



**Town of Hanover, Massachusetts**  
Hanover High School



**PMA Construction Services**  
Owner's Project Manager

## **HANOVER HIGH SCHOOL PROJECT** *September 2010 – Monthly Status Report*

<b>Project:</b>	Hanover High School	<b>Building Size:</b>	157,000	<b>Ph1 Substantial Completion:</b>	June 2011
<b>Current Phase:</b>	Construction	<b>Enrollment Projection:</b>	800 Students	<b>Ph2 Substantial Completion:</b>	May 2012
<b>Construction Type:</b>	NEW	<b>Facility Type:</b>	High School	<b>Project Total Duration:</b>	32-months
<b>Construction Start Date:</b>	28Sep09	<b>Reimbursement Rate:</b>	48.21%	<b>Day 367 of 611 to Ph1 Substantial:</b>	60.1%

### **Project Safety Report**

Safety Incidents this Month • [0]  
Past Lost Time Incidents • [1]  
Past Minor Reportable Incidents • [2]

### **Open Scope / Potential Issues**

- Athletic turf field sub base replacement due to soils drainage issue
- Getting building weathertight
- Window delivery date delayed by filed sub bidder's manufacturer
- Metal panel delivery date delayed
- Telephone and security vendor selection
- Installation of track surface and athletic field turf
- Seeding during Fall 2010 planting season
- NGRID permanent power date
- Building façade construction
- Completion of maintenance and concession building punchlist activities for early turnover
- Terrazzo contract procurement & schedule integration
- Resolution of commissioning agent punchlist items
- Preparation for FF&E / IT and move to new building
- Community Issues – none at this time.

### **Budget Status**

**Total Project Budget:** \$50,128,836 as of 9/30/10  
**Actual Incurred to Date:** \$25,127,585 as of 9/30/10 (50.1%)  
**Contingency Remaining:** \$2,142,459 (81.7%)  
*\*\*Subject to Final Revised PFA Agreement*

#### **Construction Cost Summary:**

Award Value (Callahan):	\$38,652,255.00
Previously Executed CO's (Net)	\$254,551.12
Previous Contract Value:	\$38,906,806.12
CO's Executed this Month:	\$57,187.09
<b>Current Contract Value:</b>	<b>\$38,963,993.21</b>

#### **Construction Payment Summary:**

Previous Gross Amount:	\$18,609,643.38
This Month's Gross Amount:	\$1,948,871.00
Gross Amount to-Date:	\$20,558,514.38
Retainage To-Date @ 5%:	\$1,027,925.72
Retainage Released	\$0.00
Current Retainage	\$1,027,925.72
<b>Total Net Payable To-Date:</b>	<b>\$19,530,588.66</b>

**Remaining Balance to Finish (gross):** **\$18,405,478.83**

### **Project Status**

#### **September 2010 Progress**

- PMA Performed OPM Duties (i.e. contract document compliance verification, project controls, real-time issues ID and resolution)
- Designer Continued Construction Administration (i.e. submittals, RFIs, weekly site visits, QA/QC, etc)
- Phase I Sitework 85% Complete
- Main Bldg Rough MEP Approximately 80% Complete
- 98% of Bldg Slab on Grade Complete
- 1<sup>st</sup>, 2<sup>nd</sup> & 3<sup>rd</sup> Floor Framing Complete
- 2<sup>nd</sup> & 3<sup>rd</sup> Floor Wood Blocking Underway
- Brick Veneer Installation Underway, Approx 40% Complete
- Maintenance & Concession Bldg Interior Finishes 90% Complete
- Metal Roofing Installation Underway
- Completed Construction of Athletic Field Stands
- Building Envelope Commissioning Ongoing

