



**Washington State  
Department of Transportation**  
**Paula J. Hammond, P.E.**  
Secretary of Transportation

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January 31, 2011

SENT VIA EMAIL

Marty Brown, Director  
Office of Financial Management

Judy Clibborn, Chair  
House Transportation Committee

Mary Margaret Haugen, Chair  
Senate Transportation Committee

Dear Director Brown, Representative Clibborn, and Senator Haugen:

This letter transmits to you the quarterly earned value method of project monitoring reports for the sixth quarter of the 2009-2011 biennium as directed by ESSB 6381 Section 303(6), Section 304(6) and Section 306(8). These sections read in part as follows:

Highway Improvement Program - Section 303(6): "On a representative sample of new construction contracts valued at over fifteen million dollars or more, the department must also use an earned value method of project monitoring."

Highway Preservation Program - Section 304(6): "For new construction contracts valued at fifteen million dollars or more, the department must also use an earned value method of project monitoring."

Washington State Ferries Capital Program – Section 306(8): "The department shall provide to the office of financial management and the legislature quarterly reports providing the status on each project listed in this section and in the project lists submitted pursuant to this act and on any additional projects for which the department has expended funds during the 2009-11 fiscal biennium. Elements must include, but not be limited to, project scope, schedule, and costs. The department shall also provide the information required under this subsection via the transportation executive information systems (TEIS). The quarterly report regarding the status of projects identified on the list referenced in subsection (1) of this section must be developed according to an earned value method of project monitoring."

#### **Background**

The recently completed Project Management and Reporting System (PMRS) implementation strategy covered Commercial Off The Shelf (COTS) tool implementation, integration of COTS tools with legacy business applications, and implementation of a web portal providing access to synchronized and layered management information from all tools needed to track project and budget status. Implementation was completed in May 2010. Tools to use earned value management for project monitoring are available as part of the system.

Mr. Marty Brown, Director  
January 31, 2011  
Page 2

Using the \$15 million threshold requirement for highway construction projects, a project list was compiled that contained mostly projects in the construction phase. As strategies were being worked through to implement earned value management, a lack of data was identified for projects in that phase. The limited data available for a project's construction phase is driven by the department's role of contract administration. As a result, the department proposed an evaluation methodology to legislative staff to help determine how earned value management could best serve the delivery of WSDOT projects. In addition, the threshold amount of \$15 million was lowered to include some preliminary engineering phase starts.

**Current Report Status – Highway Construction**

Initial project earned value management reports provided limited information that can be used for measurement as schedules must have activities, logic, durations, budget, and cost information before earned value methods can be applied.

The department has set up two pilot projects in PMRS that are in the design phase. The schedules have been validated to ensure they are properly set up to take advantage of PMRS built-in functionality. The earned value management reports for the two pilot projects are attached.

The department has awarded a construction contract that was selected as the pilot for earned value method monitoring of a project in the construction phase. However, the contractor has not been able to provide an approved cost loaded schedule with all of the critical path activities, logic, durations and cost information needed for earned value method monitoring. The department is working with the contractor to obtain an approved schedule that has all the required attributes.

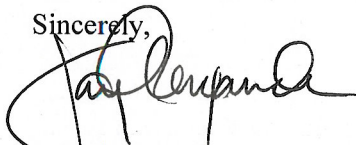
**Current Report Status – Washington State Ferries (WSF)**

Initial WSF terminal project earned value reports provide limited information that can be used for earned value method monitoring. Earned value reports for vessel projects are not available as schedules have not been fully developed loaded into a common database. To take full advantage of PMRS built-in functionality, all WSF project schedules must have activities, logic, durations, budget and cost information included before earned value method can be fully applied. In the interim, the available WSF terminal project earned value method monitoring report is attached.

Efforts continue to develop cost loaded WSF terminal and vessel project schedules and fully integrate them into PMRS. Once completed, then the vessel engineering earned value reports can be generated.

If you have questions on the attached material or need additional information, please let me know.

