

ARCHITECTURE & ENGINEERING

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CIP PROJECT MANUAL

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Preface



NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY

MISSION STATEMENT

The School Construction Authority's (SCA) mission is to design and construct safe, attractive and environmentally sound public schools for children throughout the many communities of New York City. We are dedicated to building and modernizing schools in a responsible, cost-effective manner while achieving the highest standards of excellence in safety, quality and integrity.

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SECTION I - INTRODUCTION

A. Purpose of this Guide/Expectation of Design Excellence

The SCA is tasked with completing projects within an established schedule and budget while achieving architectural and engineering excellence. This manual will guide the SCA Consultant and In-House Architect and Engineer of Record (AEOR) in accomplishing this objective.

1. Quality Assurance

In contracting for design services, the SCA seeks demonstrated design excellence, together with management skills necessary to complete the work within schedule and budget. Consultant Architects and Engineers retained by SCA to perform design services shall provide the SCA with their own firm's Quality Assurance Manual which stipulates office management practices and/or internal review processes to be utilized to ensure the overall quality of design, including the completeness, coordination, cost effectiveness and integrity of contract documents. Refer to SCA Procedural Guidelines for additional information on the CIP Quality Review Process for Consultant and A&E In-House designed projects.

2. Confirmation of Quality and Conformance with SCA Standards

At project scope and design completion, the Consultant AEOR shall submit a signed statement that all work has been performed in accordance with the above-mentioned quality assurance practices and is in conformance with SCA Design Standards, Specifications and Details and that all SCA review comments have been incorporated, or adequately responded to and accepted. Any deviation from established Standards shall require written approval from the SCA and follow Procedural Guideline PG 3.3.3, *Deviations from Design Standards*.

3. Revisions to the Manual

The AEOR shall follow the procedures contained in this manual to ensure conformity, consistency and quality in the various stages of a project. Revisions to the procedures or forms outlined in this manual will be issued as AE bulletins. The AEOR will be notified of the issuance of each bulletin via e-mail and the bulletin will also be posted on the SCA website.

4. Errors and Omissions

The AEOR is responsible for errors and omissions in construction documents. The SCA reserves the right to initiate E&O claims as deemed appropriate.

5. Projects Placed on Hold

If scope reports or design documents have been placed on hold for 4 months or longer and the project is restarted, the AEOR shall revisit the site to confirm the adequacy of the documents and cost estimate. Any changes and updates made to SCA Standards or Specifications during this time period shall be incorporated into these documents. If a project has been on hold for more than one year, it will need to be re-filed with BCC and IEH.

B. Departments & Divisions within the SCA having AEOR Interface

 ARCHITECTURE AND ENGINEERING (A&E) is comprised of five Studios, each guided by a Studio Director, and all working together under the leadership of the Departmental Vice President. A&E is responsible for the development of scope, design and construction documents for



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renovation projects at existing schools, as well as feasibility studies programming, design and construction documents for new school buildings, additions and lease conversions.

- Design Consultant Management Studio The Design Consultant Management Studio is responsible for the design of architectural, structural, electrical, HVAC (heating, ventilating, and air conditioning), plumbing and drainage components of Capital Improvement Program (CIP) and Capacity projects. These functions are accomplished by utilizing the professional services of design consultants under contract to the SCA. The management of the scope and design for Capital Task Force (CTF) projects resides within this Studio. Within the Studio, the design managers (DM) supervise the design project managers (DPM), who manage the consultants directly.
- In-House Design Studio The In-House Design Studio is comprised of architects and engineers of all the major disciplines. The In-House technical staff scopes, designs and provides construction services in architectural, structural, electrical, HVAC (heating, ventilating, and air conditioning), and plumbing and drainage components of their assigned Capital Improvement and new Capacity projects. They also review the work prepared by the consultants managed by the Design Consultant Management Studio, and provide technical assistance to A&E Studios and to SCA's Construction Management Department. In-house expediters reside in the Studio for the projects designed in-house. The Elevator/Escalator, Acoustical and MEP (mechanical/electrical/plumbing) Testing and Emergency contracts are managed in the In-House Design Studio for the projects designed in-house and for the review of consultant's work.
- Technical Standards & Support Studio (TSS) The Technical Standards & Support Studio (TSS) is a multifunctional unit that maintains the technical standards of the SCA and supports the other studios through its four units: CADD Unit, the Estimating Unit, the Specialty Testing Unit, and the Technical Standards Group. The CADD Unit maintains the AutoCAD system and plans desk for the In House Design Studio as well as the SCA's drawing archive system. It also manages the Expedition accounts for the in-house staff as well as A&E consultants. The Estimating Unit is responsible for performing estimates on SCA in-house projects and review of consultant estimates. The Specialty Testing Unit manages various specialty testing contracts for use by in-house staff as well as A&E consultants. The Technical Standards Group maintains the SCA standards for design and materials, including Green Design, as well as other numerous functions.
- Quality Control & Construction Support Studio (QCCS) The primary role of the Quality Control and Construction Support Studio (QCCS) is to review projects at all levels of scope and design for constructability and value engineered cost savings. In addition to this, QCCS acts as a facilitator and hub for improvement in construction-related activities that involve A&E. These activities are internal to A&E and may include other SCA departments. QCCS identifies and implements case studies based on construction-related observations that warrant attention or offer opportunities for improvement through revisions to A&E scope and design processes. QCCS uses a 360 degree approach across all SCA pipeline departments to collect data, document information, and develop and propose solutions. Working closely with A&E Design Project Managers, QCCS acts as a facilitator in the close-out of Capital Improvement Program and Capacity Projects where AEOR services are necessary. In an effort to achieve the best design quality for new school buildings, QCCS also chairs Peer Review meetings for capacity projects in scope and design. The SCA Commissioning Unit (Cx Unit) of QCCS explores opportunities that may enhance building commissioning with an overarching goal of partnering with Construction Management. The Cx Unit assists in achieving construction quality, timely resolution of construction issues, and delivery of a final product to the Department of Education that meets their prescribed needs for both operations and maintenance.



