.67
7C	2.01	0.05	1.33				1.48
7D	4.27		0.78				2.52
7E	2.55						2.55
8A	5.60						5.60
8B	4.19						4.19
9A			2.70	1.71			2.32
9B				1.01			1.01
Grand Total	3.55	0.97	2.84	1.23	1.26	1.00	1.84

Schedule Updating

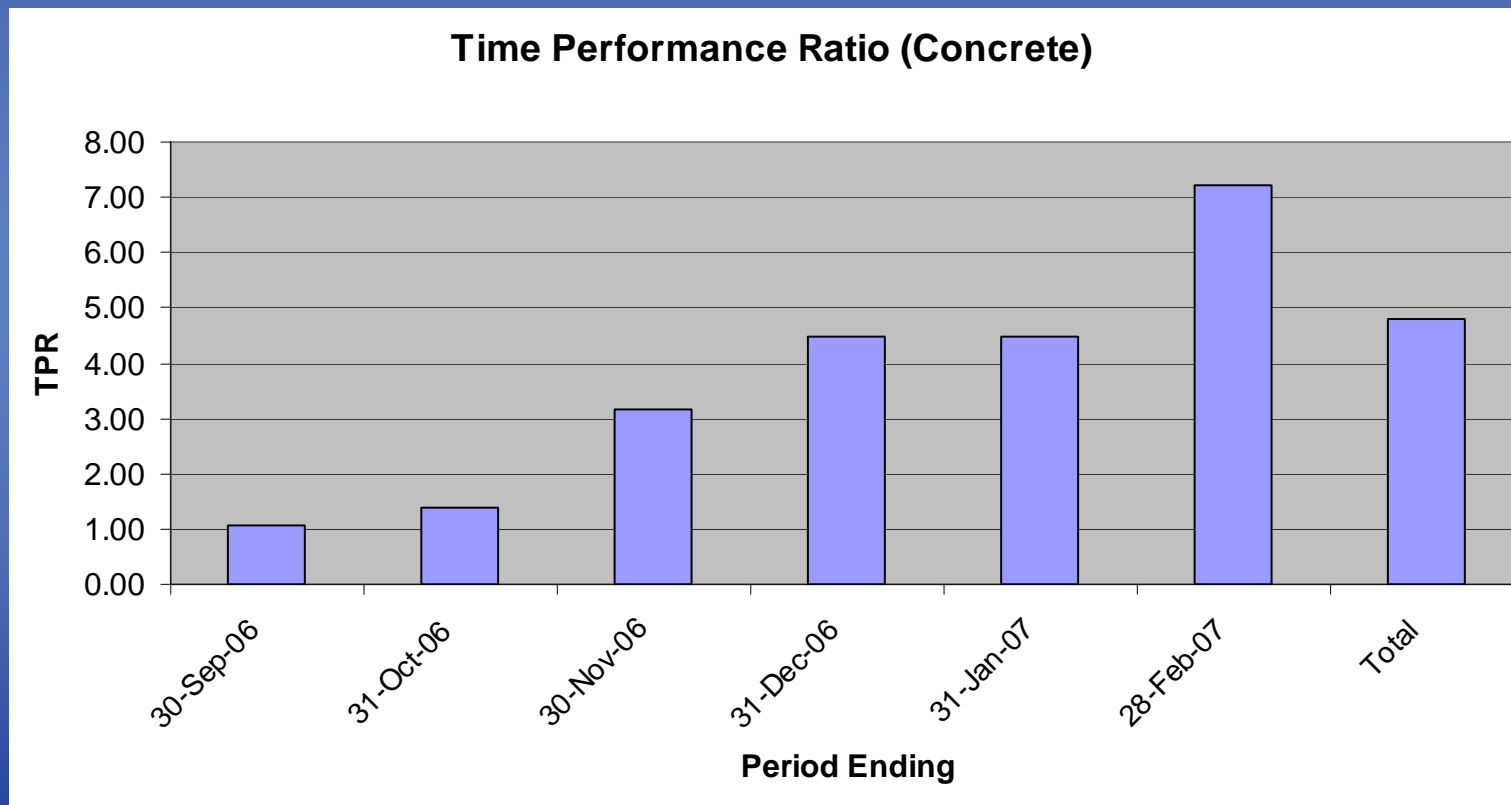


Review (TPR) Time Performance Ratio per trade
(AD/OD)



Schedule Updating

Review (TPR) Time Performance Ratio trending by trade (AD/OD)