#### **October 2010 Forecasted Items**

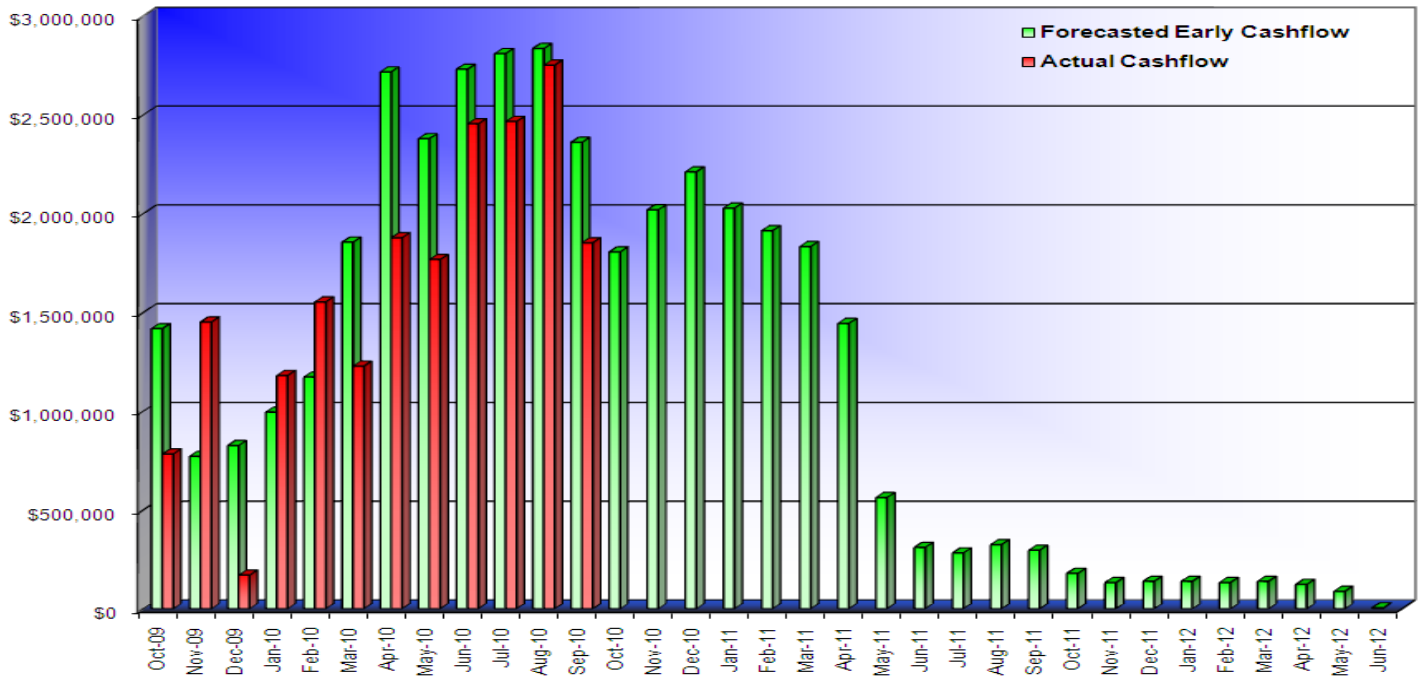
- Continue Classroom Wing MEPs / Obtain Final Inspections
- Complete Sheetrock on 2<sup>nd</sup> and 3<sup>rd</sup> Floors
- Complete Slab on Grade Work List
- Complete Outbuildings, Close Punchlist and Prep for Turnover
- Athletic Field Re-Construction, Install Turf & Track
- Award Terrazzo Flooring Contract
- Turnover Tennis Courts (Previously Phase II)
- Continue Brick Façade Installation
- Deliver Windows to Site and Begin Installation
- Deliver Metal Panels and Begin Installation
- Permanent Power Online
- Roof Penetrations – Deliver & Set Units