Sincerely,



Jay Alexander  
Director, Capital Program Development and Management  
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### EV by Phase

WBS	Budget At Completion (BAC)	Planned Value (PV)	Actual Cost (AC)	Earned Value (EV)	Cost Variance (CV)	Schedule Variance (SV)	CPI	SPI	Estimate At Completion (EAC)
<b>I-205/Mill Plain Interchange to NE 18th St Stage 2</b>	\$12,553,563.62	\$3,622,751.63	\$2,881,159.90	\$2,929,583.82	\$48,423.92	(\$693,167.81)	1.02	0.81	\$12,682,137.74
<b>Preliminary Engineering</b>	\$5,992,148.00	\$2,541,770.01	\$1,719,808.20	\$1,848,602.20	\$128,794.00	(\$693,167.81)	1.07	0.73	\$6,042,886.04
<b>Right of Way</b>	\$6,561,415.62	\$1,080,981.62	\$1,161,351.70	\$1,080,981.62	(\$80,370.08)	\$0.00	0.93	1.00	\$6,639,251.70
<b>Construction</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	0.00	\$0.00

### EV by Phase

WBS	Budget At Completion (BAC)	Planned Value (PV)	Actual Cost (AC) <input type="checkbox"/>	Earned Value (EV)	Cost Variance (CV)	Schedule Variance (SV)	CPI	SPI	Estimate At Completion (EAC)
<b>SR 518/Bridges - Seismic</b>	\$7,831,041	\$750,572	\$490,279	\$726,016	\$235,737	(\$24,555)	1.48	0.97	\$5,721,034
<b>Preliminary Engineering</b>	\$1,050,546	\$750,572	\$490,279	\$726,016	\$235,737	(\$24,555)	1.48	0.97	\$616,034
<b>Right of Way</b>	\$0	\$0	\$0	\$0	\$0	\$0	0.00	0.00	\$0
<b>Construction</b>	\$6,780,495	\$0	\$0	\$0	\$0	\$0	0.00	0.00	\$5,105,000

Note: AC includes a delayed billing estimate of \$102,925.