Schedule Updating

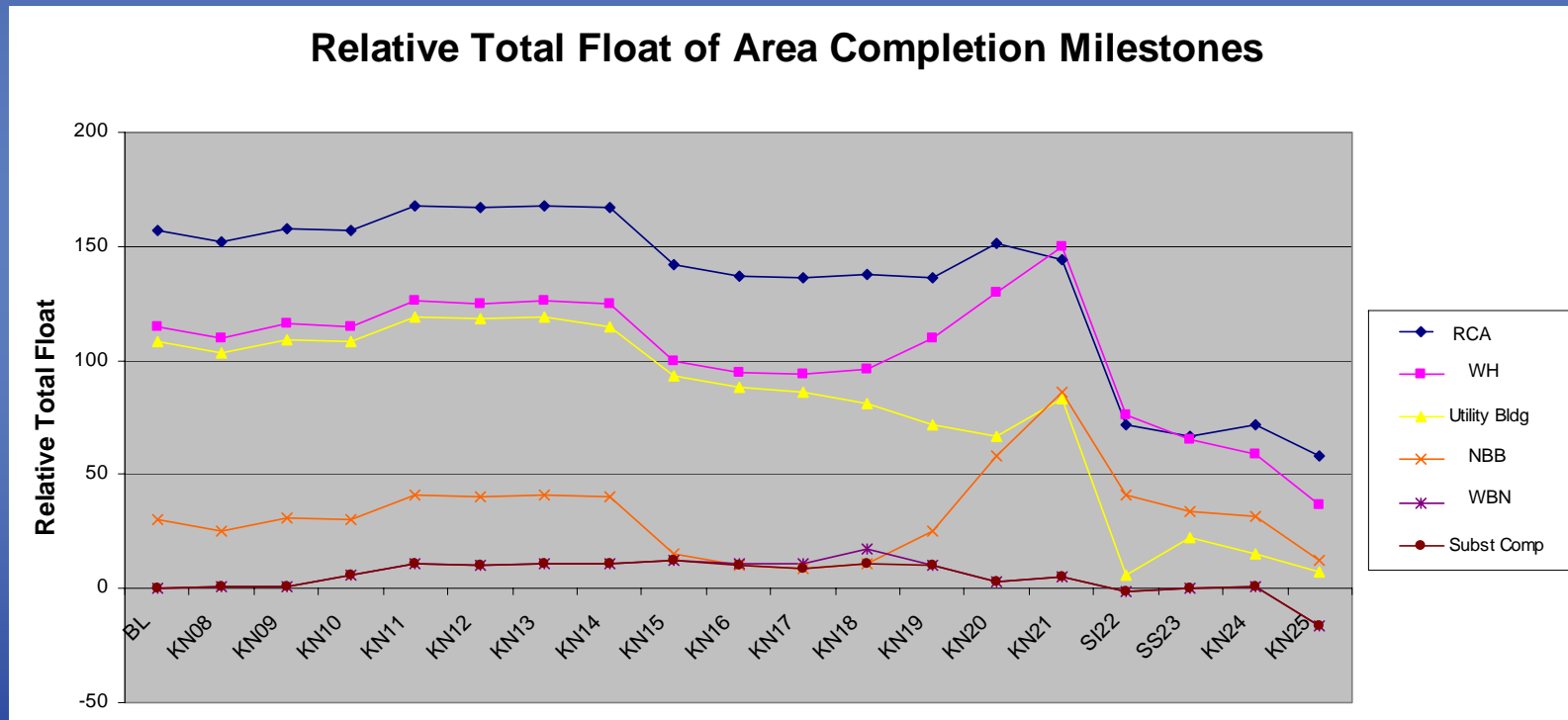


Trade Monitoring by Crew – no resource loading available, load single crew resources into activities

AMP Terminals Yard Project								Resource Comparison - Planned vs. Actual					
Planned Resources								Actual Resources					Difference
Date	Crew 1 Cut/Fill	Crew 2 Grade	Stone	Pave	Surface Pave	Striping	Total Crews Scheduled	English Crews Onsite	Higgerson Buchanan Crews Onsite	Basic Crews Onsite	Spivey Crews Onsite	Total Crews Onsite	Manpower Over (+) / Under (-)
1-Mar	3	5	3	3			14					0	
2-Mar	2	2	3	2			9	2	4			6	-3
3-Mar	3	3	3	3			12		2	3		5	-7
4-Mar	3	2	3	1			9	8	1			9	0
5-Mar	3	2	3	2			10					0	
6-Mar	3	2	2	3			10					0	
7-Mar	3	2	2	3			10					0	
7 22-Jun					1	2	3					0	
8 23-Jun					2	2	4					0	
9 24-Jun					2	2	4					0	
0 25-Jun					2	3	5					0	
1 26-Jun					2	2	4					0	
2 27-Jun					1	2	3					0	
3 28-Jun						2	2					0	
4 29-Jun						2	2					0	
A Negative Number Indicates Insufficient Resources								Over (+) or Under (-) Staffed					-10