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- The Operations Studio The "Ops" Studio provides support services to A&E through its four specialized groups: CCFU, MSU, PAPS and TDU. The Consultant Contract Funding Unit (CCFU) oversees and coordinates consultant payments. The Management Support Unit (MSU) provides assistance to the Design Studios through a variety of periodic and ad hoc planning and tracking reports related to the assignment and delivery of Capital Improvement Program (CIP) and Capacity projects. The Public Art for Public Schools (PAPS) manages art projects for new schools and the conservation of artwork at existing buildings. The Training and Development Unit (TDU) develops process and implementation improvement strategies, and coordinates related training for the A&E technical and management staff.
- 2. CONTRACT ADMINISTRATION (CA) responsibilities with regard to design, include: prequalification; coordination of selection; negotiation and processing of contracts and supplemental agreements for design Consultants. With regard to construction, those responsibilities include: prequalification; pre-bidding; bidding and construction related contracting processes including, but not limited to, Sub-Contractor approval, apprenticeship program verification and MWLBE certification. Once the Consultant's contract is executed, the Consultant cannot add or substitute another sub-consultant as part of his design team without prior written approval by the SCA.
- 3. CAPITAL PLAN MANAGEMENT is responsible for the development and authorization of the Five-Year Capital Plan and all amendments thereof. They evaluate proposed capital projects for capital eligibility and confirm that they do not duplicate other work in the pipeline. They review proposed CIP Additional Recommended Items during scope or design for approval of the additional funding needed to proceed.
- 4. CONSTRUCTION MANAGEMENT (CM) performs constructability review for all projects in scope and design (in conjunction with QCCS), and supervises the overall construction process, including but not limited to phasing and logistics, and ensures that the project schedule and contract requirements are adhered to. Each CIP project is assigned to a Project Officer (PO) who in turn is supervised by a Senior Project Officer (SPO) who oversees projects within various districts. The SPOs report to the Chief Project Officer (CPO), who is in charge of all school construction within a designated borough. Construction Management also includes the following units:
 - The Change Order Unit reviews and approves construction change orders.
 - The Scheduling Unit determines construction duration for projects prior to bid and reviews construction schedules and extension of time requests submitted by the contractor.
 - The Project Support Unit facilitates interaction between the SCA and schools, community groups, and local elected officials.
- 5. ENVIRONMENTAL & REGULATORY COMPLIANCE (ERC) is composed of 4 units:
 - Industrial and Environmental Hygiene (IEH) assures environmental regulatory compliance and oversees the environmental and industrial hygiene scope, design and construction phase components for all SCA projects. Specifically, the IEH Survey & Design Unit provides asbestos, lead and PCB surveys and design to A&E for incorporation into SCA bid documents. The IEH HazMat Unit provides a similar function for a broad range of other environmental services listed in Section II. C. 8 of this document.
 - Building Code Compliance Division (BCC) serves as the 'in-house' Building Department with full review and approval authority (and most GC inspection functions) for all SCA projects as per agreement with the NYC Department of Buildings.



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- Construction Inspection Division (CID) serves as the quality control function for projects in construction and also for regulatory inspections for the MEP trades.
- The Safety Unit conducts inspections of all active construction projects to ensure compliance with city, state, and federal regulations as well as the SCA Safety Manual.

C. Overview of the Project Process & Project Types

The Architecture and Engineering Department (A&E) is responsible for the scoping and design of capital projects under budgets and requirements set forth by the SCA's Department of Capital Plan Management. Those responsibilities include design and engineering, cost estimating and preparation of construction documents for turnover to Construction Management. During the Bid and Award and Construction phases, A&E assists Contract Administration and Construction Management to ensure that the project is properly executed and completed in accordance with the construction documents.

- 1. Capital Improvement Program Projects (CIPs) provide necessary improvements to the components and systems of existing buildings including roofs, parapets, exterior walls, windows, boilers, HVAC systems, electrical systems, P&D systems, room conversions and other upgrades. CIP projects are generally "Building Based" i.e. consisting of one or more individual items at a school. Each item is identified by type and funding category, referred to as a 'Capital Category', and tracked by an identifier called Low Level Work Number (LLW). The individual items are "bundled" together as a single project and referred to as a "Design Bundle" and given a Design Number (i.e., D014000). Certain programs, such as Local Law 16/41, are bundled geographically as multi-school projects. (Capital Categories are further subdivided into Nodes, i.e., Cap. Cat. Low Voltage Electrical could consist of PA System, Public Address, Fire Alarm, etc.).
- **2. Resolution A Projects (Reso A)**, which are similar in type to CIP projects, often include Playgrounds, Auditorium Upgrades, Science Lab Upgrades and other room upgrades. They are funded through City Council or Borough President Allocations.
- **3.** Capacity (Line) Projects are those that provide added seating capacity to the school system. They include Additions, New Buildings, and leased Facility Conversions. The feasibility study, scope and design of these projects will not be addressed in this manual.

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SECTION II – SCOPING PROCESS – PHASE 1

A. Overview

The scope phase shall result in a scope report that clearly defines the work to be performed, the preliminary cost estimate for this work and the duration of design time and construction time. The scope report is also justification of funding for a project. Design approaches and alternatives shall have been examined and major design decisions made. The scope report shall enable the SCA to decide whether the project should proceed to design.

SCA scope reports will be read by technical and non-technical reviewers, so the scope reports must be clear, simply presented, and easy to read for all reviewers. The report must be a complete picture of the investigation and recommendations. The report will also be used as the basis for reviewers of design documents to determine if the design correlates with the approved scope.