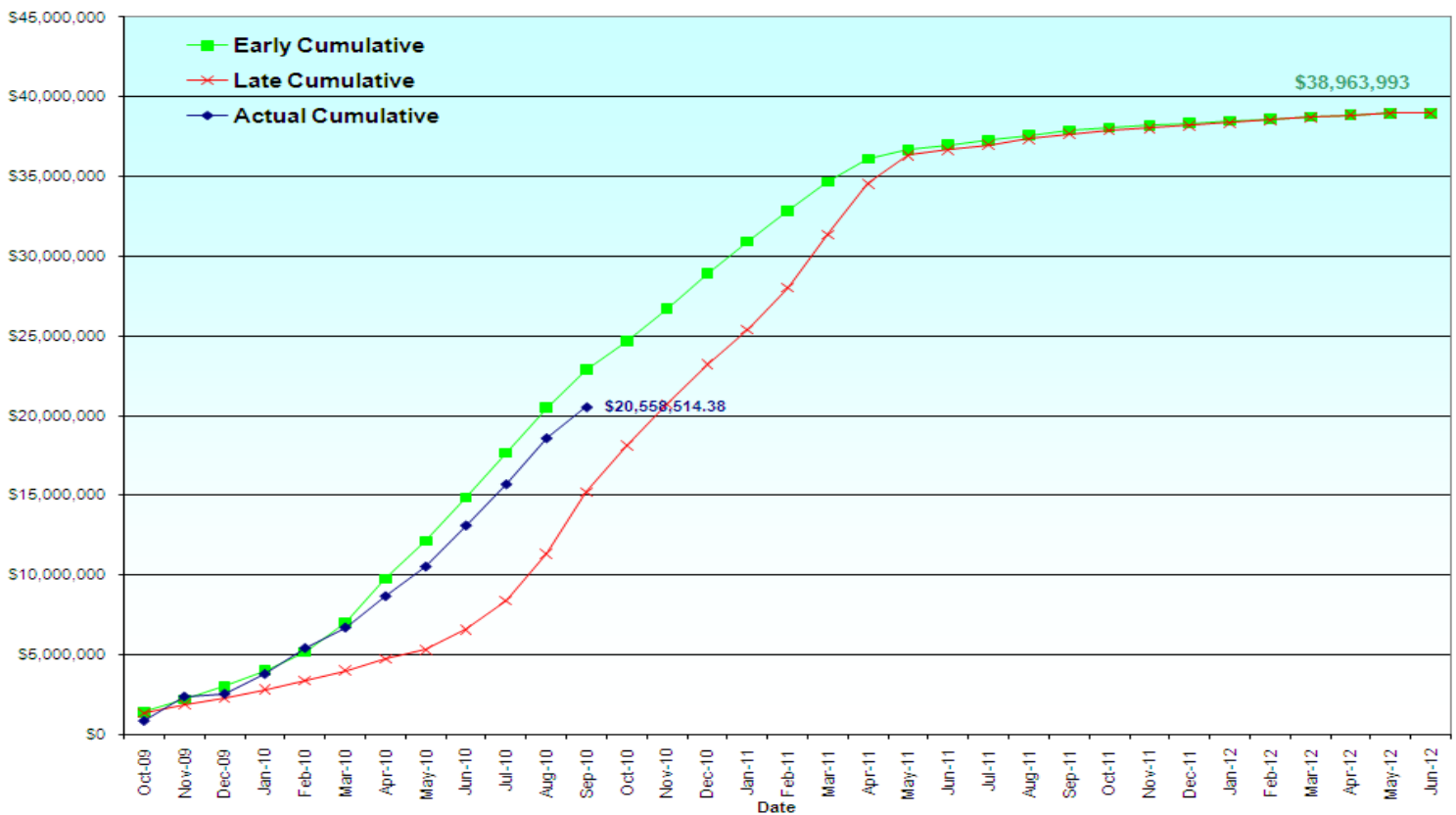
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### Monthly Cashflow Projection