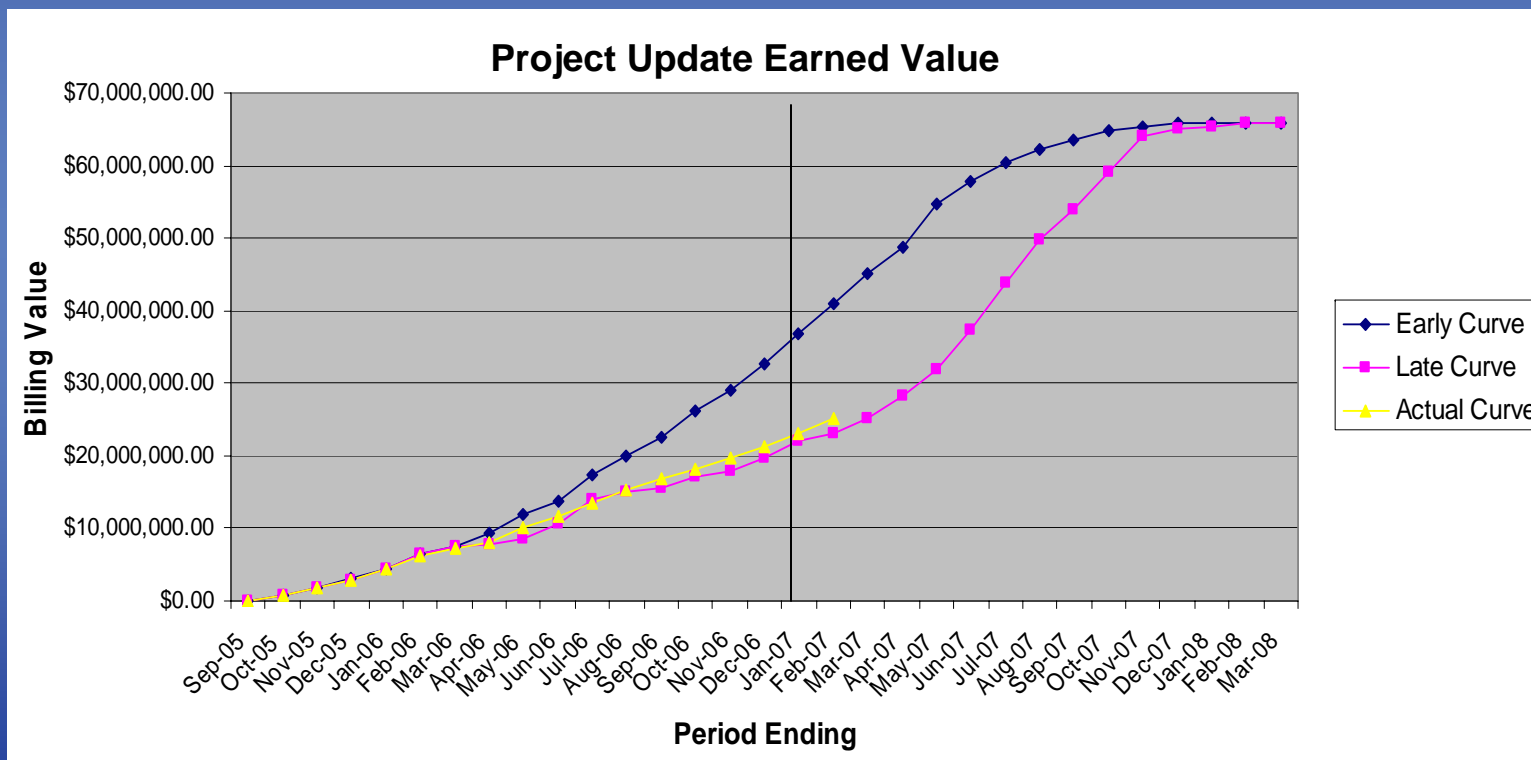
Schedule Updating

- ◆ Watch erosion of float, do not let it continue
 - Print by trade when assessing available resources