B. Project Assignment

1. Notification of Project Assignment:

- a. <u>Consultant AEOR</u>: An e-mail notification by the Design Project Manager (DPM) is addressed to the Consultant Project Manager and/or Partner in Charge. The Consultant shall complete a <u>Project Plan</u> form indicating the names of the project team that will be assigned to the project and proposed scope milestone dates. This form must be forwarded to the DPM within three (3) days of the project being assigned.
- b. <u>In-House AEOR</u>: An e-mail notification is sent to the Design Lead and other in-house disciplines and team members assigned to the project. Subsequent to the kick-off meeting, a schedule delineating the draft and final scope submission dates is sent to the Design Lead and all others involved by the DM.

2. Authorization to Proceed (ATP) to Scope:

a. The Consultant AEOR shall receive an email notification that an ATP has been generated for the project.

3. Scope Schedule:

- a. <u>Consultant AEOR</u>: A <u>Scope Phase Log</u> shall be updated weekly by the Consultant AEOR as an attachment to their weekly progress report and emailed to the DPM to track the schedule of all the Consultant's projects in Phase 1. The timeliness of the submittal of the weekly progress report and updated log shall be used as a criterion for evaluating the Consultant's adherence to schedule on the Consultant Performance Evaluation.
- b. <u>In-House AEOR</u>: The assigned schedule is tracked and reviewed by the DM prior to the weekly studio progress meeting.

C. Establishing the Scope of Work

- 1. **Project Information:** The following project information shall be obtained from the SCA CIP database. The Consultant AEOR must obtain this information from the DPM.
 - a. Building ID, school address and other data



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- D#, LLW#(s) and selected Node(s) to identify the intended scope of work and the 'DOE Authorized Construction Estimate' for each LLW#
- c. Capital Category designation(s), Funding Source(s) and Program Categories correlating to the 5-Year Capital Plan
- d. The names of the assigned Senior Project Officer (SPO) and Project Officer (PO)
- e. List of current and past projects at the school building from the CIP Database, including descriptive project titles, Design Number (D#), Project (or Package) Number (P#) and Low Level Work Number(s) (LLW#). Obtain the year of "Actual Construction Completion" of each project from the "Schedule" section of the CIP Database.
- 2. **DOE/DSF Correspondence:** The DPM or DM shall provide the AEOR with a copy of any previous correspondence from DOE, DSF or others regarding issues related to the circumstances which may have initiated the project (such as a hazardous condition or deficiencies to be addressed).
- 3. **LLW# and Node Selection:** Projects are identified by Capital Plan Management with the selection of LLW Categories and 'Nodes' (components) within these categories.

CIP projects are typically generated from information gathered in the most recent Building Condition Assessment Survey (BCAS). Generally projects are created to address hazardous conditions or deficiencies of system components (nodes) with BCAS rating '5' (Poor). In many cases, one or more related components (nodes) with BCAS rating of '3' (Fair) or '4' (Between Fair and Poor) may also be selected. Selection of certain LLW's and nodes for evaluation does not, in itself, justify action. The actual existing conditions and deficiencies should be carefully evaluated by the AEOR to determine if, in their professional opinion, work is required to bring all elements into 'good repair'.

The Capital Plan intent is to provide the necessary amount of work required for the <u>listed</u> nodes to bring them to good repair, not to replace all components. The CIP project assignments are specific as to the components of work (nodes) to be addressed.

Cost effectiveness, maintainability and overall functionality are very important to the SCA and DOE. The AEOR must consider those factors and use good judgment in determining the scope of work. The Consultant AEOR should obtain prior approval from the SCA DPM or DM on the work to be performed. The In-House AEOR should obtain prior approval from the Discipline DM.

- 4. Scoping Guidelines: Scoping Guidelines are provided to clarify the intended scope of assigned CIP projects and provide direction on how to approach the investigation and scoping of the work for the DOE Referred Items as well as SCA Additional Recommended Items in Scope Reports. These guidelines are intended to supplement the requirements of the Scoping Process as generally outlined in this section of the CIP Project Manual. Scoping Guidelines include, but are not necessarily limited to those listed below, and may be accessed by clicking on the links below:
 - General Scoping Guidelines
 - Building Envelope Scoping Guidelines
 - o Building Envelope Scoping Guidelines
 - Exterior Masonry Scoping Guidelines
 - o Parapet Scoping Guidelines



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- Roofing Scoping Guidelines
- Window Scoping Guidelines
- Exterior Door Scoping Guidelines
- Flood Elimination Scoping Guideline
- HVAC Scoping Guidelines
- Electrical Scoping Guidelines
- Plumbing Scoping Guidelines
- Program Space and Program Type Scoping Guidelines
 - o Auditorium Upgrade Scoping Guidelines
 - Gymnasium Upgrade Scoping Guidelines
 - o Program Accessibility Scoping Guidelines
 - o Science Room Conversion / Upgrade Scoping Guidelines
- 5. **BCAS:** Use the <u>BCAS</u> report as a checklist for nodes and related components that may require attention and be included in the project either as 'referred' or 'additional' items.
- 6. **SHPO/Historic Building Status:** For buildings 45 years or older, the AEOR should check the SCA "SHPO Tracking" database and/or verify with the SCA DPM or DM if the building has been deemed "Eligible" or "Not Eligible" by the State Historic Preservation Office (SHPO) for listing on the State and National Register of Historic Places commonly referred to as "SHPO Eligible".

For Projects where SHPO eligibility has not been established, request direction from the DPM or DM if the project requires a Preliminary SHPO Submission to determine eligibility. Refer to SHPO Submission Procedures.