### Cumulative Cashflow Projection



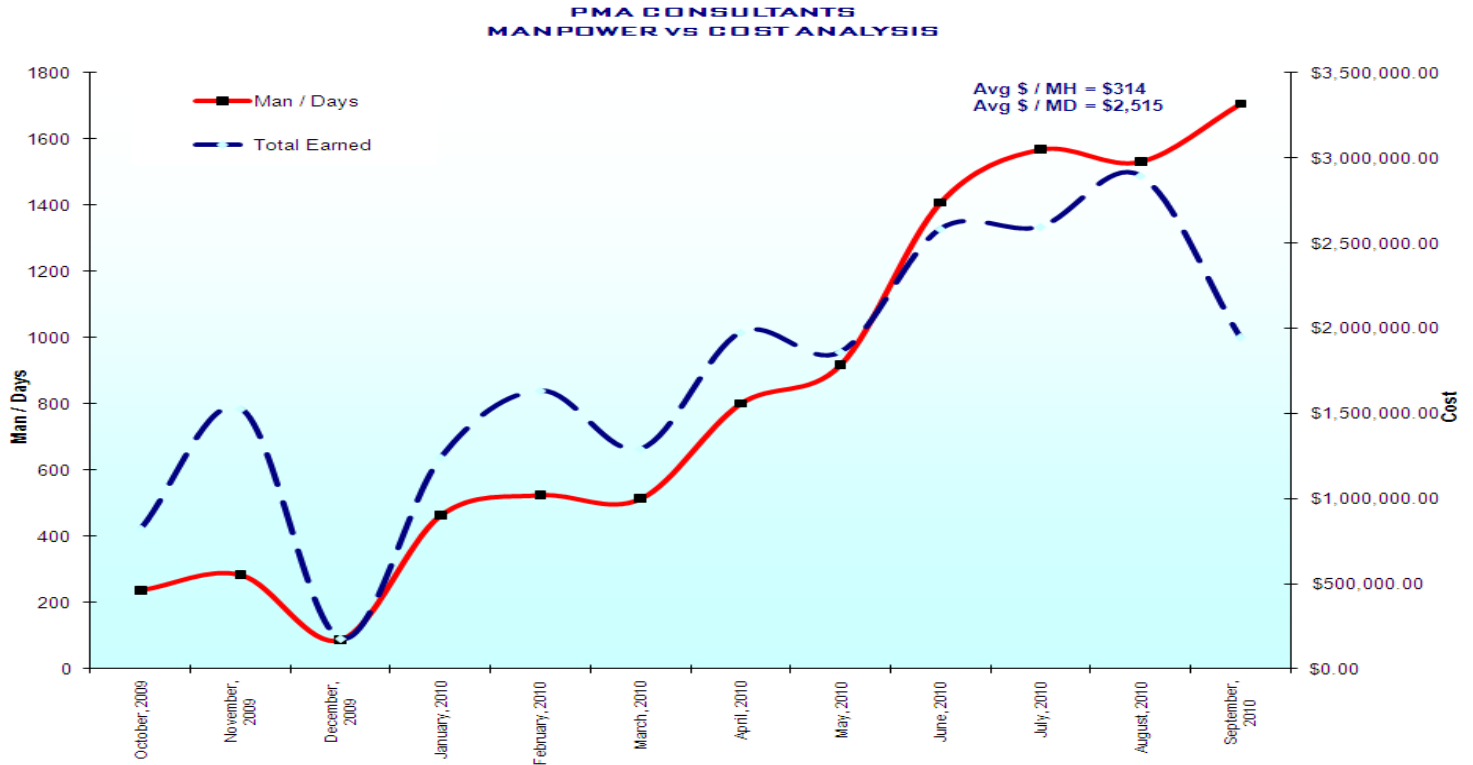


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### Manpower vs Cost Analysis



### Milestone Dates

Milestone Dates	Baseline	Forecast	Actual	Status	Schedule Notes
Construction Start - NTP	01Oct09		28Sep09	✓	On Schedule
OH MEP Work Start Milestone	20Apr10		12Apr10	✓	On Schedule
Building Envelope Start Milestone	28Apr10		26Apr10	✓	On Schedule
Begin Electrical Cut-In	17Aug10		16Aug10	✓	On Schedule
Complete Window Installation	06Oct10	18Oct10			Critical Path Impact Mitigated by Temp Protection
Ph1A Substantial Completion	01Sep10	12Nov10			No Critical Path Impact – Float Utilized
Begin Startup Checkout HVAC Systems	26Nov10	07Dec10			No Critical Path Impact – Float Utilized
Permanent Power Online	18Jan11	05Oct10			On Schedule
Phase 1 Substantial Completion	01Jun11	26May11			On Schedule

### HS09 Schedule Submission (HS10 September Update Not Yet Submitted)

#### Contract Milestone Analysis

Phase	Contract	HS08	HS09	Float
Ph1 Substantial	01Jun11	01Jun11	26May11	3
Ph1A Substantial	01Jun11	14Sep10	15Oct10	157
Ph2 Substantial	01May12	27Apr12	23Apr12	6

- The primary critical path to Phase 1 substantial completion in the HS09 schedule submission flows through the main building interior framing, rough MEPs, drywall, interior finishes (incl. paint, floors, ceilings, doors, millwork/casework, MEP finishes, etc) and continues on to punchlist, HVAC startup/testing, & inspections. This path currently contains 3 days of total float.
- The longest path to the Phase 2 Substantial Completion contract milestone flows through Phase 1 completion, building abatement/demolition, site prep, construction of athletic fields, and final site improvements.