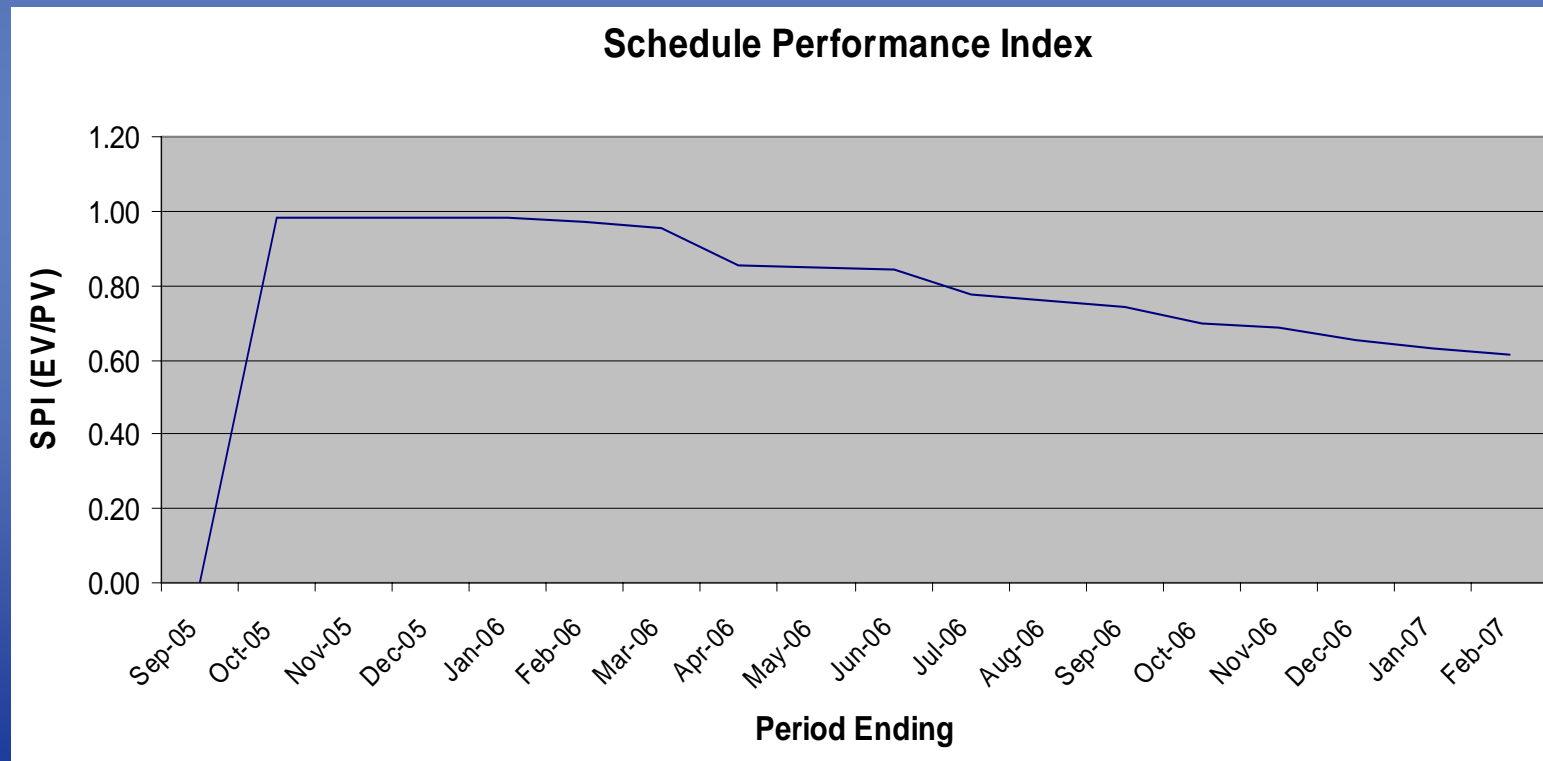
Schedule Updating

- ◆ Earned Value Management Reporting
 - Earned Value and Actual Costs
 - See separate training session



Schedule Updating

- ◆ Earned Value Management Reporting
 - SPI and CPI
 - Watch trending



Schedule Updating

- Schedule Analysis – Sequencing Review
 - ◆ Set up a Layout for Sequence
 - ◆ Group by Phase or Location
 - Look for out-of-sequence work by trade
 - ◆ Summarize to Phase
 - ◆ Neck for non-work periods
 - ◆ Review the sequence shown by the summary bars
 - ◆ Set up a Layout for Responsibility
 - ◆ Group by Responsibility
 - ◆ Summarize to Responsibility
 - ◆ Neck for non-work periods
 - ◆ Review trade workload

Schedule Updating

- Schedule Analysis – Constructability
 - ◆ Set up a Layout for weekly work
 - ◆ Group by Early Start
 - ◆ Order by Week
 - ◆ Sort by ES, EF , TF
 - ◆ Zoom in to weekly week
 - ◆ Set Major Vertical Sight Lines to one week
 - ◆ Expose column for Responsibility and Location
 - ◆ Review work to be done weekly over the next few months for reasonableness

Schedule Updating

Schedule Analysis (Slipped Completion)