- 7. DOE Authorized Construction Estimate CIP Projects: LLW budgets are based on the dollar values that Capital Plan Management assigns to various components from the BCAS Survey and historical data. The LLW budget may not be an accurate estimate for the necessary scope of work based upon further investigation, and hence should not be used as a guide for the Scope Estimate.
- 8. Industrial and Environmental Hygiene (IEH) Services Request Forms: Submit IEH Survey & Design/Hazmat Requests thru the DPM or DM to IEH. Unless specifically cleared by IEH, submit IEH Survey & Design Requests to address potential impacts and costs associated with asbestos, PCBs, and lead-based paint (LBP). HazMat Requests should also be submitted if the scope of work requires any of the environmental services listed below:
 - Due diligence
 - Petroleum bulk storage or above/underground petroleum storage tanks/associated piping
 - Petroleum spill investigation/remediation
 - Petroleum contaminated soil/hazardous soil
 - Subslab depressurization system or soil vapor barriers (installed or planned)
 - Soil vapor barrier and waterproofing compatibility
 - DEC/DEP permit assistance
 - Biological/medical wastes (including pigeon guano investigation and remediation)
 - Excavated material disposal plan review/soil reuse
 - Science lab upgrades involving acid neutralization tanks and/or chemical relocation/disposal
 - Soil or water testing
 - Water disinfection
 - Dewatering assistance
 - MSDS review



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- Chemical storage/handling
- Acid neutralization tanks

D. Establishing the Scope of Work: Reso A Projects

RESO A Projects are projects funded each year by the City Council or the Borough President's Office. They are generally smaller in scope and budget than CIP projects. Typical Reso A projects include Playgrounds, Library Upgrades, Auditorium Upgrades, Science Lab Upgrades, Room Conversions, and Cafeteria/Auditorium Air Conditioning.

Steps in establishing the Scope of Work for Reso A projects are comparable to those described above for CIP projects with following additional considerations:

DOE Authorized Construction Estimate – Reso A Projects: The cost estimate for any Reso A
project cannot exceed the authorized construction amount since there is no allowance for any
contingency. Before the project is assigned to the Consultant AEOR, the DPM or DM will first
communicate directly with the School Principal to determine the Scope of Work and whether the
work is feasible within the allocated funds.

If the allocated funding appears to be sufficient for the referred work, a kick off meeting shall be arranged with the school. In the kick off meeting, the DPM/Project Lead shall identify any of the requested items which are not "Capital Eligible". A prioritized list of items requested by the school shall be included in the minutes of the meeting. It shall also be explained to the school that the extent of work which can be accomplished within the allocated funds will be determined after an estimate is developed.

If the allocated funding is grossly insufficient for the referred scope of work, (i.e. an \$80K allocation to provide air conditioning in an auditorium that normally is estimated at approx. \$600K), the DPM may recommend to the Principal that the school would be best served to utilize the funds for a different scope of work (i.e., furniture and equipment only) and advise the Principal to write a letter to the Council Member stating this intent. The letter should copy the DPM, DM, and SCA Reso A Coordinator.

If, during the scope process, the AEOR determines that the allocated funding is not sufficient, the AEOR must coordinate with the Principal to reduce the scope of work in order to stay within the budget. If this is not possible, the SCA will advise the Principal to write a letter to the Council Member to request additional funding. The letter should copy the DPM, DM, and SCA Reso A Coordinator. The AEOR shall not continue with the scope process until notified otherwise.

If the school requests a change to the scope of work, the DPM will advise the Principal to write a letter to the Council Member to request approval of a revised scope of work. The letter should copy the DPM, DM, and the SCA Reso A Coordinator. The AEOR shall not continue with the scope process until the new scope of work is authorized.

2. Scope of Work – Reso A Projects: Since the Reso A project descriptions are oftentimes vague and subject to interpretation, it is critical to obtain the principal's concurrence with the scope at the initial site visit and to document the proposed work in the meeting minutes utilizing the Project Information Documents Procedural Guideline. Certain projects may require sketches of the proposed work as described in the Scoping Guidelines. These minutes should itemize the scope of work and should be sent to the school immediately after the site visit. The minutes should solicit the Principal's written concurrence via signing the minutes and returning it to the AEOR; it should also note that a lack of a response constitutes concurrence. The meeting minutes of the initial site



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visit as well as sign-off by the Principal on a preliminary layout shall be included in the draft scope report. Preliminary layouts must be presented to the School during the Scoping Phase for sign-off by the Principal, subject to further SCA Review following the Draft Scope Submission for Quality Review and compliance with SCA Standards. Upon finalization of the layouts incorporating SCA comments from the Draft Scope Review, the AEOR shall obtain a final sign-off from the Principal for incorporation of the approved layout into the Final Scope Report.

- 3. **DOB/ECB Violations:** DOB/ECB Violations that are <u>related</u> to the project should be listed in the scope report "Open DOB/ECB Violations" Chart and should be addressed in the scope of work. If the scope to address the violations grossly exceeds the budget, the AEOR shall advise the SCA DPM or DM immediately.
- 4. Additional Items: No additional items should be included in a Reso A Scope Report.
- 5. Furniture and Equipment: The Construction Cost Estimate shall include the cost for furniture and equipment and this cost shall be itemized separately in the Scope Report cost summary sheet. The price list for these items will be provided by the SCA's F&E group through the DPM or DM. The DPM or DM will furnish F&E with a copy of the Draft Scope Report to initiate the request for the F&E price list.

E. Retrieve Background Data

- 1. **School Address and Contact Information:** The location of the school building, Principal names and telephone numbers are all contained on the <u>Master Contact Form.</u>
- Existing Drawings: Drawings for most schools can be obtained from the SCA Alchemy database, which contain drawings for most of the DOE's (School) buildings, including surveys, borings, and construction drawings for original construction, addition(s) and subsequent renovation projects. The Alchemy database is accessible at kiosks located within the A&E CADD Unit. (Refer to the CADD Manual on the SCA website).

In addition to Alchemy drawings, always contact the SCA CADD Unit for electronic copies of past projects drawings. If needed, specifications for past projects may also be available from the SCA's electronic project document files.

In absence of existing drawings for a subject school, study of "Sister Schools" drawings may also help to understand the building construction and issues related to that type of building. A list of Sister Schools can be obtained on the SCA in-house network re: sca_stds.