WBS	Work Order Number	Budget At Completion (BAC)	Planned Value Cost	Actual Cost	Earned Value Cost (EV)	Estimate To Complete (ETC)	Estimate At Completion Cost	Cost Variance	Schedule Variance	Cost Performance Index	Schedule Performance Index	
M0353A	Anacortes Pavement Preservation Upland Holding and Traffic Lanes Construction	\$1,282,707.89	\$402,035.14	\$476,859.87	\$642,892.79	\$383,229.77	\$860,089.64			1.35	1.60	
M0353A.CN	Construction	007989	\$1,282,707.89	\$402,035.14	\$476,859.87	\$642,892.79	\$860,089.64			1.35	1.60	
M0354A	SR 20 Spur/Anacortes Terminal Slip 1 - Bridge Seat Seismic Retrofit	\$125,435.00	\$55,571.00	\$27,769.71	\$45,518.50	\$7,590.00	\$35,359.71	\$17,748.79	(\$10,052.50)	1.64	0.82	
M0354A.PE	Design	XL3633	\$55,835.00	\$55,571.00	\$27,769.71	\$45,518.50	\$7,590.00	\$35,359.71	\$17,748.79	(\$10,052.50)	1.64	0.82
M0354A.CN	Construction		\$69,600.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	0.00
M03524A	SR 304/Bremerton Tml Slip 1 - Bridge Seat Seismic Retrofit	\$134,345.00	\$67,581.60	\$45,871.19	\$61,280.00	\$2,035.00	\$47,906.19	\$15,408.81	(\$6,301.60)	1.34	0.91	
M03524A.PE	Design	XL3702	\$64,745.00	\$64,745.00	\$45,871.19	\$61,280.00	\$2,035.00	\$47,906.19	\$15,408.81	(\$3,465.00)	1.34	0.95
M03524A.CN	Construction		\$69,600.00	\$2,836.60	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	(\$2,836.60)	0.00	0.00
M03449A	SR 305/Bainbridge Tml - Facility ADA Compliance Improvements	\$0.00	\$0.00	\$17,104.13	\$0.00	\$1,031.00	\$18,135.13	(\$17,104.13)	\$0.00	0.00	0.00	
M03449A.PE	Design	XL3484	\$0.00	\$0.00	\$17,104.13	\$0.00	\$1,031.00	\$18,135.13	(\$17,104.13)	\$0.00	0.00	
M04119A-1	SR 20/Coupeville Tml - Bridge Seat Seismic Retrofit	\$148,946.00	\$130,335.81	\$94,473.01	\$147,296.00	\$1,320.00	\$95,793.01	\$52,822.99	\$16,960.19	1.56	1.13	
M04119A-1.PE	Design	XL3467	\$53,946.00	\$52,608.54	\$48,443.99	\$52,296.00	\$49,763.99	\$3,852.01	(\$312.54)	1.08	0.99	
M04119A-1.RW	Right of Way	MS6393	\$95,000.00	\$77,727.27	\$46,029.02	\$95,000.00	\$0.00	\$46,029.02	\$17,272.73	2.06	1.22	
M03706A	Eagle Harbor Maintenance Building Remodel and Dock Repairs	\$18,062,729.80	\$14,501,865.35	\$15,695,042.26	\$14,218,410.51	(\$881,258.62)	\$14,813,783.64			0.91	0.98	
M03706A.CN	Construction	007614	\$18,062,729.80	\$14,501,865.35	\$15,695,042.26	\$14,218,410.51	(\$881,258.62)	\$14,813,783.64		0.91	0.98	
M03721A	SR 305/Eagle Hbr Maint Facility - Slip E Interim Preservation	\$56,971.00	\$31,592.10	\$32,200.65	\$15,410.15	\$16,167.00	\$48,367.65	(\$16,790.50)	(\$16,181.95)	0.48	0.49	
M03721A.PE	Design	XL3708	\$56,971.00	\$31,592.10	\$32,200.65	\$15,410.15	\$16,167.00	\$48,367.65	(\$16,790.50)	(\$16,181.95)	0.48	0.49
M03819A	SR 104/Edmonds Tml - Rt. Inner Timber Dolphin Replacement	\$332,000.00	\$332,000.00	\$185,981.33	\$220,403.30	\$52,140.00	\$238,121.33	\$34,421.97	(\$111,596.70)	1.19	0.66	
M03819A.PE	Design	XL3465	\$332,000.00	\$332,000.00	\$185,981.33	\$220,403.30	\$52,140.00	\$238,121.33	\$34,421.97	(\$111,596.70)	1.19	0.66
M04423A	SR 525 NB/Front Street Intersection - Signal/Rt. Turn Pocket Imprv Construction	\$277,771.81	\$175,405.61	\$149,409.41	\$149,333.72	\$86,013.74	\$235,423.15			1.00	0.85	
M04423A.PE	Design	007996	\$277,771.81	\$175,405.61	\$149,409.41	\$149,333.72	\$86,013.74	\$235,423.15		1.00	0.85	
M04423B	SR 525/Front St I/S (Stage 2) - Signalization Safety Improvement	\$36,500.13	\$10,545.59	\$113,958.94	\$8,360.45	\$28,688.33	\$142,647.27	(\$105,598.49)	(\$2,185.14)	0.07	0.79	
M04423B.PE	Design		\$36,500.13	\$10,545.59	\$113,958.94	\$8,360.45	\$28,688.33	\$142,647.27	(\$105,598.49)	(\$2,185.14)	0.07	0.79
M04212A	SR 104/Kingston Tml - Steel Sheetpile Bulkhead Rehabilitation	\$0.00	\$0.00	\$57,800.16	\$0.00	\$0.00	\$57,800.16	(\$57,800.16)	\$0.00	0.00	0.00	
M04212A.PE	Design	XL3486	\$0.00	\$0.00	\$57,800.16	\$0.00	\$57,800.16	(\$57,800.16)	\$0.00	0.00	0.00	
M04121A	SR 20/Keystone Tml - Facility ADA Compliance Improvements	\$20,293.95	\$17,306.20	\$11,355.08	\$11,432.80	\$6,003.25	\$17,358.33	\$77.72	(\$5,873.40)	1.01	0.66	
M04121A.PE	Design	XL3485	\$20,293.95	\$17,306.20	\$11,355.08	\$11,432.80	\$6,003.25	\$17,358.33	\$77.72	(\$5,873.40)	1.01	0.66
M04125A	SR 20/Keystone Tml (Proviso) - Tollbooth Configuration Improvements	\$189,994.44	\$189,994.44	\$143,663.34	\$169,823.86	\$0.00	\$143,663.34	\$26,160.52	(\$20,170.58)	1.18	0.89	