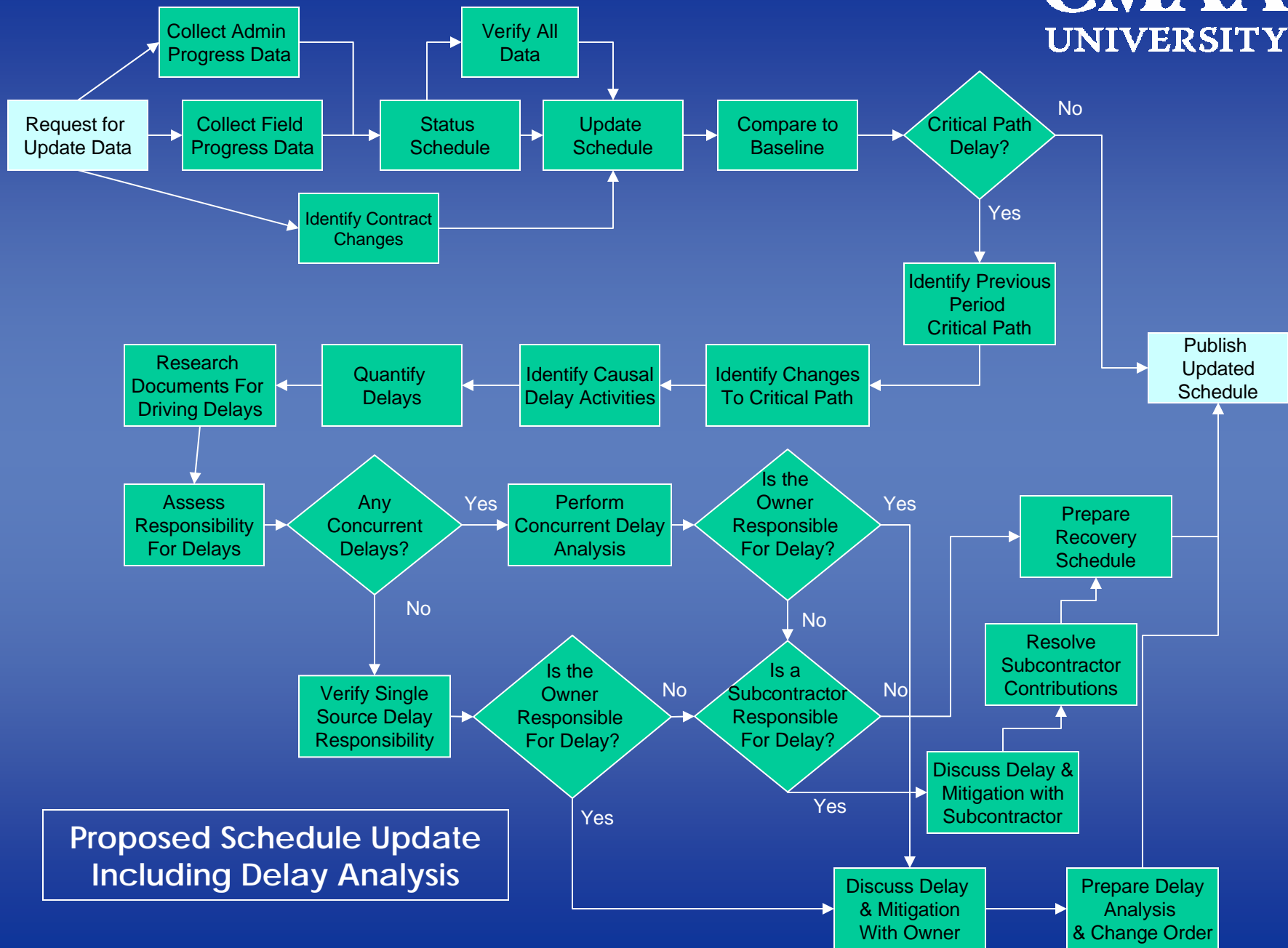
Schedule Updating



- Schedule Analysis (Slipped Completion)
 - ◆ If slippage is due to the Owner, then a time extension is owed to the Contractor
 - ◆ If slippage is due to a Subcontractor
 - ◆ The Subcontractor owes the GC a Recovery Schedule effort
 - ◆ The Contractor (GC) still owes the Owner a Recovery Schedule
 - ◆ If slippage is due to the Contractor, then the Contractor owes the Owner a Recovery Schedule
 - ◆ If the Owner causes the delay and the Sub or GC causes a concurrent delay, then a time extension is owed to the Contractor; no recovery schedule required

Schedule Updating

- Schedule Analysis (Slipped Completion)
 - ◆ Identify previous period Critical Path (Longest Path)
 - ◆ Use layout to compare against current schedule
 - ◆ Identify current Critical Path & changes from previous
 - ◆ Identify which activities slipped and drove progress
 - ◆ Causal Activities drive progress
 - ◆ Identify Start Gain or Loss
 - ◆ Identify Production Gain or Loss
 - ◆ Identify specific Causal Activity or Activities for delay
 - ◆ Develop process for dealing with slipped completion before needed



Schedule Updating

- Schedule Analysis (Slipped Completion)
 - ◆ Quantify Four Delay/Gain Changes for Each Causal Activity by Working From the Beginning of the Period, Using a Standard Layout with Current Baseline as Schedule Target
 - ◆ Verify That the Totals Add Up to the Total CP Change
 - ◆ Research the Issues that Caused the Changes to the Causal Activities
 - ◆ Interview Project Management Team
 - ◆ Review Project Documents; Issue Files, Minutes, RFI/Submittal Logs, Field Reports, Photographs
 - ◆ This Research is Usually a Discussion About Reasonably Current Problems – Quick, Painless, and Easy

Schedule Updating

- Schedule Analysis (Slipped Completion)
 - ◆ Identify the Driving Issues that Affect the Causal Activities
 - ◆ Assess Responsibility for Driving Issues
 - ◆ Review Concurrency of Driving Issues– Can Be Delay and/or Acceleration/Mitigation
 - ◆ Work Through Concurrent Driving Issues from the Beginning of the Period, Identifying First Driving Issue, Establishing any Concurrency with Next Driving Issue
 - ◆ Perform a Careful Concurrent Delay Analysis, Record in Clear Graphical Format
 - ◆ Assign Responsibilities for All Driving Concurrent Delays

Schedule Updating

- Schedule Analysis (Slipped Completion)
 - ◆ If Subcontractors are Responsible for any Driving Delays, or Portions of Concurrent Delay, Meet Face-to-Face
 - ◆ Provide Clear Documentation with Approximate Costs for Delays
 - ◆ Discuss Ramifications & Options
 - ◆ Collaborate and Gain Commitment for Mitigation/Acceleration
 - ◆ If Owner is Responsible for Any Driving Delays, or Portions of Concurrent Delay, Meet Face-to-Face
 - ◆ Provide Clear Documentation with Approximate Costs for Delays
 - ◆ Discuss Ramifications & Options
 - ◆ Collaborate and Determine Best Approach; Owner Mitigation, paid Contractor Mitigation, or Time Extension

Schedule Updating




Reporting - Internal

Schedule Updating



Senior Management Report



Management Schedule Report

Project: 14th and Main Parking Garage Date: 28-Apr-05

Distribute to: Steve Wayne John
Chuck Paul Dave
Jim

Contract Substantial Completion Date	05-Aug-05	Original Production Substantial Completion Date	05-Aug-05
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Current Predicted Contract Completion Date	10-Jun-05	As of this update, we are	ahead	56	calendar days	
Current Production Substantial Completion Date	10-Jun-05	As of this update, we are	ahead	56	calendar days	
21-Mar-05	Update Completion	18-May-05	Since the last update, we	lost	(23)	calendar days

Principal Reasons for Change

Primary cause of delay is lack of manpower from Hall Brothers Electric (HBE). HBE's manning has been around 10 men, while SBB's superintendent estimates that at least 20 were required to complete work on time. In addition to their own work, HBE is delaying Johnson Controls. Also, water meter release is delaying installation of irrigation, sod, and certification of the backflow. Water meter is an owner issue. Gas meter release is delaying tying the generator in, which in turn is delaying emergency elevator recall system. Gas meter is waiting a response from the city of Richmond. The decking on the roof for the generator is not yet designed.