- **3. Five Year Capital Plan:** The AEOR shall check the Five Year Capital Plan (see DOE website) for future planned projects at the school to avoid redundancy of effort, overlapping scopes, and inappropriate sequencing of projects.
- 4. DOB and ECB Outstanding Violations: All outstanding Department of Building violations are to be obtained. The current DOB and ECB Violations are contained on the NYC DOB website. If information on any outstanding violation is not found on the NYC DOB website, the AEOR must contact DOB for a copy, since all outstanding violations must be addressed if determined to be relevant to the project.
- **5. BCAS**: The <u>BCAS</u> (Building Condition Assessment Survey) reports contain ratings of the condition of each building system based on a condition assessment survey that is mandated by the State of



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New York for every school building every five (5) years. The survey is currently being conducted annually. This survey should be reviewed prior to the initial site visit.

BCAS rating is based on a scale of 1 thru 5, where 1 is rated as a building component in good condition and 5 is rated as poor where the component needs to be replaced or it is a component that has outlived its life expectancy.

- SHPO/Historic Building Status: Refer to description above under "Establishing the Scope of Work".
- **7. Warranties:** Where system(s) or equipment appear to be relatively new, the AEOR shall research whether there are existing warranties for such items as roofing, windows, etc.

F. Scoping Phase Milestones:

1. Phase 1 Kickoff Meeting

- Preparation for Kick-Off Meeting/Initial Site Visit: Prior to the Phase 1 Kick-off Meeting/Initial
 Site Visit, the AEOR must retrieve and review the relevant background data and understand
 the intended scope of work to determine areas requiring examination in the site investigation.
- Temporary Identification Badges for Consultant AEOR Team Members: Upon award of the requirements contract or each time a new member is assigned to an SCA project, the AEOR shall obtain a temporary SCA identification badge for each member of the scoping team by filling out a Request for Temporary SCA Identification Badge Consultants and Contractors, obtaining the appropriate approvals from A&E, and taking it in person to the SCA Human Resources Department for a Photo ID to be created.
- Scheduling/Attendees: Schedule the Kick-Off Meeting/Initial Site Visit with the School Principal(s) and Custodian and coordinate with the DPM and Project Officer (PO). If a building houses multiple campuses and multiple Principals, consult with the DPM to determine if one or more of the Principals will serve as primary Principal contact(s). Once a date and time is established, forward meeting invitations and agenda via MS Outlook to all parties listed on the Master Contact Form. If the AEOR encounters difficulty in contacting the Principal(s) or other key contacts to schedule the meeting, the DPM should be alerted immediately so that any delay is avoided.
- <u>Meeting Agenda</u>: Prepare and distribute a meeting agenda for the Scope Kick-Off Meeting. Refer to PG 3.1.2, *Project Information Documents*, for the CIP Meeting Agenda format.
- Review Scope of Assigned Project: Review the scope of the assigned project and related prior and current projects at the School. The Custodian should be asked whether he or she is aware of any projects that may be current or planned by the DOE's Division of School Facilities (DSF) in order to avoid duplication of effort. If duplication does exist, the DPM shall contact the DSF and determine which entity should handle the proposed work. Due to the potential for projects being deferred or cancelled, SCA representatives including the AEOR should not convey any commitment as to the start and end of construction. The AEOR should also inform the school that the scope of work is limited to the work identified in the Capital Plan. As Reso A projects have a slightly different procedure, refer to the 'Establish Scope of Work: Reso A Projects' within this section.
- <u>Anticipated Normal School Hours</u>: Document anticipated normal school hours during the week, weekends, holidays, and during the summer obtained from the School Principal(s).



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- School Population, Grade Levels Served & Number of Classrooms: Confirm the total current number of students and staff, and the grade levels served. Based upon input by the School Principal(s), note if any changes in school population or grade levels served are anticipated in the future. Also, confirm the total number of classrooms in the building. (This is especially important if classrooms will be affected during the project construction and construction phasing is required).
- <u>Construction Issues</u>: The Project Officer will initiate a discussion with the Principal(s) regarding construction issues such as phasing and swing space. In consultation with the PO, the AEOR shall establish preliminary construction duration and include in the scope report. The AEOR should consult the PO and check the status of all projects at that school that are currently in design or construction and any planned projects to determine potential project phasing issues.
- Meeting Minutes: The AEOR shall take minutes of the meeting to record the general scope of work and discussions related to prior and current projects at the School and phasing issues, if any. Refer to PG 3.1.2, Project Information Documents, for the CIP Meeting Agenda format. The draft minutes shall be forwarded to the DPM and the Design Manager no later than one week after the meeting. The minutes should have a broad outline of the items that will be addressed in the scope report. Once approved by the DPM or DM, the final minutes shall be sent to all the meeting attendees and shall include the DPM, Design Manager, PO, SPO, Principal(s), Custodian, and all other persons listed in the current Project Directory from the Master Contact Form. Include these and other meeting minutes in the Appendix of the scope report.
- <u>Scheduling of Initial Site Visit</u>: Typically, an Initial Site Visit shall immediately follow the Phase I Kick-off Meeting.

2. Initial Site Visit

- Scoping of CIP Projects: For CIP projects, the scope of work is identified by the LLW category and selected "Nodes" and supplemented by other documentation listed above. For projects intended to address building deficiencies and bring the building into "good repair", it is essential to be familiar with the latest BCAS report and use it as a check list of building components to review, assess existing conditions and recommend repair or replacement. Also, copies of the original building plans, elevations and other relevant drawings must be brought to the site for annotation of existing conditions. Refer to "Establishing the Scope of Work" within this section.
- <u>Photo Documentation</u>: Document existing conditions with color photographs to illustrate the 'findings' related to building deficiencies or other items requiring work to accomplish the project. These photographs must be captioned and included in the scope report. The scope report narrative should reference the numbered photos to substantiate the findings.
- Scope Drawings: Prepare "Existing Condition" or "Damage Mapping" drawings which record the location(s) and extent of deficiencies observed on annotated plans, elevations and other drawings as appropriate. Where water infiltration and interior damage is involved, prepare annotated plans and elevations to indicate the location(s) of observed and reported leaks and interior damage to be addressed as part of the project. Also, prepare corresponding drawings



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which graphically describe "Recommended Work". Include both "Existing Condition" drawings and "Recommended Work" drawings in the "Scope Drawings" Appendix section.