M04125A.PE	Design	XL3490	\$189,994.44	\$189,994.44	\$143,663.34	\$169,823.86	\$0.00	\$143,663.34	\$26,160.52	(\$20,170.58)	1.18	0.89
M04312A	SR 20 Spur/Lopez Tml - Floating Timber Wingwall Replacement	\$628,000.00	\$237,723.00	\$121,707.65	\$165,365.45	\$409,585.00	\$531,292.65	\$43,657.80	(\$72,357.55)	1.36	0.70	
M04312A.PE	Design	XL3468	\$628,000.00	\$237,723.00	\$121,707.65	\$165,365.45	\$409,585.00	\$531,292.65	\$43,657.80	(\$72,357.55)	1.36	0.70
M04420A	SR 525/Mukilteo Tml - Timber Floating Dolphin Replacement	\$163,016.08	\$163,016.08	\$283,358.11	\$160,816.08	\$0.00	\$283,358.11	(\$122,542.03)	(\$2,200.00)	0.57	0.99	
M04420A.PE	Design	XL3469	\$163,016.08	\$163,016.08	\$283,358.11	\$160,816.08	\$0.00	\$283,358.11	(\$122,542.03)	(\$2,200.00)	0.57	0.99
M04420A.CN	Construction	007964	\$2,183,156.24	\$2,031,049.79	\$1,531,018.71	\$1,293,066.79	\$712,783.32	\$2,243,802.03		0.84	0.64	
M04421A	SR 525/Mukilteo Tml Transfer Span - Mech./Elec. Systems Replacement	\$599,440.00	\$599,440.00	\$577,768.47	\$576,733.00	\$51,810.00	\$629,578.47	(\$1,035.47)	(\$22,707.00)	1.00	0.96	
M04421A.PE	Design	XL3470	\$599,440.00	\$599,440.00	\$577,768.47	\$576,733.00	\$51,810.00	\$629,578.47	(\$1,035.47)	(\$22,707.00)	1.00	0.96
M04421A.CN	Construction	008019	\$1,392,495.60	\$91,410.42	\$5,998.34	\$5,998.34	\$904,995.60	\$910,993.94		1.00	0.07	
M04433A	SR 525/Mukilteo Tml (Proviso) - Tml Preservation/Relocation Funding	\$5,503,647.60	\$1,927,812.96	\$2,615,728.98	\$1,237,699.23	\$2,565,720.03	\$5,181,449.01	(\$1,378,029.75)	(\$690,113.72)	0.47	0.64	
M04433A.PE	Design	XL3701	\$5,503,647.60	\$1,927,812.96	\$2,615,728.98	\$1,237,699.23	\$2,565,720.03	\$5,181,449.01	(\$1,378,029.75)	(\$690,113.72)	0.47	0.64
M04523A	SR 20 Spur/Orcas Tml - Bridge Seat Seismic Retrofit	\$42,000.00	\$32,964.34	\$18,976.32	\$23,734.30	\$0.00	\$18,976.32	\$4,757.98	(\$9,230.04)	1.25	0.72	
M04523A.PE	Design	XL3703	\$42,000.00	\$32,964.34	\$18,976.32	\$23,734.30	\$0.00	\$18,976.32	\$4,757.98	(\$9,230.04)	1.25	0.72
M04613A	SR 163/Point Defiance Tml - Trestle Security Gate Improvement	\$45,500.00	\$45,500.00	\$59,030.78	\$8,000.00	\$0.00	\$59,030.78	(\$51,030.78)	(\$37,500.00)	0.14	0.18	
M04613A.PE	Design		\$45,500.00	\$45,500.00	\$59,030.78	\$8,000.00	\$0.00	\$59,030.78	(\$51,030.78)	(\$37,500.00)	0.14	0.18
M04613A.CN	Construction	008000	\$83,936.00	\$83,081.00	\$78,226.25	\$72,716.00	\$3,769.76	\$81,996.01		0.93	0.88	
M04616A	SR 163/Point Defiance Tml - Bridge Seat Seismic Retrofit	\$111,600.00	\$4,923.49	\$14,465.63	\$4,923.49	\$0.00	\$14,465.63	(\$9,542.14)	\$0.00	0.34	1.00	
M04616A.PE	Design	XL3704	\$42,000.00	\$4,923.49	\$14,465.63	\$4,923.49	\$0.00	\$14,465.63	(\$9,542.14)	\$0.00	0.34	1.00
M04616A.CN	Construction		\$69,600.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	0.00	
M04722A	SR 20/Port Townsend Tml Slip 1 - Timber Dolphin Replacement	\$341,431.84	\$341,431.84	\$315,709.15	\$341,215.24	\$0.00	\$315,709.15	\$25,506.09	(\$216.60)	1.08	1.00	
M04722A.PE	Design	XL3471	\$341,431.84	\$341,431.84	\$315,709.15	\$341,215.24	\$0.00	\$315,709.15	\$25,506.09	(\$216.60)	1.08	1.00
M04722A.CN	Construction	007983	\$2,900,990.10	\$2,350,977.11	\$1,192,983.22	\$1,107,394.85	\$698,492.53	\$1,891,475.75		0.93	0.47	
M04731A	SR 20/Port Townsend Tml Slip 1 - Bridge & Transfer Span Replacement	\$771,172.33	\$321,046.34	\$132,125.57	\$332,839.31	\$0.00	\$132,125.57	\$200,713.74	\$11,792.97	2.52	1.04	
M04731A.PE	Design	XL3491	\$771,172.33	\$321,046.34	\$132,125.57	\$332,839.31	\$0.00	\$132,125.57	\$200,713.74	\$11,792.97	2.52	1.04
M04737A	SR 20/Port Townsend Tml (Proviso) - Tollbooth Configuration Improvements	\$190,000.00	\$182,486.79	\$166,617.99	\$156,627.74	\$0.00	\$166,617.99	(\$9,990.25)	(\$25,859.05)	0.94	0.86	
M04737A.PE	Design	XL3492	\$190,000.00	\$182,486.79	\$166,617.99	\$156,627.74	\$0.00	\$166,617.99	(\$9,990.25)	(\$25,859.05)	0.94	0.86
M04843A	SR 519/Seattle Tml Slip 3 - OHL & Transfer Span Replacement	\$3,072,000.00	\$1,278,963.34	\$592,077.10	\$750,285.34	\$1,239,535.00	\$1,831,612.10	\$158,208.24	(\$528,678.00)	1.27	0.59	
M04843A.PE	Design	XL3473	\$3,072,000.00	\$1,278,963.34	\$592,077.10	\$750,285.34	\$1,239,535.00	\$1,831,612.10	\$158,208.24	(\$528,678.00)	1.27	0.59
M04850A	SR 519/Seattle Tml - Electrical Distribution System Upgrade	\$913,000.00	\$745,893.79	\$580,979.60	\$648,989.67	\$199,045.00	\$780,024.60	\$68,010.07	(\$96,904.12)	1.12	0.87	

