

CONSTRUCTION MANAGEMENT

We compared the leading practices listed in Appendix C to the systems developed by Seattle Public Schools to manage construction projects. This list of the District's processes does not include changes the District made in late 2008 and again in 2010. We have not examined those changes.

Process	Leading Practices
Develop Project Charter	<p>This process identifies the need for the project, authorizes the use of resources to complete the project, and should provide project information, including:</p> <ul style="list-style-type: none"> • Assigned project manager and authority level. • Establish standardized guidelines, work instruction, proposal evaluation criteria and performance measurement criteria. • Project selection methods. • Project management methodology. • Defined scope of projects. • Record retention procedures. • Communication with stakeholders. • Risk control procedures. • Procedures for issuing and approving work authorizations. <p>(PMBOK, 2004, Section 4.1)</p>
Develop Preliminary Project Scope Statement	<p>This process defines the project and what needs to be accomplished. The statement defines the characteristics and boundaries of the work and provides methods of acceptance of the work and scope control. It also includes:</p> <ul style="list-style-type: none"> • Project objectives. • Project and service requirements and deliverables. • Initial defined risks. • Order of magnitude cost estimate. • Approval requirements. (PMBOK, 2004, Section 4.2)
Develop Project Management Plan	<p>This process defines how the project will be executed, monitored and controlled, and closed. It includes:</p> <ul style="list-style-type: none"> • The project management process selected by the project management team. • How work will be executed to accomplish the project objectives. • How changes will be monitored and controlled • How integrity of performance measurement baselines will be maintained and used. • The need and technique for communications among stakeholders. • Key management reviews for content, extent, and timing to facilitate addressing open issues and pending decisions. • How risks will be identified and monitored through a risk register. • Provisions for communication requirements including communication with stakeholders. • (PMBOK, 2004, Section 4.3) • Best practices covering all facets of contracting for construction services: • Clearly defined performance standards and measurable outcomes. • Identification of how vendor performance will be evaluated, including positive or negative performance incentives. • Identification of staff responsible for monitoring vendor performance. • (NSAA, Best Practices in Contracting for Construction Services)

Process	Leading Practices
<p>Direct and Manage Project Execution</p>	<p>This process requires project managers to perform multiple actions to execute project management plan to accomplish the work defined in the project scope statement, including:</p> <ul style="list-style-type: none"> • Staff, train, and manage the project team. • Obtain quotes, bids, or proposals. • Obtain, manage, and use resources. • Manage risks and implement risk response activities. • Adapt approved changes into the project scope and plan. • Collect project data and report cost, schedule, technical and quality progress, and status information to facilitate forecasting. • Collect and document lessons learned, and implement approved process improvement activities. • Implement approved corrective actions to improve project performance. • Conduct procurement, negotiate contracts. • (PMBOK, 2004, Section 4.4, 12.4) Contract provisions can be used to facilitate project management, by representing the agency's interests by including: <ul style="list-style-type: none"> • Performance standards, performance incentives and/or clear penalties and corrective actions for non-performance, with a dispute resolution process. • Include provisions to ensure that rented equipment rates are competitive, and if the equipment is rented directly from the contractor, that the rental rate reflects actual costs. • Include provisions to protect the integrity of subcontractor bids to ensure that such bids are competitive. (NSAA Best Practices in Contracting for Construction Services)
<p>Monitor and Control Project Work</p>	<p>Monitoring and controlling is performed throughout the project and includes collecting, measuring, and communicating performance information, and assessing measurements and trends for process improvements. This process is concerned with:</p> <ul style="list-style-type: none"> • Comparing actual project performance to the project plan. • Assessing performance to identify the need for corrective or preventative action. • Analyzing, tracking, and monitoring the project to identify risks, and revise and execute the risk response plan. • Maintain accurate and timely information and documentation. • (PMBOK, 2004, Section 4.5) • Effective contract monitoring includes: <ul style="list-style-type: none"> • Assign contract manager with the authority, resources, and time to monitor the project. • Ensure that the contract manager possesses adequate skills and training to properly manage the contract. • Track budgets and compare invoices and charges to contract terms and conditions. • Monitor, at least periodically, subcontracts to ensure that all subcontractors are authorized and that amounts paid are consistent with reported costs. • Ensure deliverables are received on time and document the acceptance or rejection of deliverables. • Retain documentation supporting charges against the contract. • After contract completion the agency evaluates the contractor's performance against a set of pre-established, standard criteria and retain record of performance for future use. • (NSAA, Best Practices in Contracting for Construction Services)

Process	Leading Practices
Integrated Change Control	<p>The Integrated Change Control process is performed from project inception to project completion to accommodate necessary changes to the project:</p> <ul style="list-style-type: none"> • Managing factors that circumvent integrated change order so that only approved changes are implemented. • Reviewing and approving requested changes. • Reviewing and approving all recommended corrective and preventative actions. • Controlling and updating the scope, cost, budget, schedule and quality requirements based upon approved changes across the entire project. For example, a proposed schedule change will often affect cost, risk, quality and staffing. • Documenting the complete impact of the requested change. <p>(PMBOK, 2004, Section 4.6)</p>
Close Project	<p>The Close Project process includes:</p> <ul style="list-style-type: none"> • Finalizing all activities completed. • Procedures for verifying and documenting the project deliverable. • Formalizing acceptance of the deliverables. • Investigating and documenting the reasons for the actions taken in terminating a project prior to completion. <p>Administrative closure procedures include:</p> <ul style="list-style-type: none"> • Collecting project records. • Analyzing project success or failure. • Gathering lessons learned from the project. • Archive project information for future use. • Contract closure procedures include: <ul style="list-style-type: none"> • Verifying the deliverables is consistent with the contract terms and conditions. • Updating all project records to reflect the results for archive and future use. <p>(PMBOK, 2004, Section 4.7)</p>
Sources: *	<p><i>A Guide to the Project Management Body of Knowledge (PMBOK), Third Edition 2004.</i> <i>Project Management Institute Leading Practices in Contracting for Construction Services, National State Auditors Association, 2005</i></p>