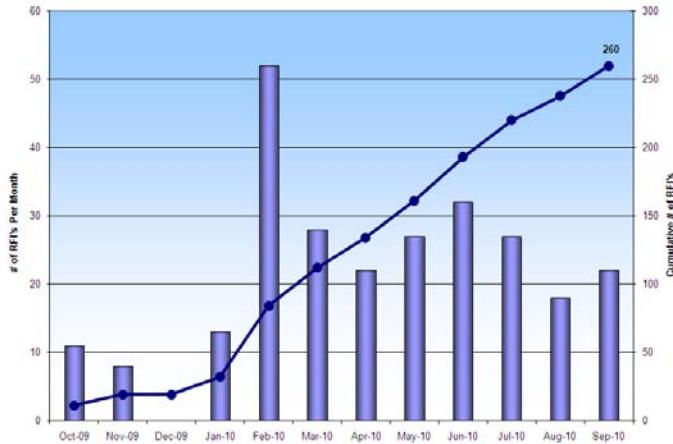
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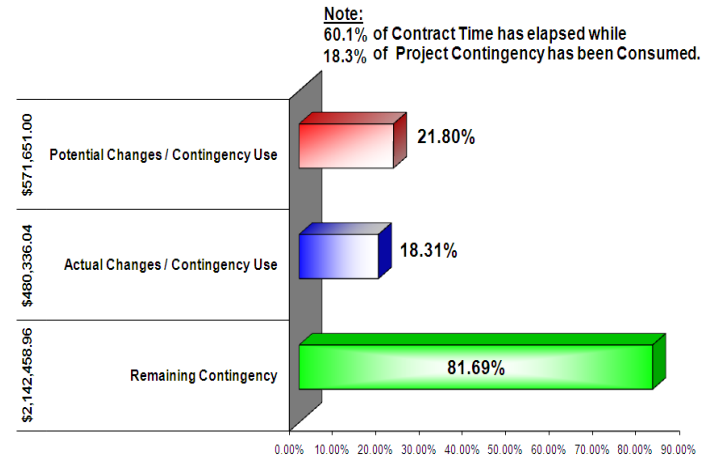
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## Graphs & Data

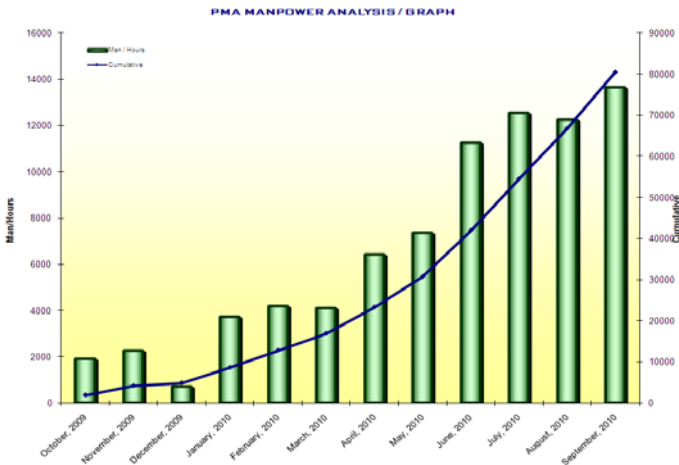
### Requests for Information (RFIs)