Next Period Critical Issues to Watch

All electrical work
Water Meters (affects irrigation and sod installation)
(Owner delay, as the state will not release until the owner resolves the need for a backflow preventer for the dry stand pipe)
Gas Meter (affects generator and elevator completion)
(Inspected. Jim Griffin contacted Paul Holt with the city, waiting response)
Glass at window frames (pending change order)
Decking at Generator Roof (not yet designed)
Johnson Controls work (held up by HBE)

Milestones to Hit	Finish Date
2nd BCOM inspection	
Above Ceiling Inspection (cannot be conducted until HBE completes work)	

Secondary Issues to Watch

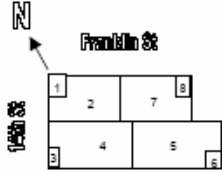
Design issue regarding bollards
(Missing 3 per level in Stair 1, drawings show none in Stair 2)
2 Grilles in litewall missing (in fabrication)
Waiting for LCP delivery
Waiting on Chin Vu to accept toll booth mods (ADA)
Vents and Louvers (delivery of remaining material in two weeks)
Ceiling Tile Installation (waiting above ceiling inspection)
Painting (waiting Clidewell contract)
Striping (waiting Payne's Parking contract)
Canopy soffits (waiting on HBE installation of lights, ordered but not delivered)

Other notes

1. The following contracts have not been signed:
a) Clidewell Brothers (painting)
b) Payne's Parking (striping)


2. The following change order is outstanding: Glass at window frames. The change order altered the specified 1/4" tempered glass to 5/8" insulated glass. The change order is not yet definitized.

3) The following subcontractors have issues:
a) HBE. Not enough manpower.
b) Miscellaneous Metals. They disagree with the need for additional bollards in Stair 1. They insist it is not in their contract.



Schedule Updating

- Developing senior management reports is crucial



Tazewell Place - Harbor

Management Schedule Report

Contract Substantial Completion date is 6/13/2007		Original Production Completion Date is 6/13/2007	
Current predicted Contract Completion date is 5/17/2007		As of this update, we are ahead 27 calendar days	
Current predicted Production Completion date is 5/17/2007		As of this update, we are ahead 27 calendar days	
9/8/2006 Update: Production Completion Date was 5/15/2007		Since the last update, we lost 2 calendar days	

Principal Reasons for Changes in this Schedule Report:

Update Data Date 04Oct06
 Project slipped 2 days for the first time in 4 updates. Set Shoring DP-28, on the DP01 side of the building, 8th Floor, slipped 2 days and was the driving cause for delay. The Critical Path (CP) sequence is: Set Shoring on DP01 side of the building, through the exterior wall form and rebar, then the deck shoring, formwork, rebar, and pour, then back to buttoning up the walls and the cycle starts again on the DP01 side of the building in this sequence WILL delay the project, on a day per day delay.

DP-29 shoring finished 1 day early, but since DP-28 slipped, this early finish did not advance the project completion.

Critical Issues to Watch	Secondary (Near Critical) Issues to Watch
The Longest Path (Critical Path) runs through the DP-28 pour, then over to buttoning up Shear Walls 1 and 3 (WP176, 178, 175, 173, 177, 179, 174) and then up to Set Shoring on DP-30 the next deck above DP-28 on the DP01 side.	Near Critical work for this period is: Columns on DP-26 and DP-28, and the DP02 corner of Boush Street.

Future Milestones	Dates	Legend
R/F/Pour columns DP-26	4-Oct-06	
Pour deck DP-28	11-Oct-06	
Pour deck DP-29	12-Oct-06	

Schedule Updating



- Best to keep update & report weekly (full metrics monthly)
- Report should include general status summaries:

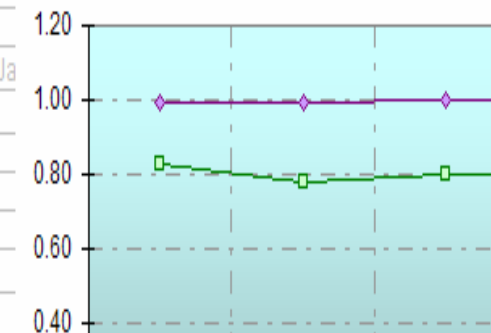
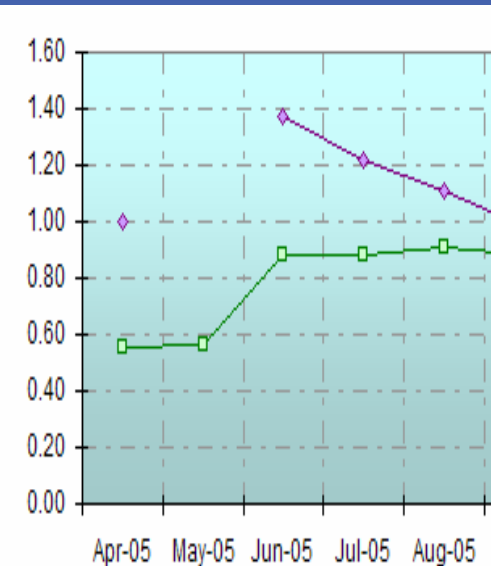
APMT Dashboard								10/7/2005	
Schedule Status									
Project	Phase	Status	NTP	Contract Finish	Early Finish	Contract Time Expired			
Dredge	Construction	50% Ahead 28 CD	5/4/2005	1/18/2006	12/19/2005	57.4%			
Wharf	Construction	39% Behind 34 CD	11/29/2004	11/18/2006	12/22/2006	42.2%			
Yard	Construction	5% On Time	7/11/2005	7/30/2007	7/30/2007	10.8%			
Off Site Road	Design Build	On Time	8/1/2005	1/15/2007	1/15/2007	11.0%			
Wetlands	Design Complete	N/A	N/A						
Dominion	Design - Various	N/A	N/A						
Buildings	Design	N/A	N/A						
On Site Rail	Design - Concept	N/A	N/A						
Off Site Rail	Design - Concept	N/A	N/A						
Current Issues									
Project	Date	Description	TF	Notes	BIC				
Wharf	7/13/2005	#18 Tierods	N/A	Cold galvanizing of tierod threads has clogged threads preventing couplings from being attached. <i>Not critical</i>	CH2MHILL				
Wharf	7/15/2005	HZ bulkhead Eastward deflection by 24-inches	?	Design correction completed. Contractor given NTP. Schedule affects will be assessed when 36" piles (A-F) must stop due to repair operation.	CH2MHILL				
Wharf	8/1/2005	HZ bulkhead 252 - 437	N/A	Shear studs missing (see non-compliance notices) <i>Not critical</i>	Weeks				
Wharf	8/3/2005	Concrete pile damage	-15	First 3 driven piles developed cracks. Waiting on repair methods from Weeks.	Weeks				
Wharf	8/17/2005	Concrete pile out of tol.	N/A	Joints between sections are greater than allowed 1/4-inch. <i>Not critical</i>	Weeks				
Open Non-compliance Notice									
Project	Date	Title	TF	Notes	BIC				
Wharf	8/23/2005	Submittal Schedule	N/A	Submittal schedule not provided as required by specifications	Weeks				
Wharf	8/23/2005	Holes cut in AZ-18 piles	N/A	Holes cut to allow water drainage during jacking operations	Weeks				
Wharf	8/1/2005	Improper handling walers	N/A	Unloading without protection causing surface coat scratches	Weeks				
Wharf	8/2/2005	AZ-18 w/o shear studs	N/A	AZ-18's stabbed w/o shear studs	Weeks				
Wharf	8/4/2005	AZ-18 w/o shear studs	N/A	AZ-18's being driven w/o shear studs	Weeks				
Wharf	9/17/2005	Out of tolerance 36" pile	N/A	Joint offsets greater than 1/4"	Weeks				
Wharf	8/18/2005	Improper handling AZ-18	N/A	Scratched coating	Weeks				
Wharf	8/22/2005	Out of tolerance 36" pile	N/A	Joint offsets greater than 1/4"	Weeks				
RFIs					Submittals				
Project	Open	Closed	Avg Time Out	Project	Open	Reviewed	Avg Time Out		
Wharf	9	55		Wharf	34	186	43.4		
Yard	4	14		Yard	10	37	22.4		
Buildings	0	0		Buildings	0	0	0.0		
On Site Rail	0	0		On Site Rail	0	0	0.0		

Schedule Updating

- Provide project managers with additional standard reports - Earned Value metrics

Wharf													
2005	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Earned Value (\$M)				6.0	8.9	22.1	30.5	36.4	36.5	42.8	46.8	51.0	
Actual Cost (\$M)				6.0	4.6	17.4	27.7	27.7	37.2	38.3	43.4	45.9	
CPI ¹				1.00	1.90	1.37	1.22	1.11	0.98	1.12	1.08	1.11	
SPI ²				0.55	0.56	0.88	0.88	0.91	0.88	0.88	0.87	0.89	
2006	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Earned Value (\$M)	56.4	60.9	60.7	72.0	78.2	82.5	87.1	85.9					
Actual Cost (\$M)	52.2	55.2	60.4	70.0	76.5	80.6	83.8	90.7					
CPI ¹	1.08	1.10	1.00	1.03	1.02	1.02	1.04	0.95					
SPI ²	0.70	0.90		0.96	0.97	0.99	0.95	0.91					

Yard													
2005	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Earned Value (\$M)											16.7	18.2	
Actual Cost (\$M)											16.8	18.4	
CPI ¹											0.99	0.99	
SPI ²											0.83	0.78	
2006	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Earned Value (\$M)	19.5	22.9	29.0	32.4	35.4	40.6	44.5	53.1					
Actual Cost (\$M)	19.5	23.3	29.2	32.3	35.2	40.9	46.5	53.1					
CPI ¹	1.00	0.99	0.96	1.00	1.01	0.99	0.96	1.00					
SPI ²	0.80	0.80	0.86	0.87	0.88	0.87	0.84	0.85					