- <u>Hazardous Conditions</u>: If the AEOR observes any <u>unsafe or potentially hazardous conditions requiring immediate attention</u> during any site visit to the school, the AEOR must notify the DPM, the DM, the PO, SPO and the CPO immediately so that immediate action can be taken, i.e., sidewalk bridging or other measures to stabilize the conditions to eliminate the hazard. The AEOR should then follow up with a field report documenting the immediate hazard and recommendations for correcting the unsafe condition.
- Environmental Conditions: If the AEOR identifies any environmental conditions that may require a service listed in C.8 above, submit a <u>Hazmat Request</u> thru the DPM or DM to inform the IEH Hazmat Unit and request a site visit be scheduled to review conditions with the AEOR at the earliest possible time during the scope phase. If the IEH HazMat representative confirms the need for a particular service based on the scope of work following his/her initial site visit, the HazMat representative will develop a recommended scope of work and cost estimate for environmental work to be included in the Scope Report.
- 3. Preliminary SHPO Submission If the building is more than 45 years old, the AEOR must check the SCA Historical database to determine if a Preliminary SHPO Submission had previously been submitted for the school. If records indicate SHPO has already designated the school building as "Eligible" for listing on the State and National Register of Historic places, then no further submittals are required until the Design Phase. If records indicate that SHPO has already determined the building to be "Ineligible" or "Not Eligible" for listing, no further action is required. If no previous Preliminary SHPO Submission has been made, then the AEOR must request direction from the DPM or DM if a Preliminary SHPO Submittal is required for the project. For Consultant AEOR's, the DPM or DM will confirm if a previous SHPO Submittal was done.
 - If required, the AEOR shall prepare and submit a Preliminary SHPO Submittal and forward to
 the DPM or DM no later than five (5) calendar days after the first meeting with school
 personnel and the Authority's representatives or the Scope Kick-Off Meeting, whichever is
 sooner. Refer to <u>SHPO Submittal Procedures</u> in the CIP Exhibits section of the website for
 Preliminary SHPO Submission requirements.
 - If a building has already been determined to be "SHPO Eligible" or is found to be "SHPO Eligible" following submission of a Preliminary SHPO Submission, the scope report shall note this and all recommendations shall conform to SHPO guidelines. A Detailed SHPO Submittal may be required during the Design Phase. Refer to SHPO Submittal Procedures for a description of when Detailed SHPO Submissions are required. Consult with the SCA SHPO Liaison for confirmation of requirements.
- 4. Field Report Within two (2) weeks following the Initial Kick-Off, the Consultant AEOR shall submit a Field Report identifying the proposed scope of work of DOE-Referred and SCA Additional Recommended Items to the DPM/DM for review and approval of items to be scoped. Indicate if any environmental conditions may exist which require the involvement of the IEH HazMat Unit. (See C.8 for a list of possible services). Any requested NDT, probes or other tests, surveys, etc. should also be identified. Sketches/plans showing all destructive testing for probes or roof cuts should be submitted with the Field Report submittal. All probe requests must indicate the depth & size. See item G.2 below for applicable TSS & IEH required services. Prior to proceeding with scoping of additional items, the Consultant AEOR must obtain approval by the DPM/DM.



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- 5. Draft Scope Report Submit copies of the Draft Scope Report with a Preliminary Scope Estimate to the DPM or DM for review. Submit two (copies) of the Draft Scope Report thru the DPM or DM with an IEH Survey & Design Unit in order to begin the LBP, Asbestos & PCB (LAP) Survey. Sketches/plans showing all destructive testing for probes or roof cuts should also be submitted with, or prior to the Draft Scope Report submittal See item G.2. below. All probe requests must indicate the depth and size.
- **6. SCA Review/QC Meeting** To occur 1 to 2 weeks after receipt of Draft Scope if, at the determination of the DPM or DM, there are comments or concerns requiring resolution. Refer to the SCA Procedural Guidelines for additional information on the <u>Constructability Review Process</u> and Quality Review Process.

7. Revised/Final Scope Report

- a. Incorporate all finalized review comments from the Draft Scope Report. If requested by the DPM or DM, attend meeting(s) with reviewers to discuss comments and responses.
- b. With the approval of the DPM or DM, provide a preliminary schedule for Design, Bidding & Award, and Construction phases. If possible, get input from the Project Officer on the preliminary 'Construction Schedule' as well as 'Phasing Issues'.
- c. The consultant AEOR shall submit a letter signed by the firm's Partner in Charge to attest that the scope report has been reviewed in accordance with their Quality Assurance Protocol and that the SCA review comments have been incorporated (Refer to <u>CIP Phase 1</u> Sample Certification Letters).
- d. Submit hard copies and electronic copies of the Final Scope Report as requested by the DPM or DM. Upon approval of the Final Scope Report, Authorization to Proceed to Design (Phase 2) must be received prior to commencing work in the Design Phase.
- e. Submit two (2) copies of the Final Scope Report thru the DPM or DM to the IEH Survey & Design Unit with an updated <u>IEH Survey & Design Request</u> in order to begin, or continue (if already submitted at Draft Scope) to finalize the LBP, Asbestos & PCB (LAP) Survey.