WBS	Work Order Number	Budget At Completion (BAC)	Planned Value Cost	Actual Cost	Earned Value Cost (EV)	Estimate To Complete (ETC)	Estimate At Completion Cost	Cost Variance	Schedule Variance	Cost Performance Index	Schedule Performance Index
M04850A.PE Design	XL3475	\$913,000.00	\$745,893.79	\$580,979.60	\$648,989.67	\$199,045.00	\$780,024.60	\$68,010.07	(\$96,904.12)	1.12	0.87
M04854A SR 519/Seattle Tml Slip 2 - Bridge & OHL Interim Preservation		\$531,077.47	\$449,968.81	\$137,938.35	\$113,769.15	\$0.00	\$137,938.35	(\$24,169.20)	(\$336,199.65)	0.82	0.25
M04854A.PE Design	XL3763	\$531,077.47	\$449,968.81	\$137,938.35	\$113,769.15	\$0.00	\$137,938.35	(\$24,169.20)	(\$336,199.65)	0.82	0.25
M04859A SR 519/Seattle Tml - Bicycle Entry Gate Improvement		\$45,069.75	\$36,167.99	\$56,933.30	\$28,743.00	\$16,359.75	\$73,293.05	(\$28,190.30)	(\$7,424.99)	0.50	0.79
M04859A.PE Design		\$45,069.75	\$36,167.99	\$56,933.30	\$28,743.00	\$16,359.75	\$73,293.05	(\$28,190.30)	(\$7,424.99)	0.50	0.79
M05113A SR 163/Tahlequah Tml - Bridge Seat Seismic Retrofit		\$111,600.00	\$6,013.84	\$11,855.69	\$4,899.80	\$0.00	\$11,855.69	(\$6,955.89)	(\$1,114.04)	0.41	0.81
M05113A.PE Design	XL3705	\$42,000.00	\$6,013.84	\$11,855.69	\$4,899.80	\$0.00	\$11,855.69	(\$6,955.89)	(\$1,114.04)	0.41	0.81
M05113A.CN Construction		\$69,600.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	0.00