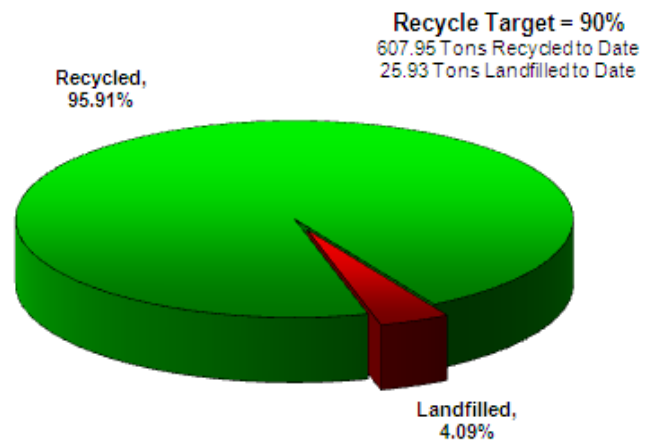
### Contingency Utilization



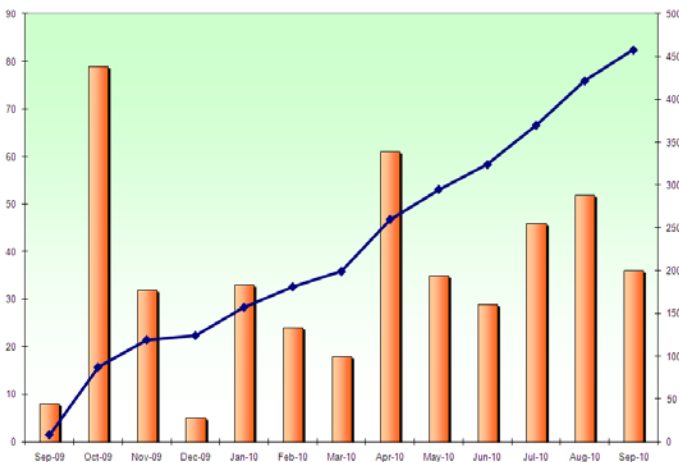
### Monthly Manpower



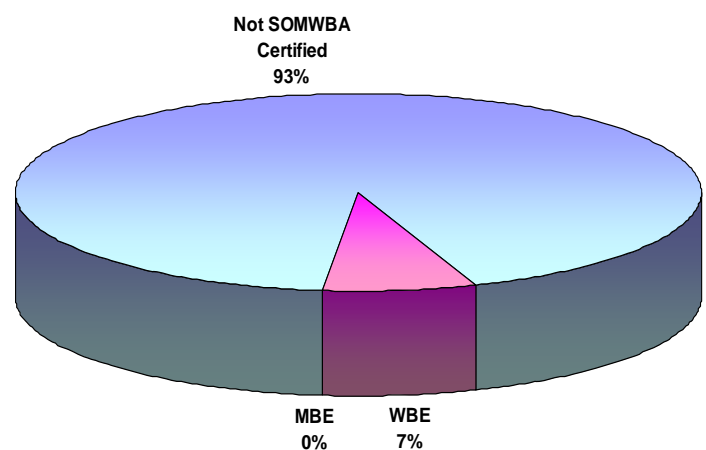
### MA-CHPS Waste Management



### Economic Impact – Work Force Employed To-Date



### MBE / WBE Participation





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## PMA Change Management



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Rejected Change Order Open



PMA Construction Services  
Owner's Representative

### PMA Potential Change Order Log

	Received	Description	Proposed Amount (\$)	Pending Amount (\$)	Approved Amount (\$)	Time Extension (Y/N)	PMA/HMFH Review	Current Status
		<b>Total</b>	<b>\$724,141.01</b>	<b>\$196,651.38</b>	<b>\$311,736.21</b>			
PCO #01	2/6/2010	Elevator Substitution Credit	-\$7,500.00		-\$7,500.00	N		CO #1
PCO #02	5/5/2010	Water Main- Add'l Valves	\$4,481.94		\$4,001.65	N		CO #1
PCO #03	3/17/2010	Unexpected Cold Weather Procedures	\$145,898.43		\$122,500.00	N		CO #2
PCO #04	5/5/2010	R&R Unsuitable @ Drain w/ Stone	\$4,146.14		\$3,605.34	N		CO #1
PCO #05	5/5/2010	R&R Existing DMH in Poor Condition	\$3,526.40		\$3,147.98	N		CO #1
PCO #06	3/16/2010	Waterline Replacement Option #1 (Lopes)				N	SUPERCEDED BY PCO #32	Closed
PCO #07	TBD	Force Main Repair	TBD	\$5,000.00		N	T&M. Callahan to turn over to PMA/HMFH	Open
PCO #08R1	9/30/2010	Add'l MH & Wider Duct bank for NGRID (Without Griffin)	\$8,926.00		\$8,926.00	N	T&M. Callahan to turn over to PMA/HMFH	CO #5
PCO #08R2	9/30/2010	NGRID Changes: Griffin	\$39,037.00	\$39,037.00		N	No owner driven scope change for Griffin work. Trades coordination issue	Open
PCO #09	6/4/2010	RFI #123-2 Added Soffits for RLs @ B313 and B314	\$1,126.81		\$1,127.00	N		CO #4
PCO #10	5/26/2010	Lopes Swing set Relocation	\$3,628.90		\$3,628.90	N		CO #3
PCO #11							***VOID*** PCO SUPERCEDED	Closed
PCO #12							***VOID*** PCO SUPERCEDED	Closed
PCO #13	6/24/2010	ASI #27-10Outbuilding Façade	\$56,713.93		\$47,575.25			CO #3
PCO #14	8/4/2010	PR #3 Stair #4 Railing	\$29,266.87		\$31,123.00	N		CO #4
PCO #15	7/2/2010	PR #9 Science Room Layout Changes	\$8,087.72	\$2,805.00		N	HMFH reviewing	Open
PCO #16	7/30/2010	Additional Pruning Around Track	\$24,732.89		\$24,733.00	N		CO #4
PCO #17	7/28/2010	ASI #39 Relocate Conduit at Cedar School	\$136,379.44			N	Rejected- Owner decided to go through school not around school. PCO was originated from PR, owner withdrew.	Closed
PCO #18.001	7/30/2010	Cedar St. Grind & Re-pave	\$49,599.93	\$35,554.00		N	PMA Reviewing + Requesting Overlay	Open
PCO #19							Callahan reserved for future use	