G. Investigation and Development of Findings & Recommendations

- 1. **Investigation & Documentation of Findings:** Perform investigations including site visits to perform visual inspections as appropriate to the scope of work. Arrange for the use of lifts and booms if appropriate. Document findings using photography and annotated drawings.
- 2. Specialty Testing: Early in the Scoping Phase and as soon as possible following the Kick-Off Meeting and Initial Site Visit, identify surveys, borings, tests and probes that will be required to confirm conditions and assist in determining findings. Although the schedule may not permit the performance of all investigative testing during this phase, requests for investigative work should be initiated during Phase 1 so that the work can be performed at the onset of Phase 2. If probes, tests, or borings are necessary in order to develop recommendations, the AEOR shall notify the DPM or DM immediately and a revised schedule should be proposed. The IEH Survey & Design Unit must be notified to perform an asbestos survey prior to conducting the investigative testing. All probe requests must indicate the depth & size.

For probes, tests, and borings, submit work order requests thru the DPM or DM to the Specialty Testing Unit (STU). If the SCA contractors are not available, solicit proposals from at least three



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SCA pre-qualified contractors for any investigative probes and borings which are required. The probe package, which should include the locations, number of probes, and the contractor's name, shall be submitted for review and approval by the DPM. Once bids are received, the DPM or DM will provide an authorization letter to proceed with the lowest responsive bidder. For borings, prepare boring plans and TR1's for filing with BCC. Prior to the commencement of any destructive testing or borings, notify the PO, the Principal, the Custodian and the DPM or DM.

If a roof is found defective, first check to determine if the roof is under warranty thru the DPM. If it is, it will need to be decided if the manufacturer can address the defects or the source of infiltration requires the roof to be replaced. Schedule roof cuts if necessary through the DPM by filling out a <u>STU Service Request Form</u>. A roof plan indicating the areas to be tested shall be included. The IEH Asbestos Subconsultant will be notified by the Roof Testing Consultant (as assigned by TSS) of the date the roof cut(s) will be performed. The AEOR will be notified of the schedule in order to attend, if needed. The AEOR shall review the report prepared by the SCA Roof Testing Consultant to ascertain that the report sufficiently documents the requested data. The Roof Testing Consultant shall also take design cuts if specified on the STU Service Request.

If a utility line is damaged during subsurface investigations, the SPO must be notified immediately so that an Emergency Contractor can be dispatched.

- 3. Layouts: Layouts for projects that involve wall and ceiling modifications and/or furniture and equipment such as Science Labs, Library Upgrades, Room Conversions, and Playgrounds must be included in the Scope Report. Preliminary layouts must be presented to the DPM or DM for SCA review prior to presenting to the School Principal or other School Representatives. Following SCA review and approval, the AEOR shall present the preliminary layouts to the School during the Scoping Phase for sign-off by the Principal which will entail initialing the layouts. The signed layouts shall be scanned and placed in the SCA's electronic project folder.
- 4. **Furniture and Equipment:** Draft Scope Reports for projects that require furniture and equipment should be forwarded to the DPM or DM to forward to SCA F&E Unit for review and pricing.
- 5. "DOE Referred" Items: Include only work related to the referred LLW and selected nodes in the "DOE-Referred Items". The AEOR shall also evaluate the extent of originally assigned scope items and include related work needed in order to accomplish the originally stated project intent (i.e. roof strip replacement as needed to accomplish parapet replacement work in conjunction with a "parapet" project). If the originally assigned scope items are observed to be in good condition and work is not necessary to bring items into good repair, notify the DPM or DM prior to further scoping.
- 6. Additional Recommended Items: Additional Recommended Items are those components in other LLW categories or nodes within the referred LLW category that are not included as a selected node or related to any selected node, but are items of work the AEOR deems as critical to be addressed. "SCA Additional Recommended Items" typically fall under one of the three following categories:
 - Components in other LLW Categories or components not included as "selected nodes" in the DOE-Referred LLW Category that are not related to the selected node(s).
 - Exterior Building Envelope components that are not part of the referred LLW category but should be scoped in accordance with the Building Envelope Scoping Guidelines.



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 The permanent remediation of any hazardous condition that is observed during the scope site visit(s) that are not related to the referred items. See "Initial Site Visit" section for the immediate remediation of hazardous conditions.

The inclusion of items of work as additional items should be submitted in the Field Report and discussed and approved by the DPM and DM prior to the submittal of the Draft Scope Report. If the DPM and DM concur that the added scope items are justifiable, then those items are to be included in the Draft Scope Report. The Draft Scope Report is then submitted to the DPM or DM, who will then prepare the Added Scope Item Justification form. This package will then be presented to Capital Plan Management by the DPM and DM for approval. If Capital Plan Management approves the Additional Item(s), these items shall be incorporated into the Final Scope Report as "DOE-Referred Items".

H. Scope Report: Step-by-Step Instructions

<u>Scope Report Template</u>: Utilize the most current <u>Scope Report Template</u> found on the SCA website.

Scope Report Organization:

- 1. Report Sections A through G: Maintain the standard format, headings and organization of Report Sections per the Scope Report Template. Start a new page at the beginning of each report section.
- 2. Section G Appendix: Organize and number the Appendix sections for ease of referencing. Include labeled tabs and cover sheets to identify each Appendix Section. The order of Appendix Sections must follow that shown on the Scope Report Template.

Scope Report Cover:

- 1. Report Prepared by: Insert the name of the SCA Consultant Firm or SCA A&E In-House Studio.
- 2. <u>Completion Date</u>: Provide month and year only of Final Scope Report completion/turn-over below the SCA Design Manager Name in Month/Year format.
- 3. <u>Latest Revision Date</u>: Provide month, day and year of latest revisions in numerical Month/Day/Year format (MM/DD/YYYY) in the footer. If the Scope Report is revised after the turn-over date, retain the 'Completion Date' above and indicate the 'latest revision date' here unless otherwise directed by the DPM/DM.

<u>Table of Contents</u>: Refer to comments above. Appendix Sections shall be numbered as per the format for ease of referencing. <u>Include labeled tabs and cover sheets to identify each Appendix Section.</u>

A. Project Information

A.1 Project Data

- 1. <u>LLW#, LLW Description, Funding Source & Capital Category</u>: Refer to the CIP Printout for information and insert in the Template.
- 2. Filing Reg'd: Indicate if permit filing is required for each LLW Category item (Y-N).
- 3. School Address: Include complete address, including zip code
- 4. Priority: Refer to the CIP Printout for information and insert in the Template.
- 5. Inspection Date(s): Include the date of the Kick-off meeting and subsequent site visits.
- 6. <u>Person(s) Performing Site Inspection(s):</u> List names and firms of persons attending site inspections, including SCA personnel.