Schedule Updating

Customized reports – PM - myPrimavera

The screenshot displays the Primavera Project Workspace interface. At the top, a window title bar reads "Welcome, Chris Carson" and includes standard navigation icons. Below this, a header bar shows "Project Workspace" and "Related Actions" with a dropdown menu set to "Select an action...". The main content area is titled "Project Workspace - Dormitory Housing Construction" and includes options for "Expand All", "Collapse All", and "Customize". A list of project reports and tools is presented in a grid-like format, each with a dropdown arrow, a name, and three icons (help, refresh, close):

- Project Statistics
- Milestone Status
- Project Documents
- Communication Center
- Project Issues
- Project Notebook Topics
- Project Reports
- Schedule Performance
- Earned Value Performance
- Index Performance
- Project Risks
- Project Calendar
- Critical activities behind schedule
- Project Health

Schedule Updating

Customized reports – PM - myPrimavera

Project Workspace - Jefferson Labs - Hall D Complex
Expand All | Collapse All | Customize

Project Statistics
Project Documents
Communication Center
Project Risks

Customize

Name	Priority	Owner	Risk Type	Status	Description
Beam operation	Normal		Schedule	Open	
Check funding phasing	Normal		Support & Funding	Open	
Cryogenic lines termination	Normal		Project Facilities	Open	
Determine end user needs	Normal		Schedule	Open	
Environmental impact study	Normal		Government/Regulatory Compliance	Open	
Equipment coordination	Normal		Schedule	Open	
Existing drainage swale across site	Normal		Weather/Environmental Hazards	Open	

Project Calendar

NOVEMBER 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
28	29	30	31	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	1

Activities

- Excavate for Deep Building & Tunnel Foundations
- Form/Prep/Reinforce/Pour Deep Foundations
- Rough-in Deep & Gravity Utilities

Critical activities behind schedule

Project Health

Project Issues

Add | Expand All | Collapse All | Customize
Display List Chart Filter All Issues

Issue Name*	Priority	Owner	Resolution Date	Status	Description	E-mail
Geotechnical report	High		15-Mar-07	Open		
Interior stairs - Counting & Service buildings	Normal		30-Apr-07	Open		
Radiation Safety Process	High		15-May-07	Open		
Storm system pump stations locations	High		09-Apr-07	On Hold		
Water main loop	Low		21-May-07	Open		
Water shut down time	Normal		01-Jun-07	Open		

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Schedule Updating



Narrative - External Reporting

Schedule Updating

Narrative - External Reporting Checklist



Alpha Corporation

Checklist for an Update Schedule Narrative

The purpose of the Narrative is to provide a summary of the work, explain the plan for construction, show how the schedule meets the specification and plan contractual requirements, identify potential problems, and summarize the Critical Path. The major components of the Written Narrative are:

- General description of the scope of work.
- Identification of any area designations.
- General description of the sequencing, including any necessary legend.
- Identification of any deviations from the contractually mandated sequencing.
- Identify any phasing.
- Identification of all Milestones that are contractually mandated.
- Identification of any other Milestones.
- Identify Traffic Control Plan, if applicable.
- Identification of problem areas of the project, and steps taken to limit risk.
- Identify any road closings, or utility coordination shutdowns, or other conflicts.
- List and explain Calendars.
- Explain Adverse Weather planning methodology incorporated in the schedule.
- Identify any unusual logic relationships, such as Start-to-Start or Finish-to-Finish Activity Types and rationale.
- Identify purpose and use of all relationship lags.
- Explain any Activity ID coding.

Schedule Updating



Narrative - External Reporting Format

Project Name	Updated Schedule Narrative
Client Name	
TABLE OF CONTENTS	
I. EXECUTIVE SUMMARY	1
II. OVERVIEW	2
A. THE PROJECT	2
A. TASK ASSIGNMENT.....	2
B. SUBMITTAL CONTENTS.....	2
C. REVIEW OF THE CPM.....	2
III. ANALYSIS	3
A. DESCRIPTION OF PROGRESS.....	3
<i>Progress This Period</i>	3
<i>Duration and Milestones</i>	3
<i>Longest Path</i>	3
B. ANALYSIS OF PROGRESS.....	3
V. ALTERATIONS TO SCHEDULE	4
A. ACTIVITY IDENTIFICATION CODES.....	4
B. ACTIVITY CODES	4
C. LOGIC	4
D. CONSTRAINTS	4
E. CALENDARS.....	4
<i>Description of Calendars</i>	4
<i>Planned Adverse Weather</i>	4
F. COST LOADING.....	4
G. RESOURCE LOADING.....	4
V. SUMMARY	5
ENCLOSURE LIST	6
TABLES	7
Table I.....	7
Alpha Corporation	Table of Contents
Month DD, YYYY	

**“Project Management is what you
are forced to do when you don’t
Schedule!”**

(Chris Carson, ~1986)

Questions? Updating a Schedule

December 13, 2007

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Construction Management Association of America