PCO #20	6/30/2010	RFI #79 & 139 Additional Ductwork and Grills	\$6,195.04	\$6,195.04		N	Callahan provided \$322 direct cost credit. Need to apply labor cost. Should be closer to \$500-\$600 (see Simmler Email)	Open
PCO #21							Callahan reserved for future use	
PCO #22	7/31/2010	45 Degree Angles Curb and radiuses Return	\$5,561.18		\$5,561.00	N		CO #4
PCO #23	8/6/2010	ASI #32 Metal Wall Panels Credit	-\$20,000.00		-\$20,000.00	N	HMFH reviewing credit. Will be included in CO #5 if HMFH approves.	CO #5
PCO #24	8/10/2010	Concessions Drainage and Fence Revision	\$7,223.45		\$6,500.00	N		CO #4
PCO #25	8/10/2010	ASI #34 Hand Dryers Added Wire at Concession Stand	\$56,864.96	\$56,865.00		N	HMFH Reviewing	Open
PCO #26	8/25/2010	ASI #49 Bollards at Maint. Bldg	\$3,547.77		\$3,548.00	N		CO #4
PCO #27	8/25/2010	Additional Shoring of Decks Per SKS CA03-05	\$3,336.00	\$3,336.00		N	Off Set with Deleted Construction Joints. Arch design issue. 9/31: Currently being disputed.	Open
PCO #28	8/30/2010	Dual Ring Infiltrometer Test	\$4,109.98	\$4,109.98		N	Previously rejected- Need to revisit since issuance of CCD #4. PMA is recommending approval	Open
PCO #29(R1)	8/25/2010	Misc. Lopes	\$1,930.00		\$1,930.00	N		CO #5
PCO #30	8/25/2010	Blocking for Visual Display Boards	\$5,000.00		\$5,000.00	N		CO #4
PCO #31	8/25/2010	Path to Scoreboard	\$5,124.36	\$5,124.36		N	HMFH to Review. PMA Requested Backup for Pricing	Open
PCO #32	9/26/2010	Water Main Revisions	\$84,507.51		\$59,894.00	N	Update 5/20: WILL PROCEED on T&M basis NTE \$77k, cost to be finalized in CO.	CO #5
PCO #33							Callahan reserved for future use	
PCO #34	9/26/2010	Change Water Service to Building to Copper	\$5,306.00		\$5,306.00	N		CO #5
PCO #35	8/26/2010	Concession Manhole Covers	\$1,131.09		\$1,131.09	N		CO #5
PCO #36							Callahan reserved for future use	
PCO #37	8/27/2010	Dimming Change and Overhead Coiling Doors	\$7,626.27			Y	Rejected: Need breakdown from Griffin showing schedule impact.	Closed
PCO #38							Callahan reserved for future use	
PCO #39	9/17/2010	Acid Waste Vent Relocation	\$12,004.00	\$12,004.00		N	HMFH/GGD reviewing cost	Open
PCO #40	9/27/2010	Landscaping Irrigation Revisions	\$21,576.00	\$21,576.00		N	HMFH Reviewing	Open
PCO #41(R1)	9/18/2010	Pre-cast Medallion and Brick Change	\$5,045.00	\$5,045.00		N	Need to see credit for less complicated medallion. No artist needed to form.	Open



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**Progress Photos**

**View from SE Corner of Building**



**Temp Weather Protection Installation**



**Infiltration Bed #2 Installation (Phase II Scope – Ahead of Schedule)**



**Brick Veneer – South Elevation**



**View of North Elevation from Athletic Field**



**Insulation / Prep for Metal Wall Panels**