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- 7. <u>SCA Sr. Project Officer and Project Officer:</u> Refer to CIP Printout for assignments. Confirm names with DPM.
- 8. SCA Design Manager and Design Project Manager: Confirm names with DPM.
- 9. <u>Scope Reviewers</u>: Add names of SCA Reviewers, followed by discipline (in brackets) for Structural, Architectural, HVAC, Plumbing, Fire Protection, Electrical and other disciplines as appropriate in the Final Scope Report.

A.2 Schedule

A.2.a. Design (including filing and review)

- 1. Below the estimated duration of the Design Phase, include a brief narrative identifying required Regulatory Agency and Utility filings and approvals (such as SHPO, BCC, IEH, DEP, DOT, Fire Dept, etc.) during the Design Phase.
- 2. Also in the narrative, identify other tasks to be accomplished within the Design Phase, including, but not limited to: design reviews, additional investigation (such as obtaining additional cores and/or probes), IEH investigation & documentation, Regulatory Agency reviews, and other activities appropriate to the project.

A2.b. Bidding & Award (from turnover to Contractor Award and NTP)

1. For the 'Bidding & Award' duration, assume three (3) months unless otherwise directed by the DPM/DM.

A2.c Construction (from Contractor Notice to Proceed to Substantial Completion)

1. Below the estimated duration for the Construction Phase, include a brief narrative description of anticipated timeframe from Contractor NTP to Substantial Completion. Refer to the Phasing description under A.3 (see below) and identify key items which could affect the estimated construction duration.

A.3 Phasing Issues

- 1. Unless otherwise directed, <u>all</u> construction work for CIP projects is completed after normal school hours. Include initial assumptions regarding normal Contractor working hours while school is in session, as well as the summer as a basis to determine approximate construction duration and cost estimate, since these assumptions will affect the calculation of General Condition costs and escalation. (In the Kick-off Meeting, document anticipated normal school hours during the week, weekends, holidays, and during the summer obtained from the School Principal). Include Phasing assumptions in the DRAFT Scope Report for review and confirmation by the PO and others at SCA and finalize assumptions in the Final Scope Report.
- 2. Also, include a brief statement regarding construction phasing issues, including requirements for abatement of asbestos containing materials and other hazardous materials, sidewalk bridging, scaffolding, and other temporary protection, as well as temporary facilities, staging areas, storage, security, etc. Identify if the work may require disruption of existing school operations (loss of use of classrooms, gymnasium, auditorium or other spaces for periods of time) to perform the work, which must be coordinated with school personnel. Also, identify any potential impacts of other planned or future projects currently in design or construction and any future planned projects.

A.4 Licensing Agreements with Adjoining Property Owners: Respond to questions regarding Licensing Agreements with Adjoining Property Owners. All projects which include exterior building work and/or site work may require Licensing Agreements with adjoining property owners. If the project scope includes exterior building work or site work, answer "Y" to question 4a.

A.5 SHPO Eligibility: Respond to questions regarding SHPO Eligibility.

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A.6 Public Art: Respond to question regarding Public Art in the area(s) affected by the Project.

B. Cost Summary of Recommendations

- 1. Format cost numbers using \$ symbol, <u>rounded to the nearest dollar</u>, with commas separating millions and thousands (i.e. \$2,468,946).
- 2. Cost Summary of Recommendations should match line by line with submitted Scope Estimate.
- 3. Refer to Estimating Procedures in the CIP Exhibits section of the website.

C. Prioritization Form

1. Provide separate line items for each selected Node or component ('Node'=numbered 'component' as listed in BCAS) under the corresponding LLW Categories. An example is provided below:

Flood Elimination:

- Node #70063 ARCH.INTERIOR.Structural.Foundation Walls
- Node #70299 MECH.DRAIN/WASTE/VENT AND STORM SYSTEM.Sump Pump Exterior Masonry:
- Node #70013 ARCH.EXTERIOR.Exterior Walls
- Node #70015 ARCH.EXTERIOR.Louver
- Node #70029 ARCH.EXTERIOR.Stairs/Ramps

Parapets:

Node #70016 ARCH.EXTERIOR.Parapets

Windows:

- Node #70033 ARCH.EXTERIOR.Windows
- 2. On the Prioritization Form, also include line items for the components in each "SCA Additional Recommended Item". Include only components for which work is recommended.
- 3. Refer to the most current BCAS report and note the latest BCAS ratings for each node or component. (Note: LLW categories do not have BCAS ratings, only components under these categories). If no applicable BCAS rating, indicate "N/A".
- 4. For line items where a "Potentially Hazardous Condition", "Critical Life Safety Issue" or "Other Critical Condition" are referenced, clearly describe the specific hazard and/or life safety issue and indicate what can be done to stabilize these conditions in the 'Comments' column to avoid danger to building occupants prior to construction start. Immediately notify the DPM and DM in writing of any hazardous or life safety issues observed to determine if emergency measures are required (i.e. adding a sidewalk bridge, shoring, etc).
- 5. For columns headed with 'Has it been stabilized?' or 'Criticality Level', if 'N' in the first column, note 'NA' under these.
- 6. At the top of the page, respond to questions regarding sidewalk bridges, whether the proposed CIP project involves Work on school buildings or additions completed less than 10 years ago, or if areas or components being addressed were the subject of Capital Projects completed less than 5 years ago.
- 7. At the bottom of the form, after 'Form completed by', provide the <u>name of the individual</u>, <u>followed by the firm name</u>. The form must be reviewed and approved by the SCA DM. Insert the name of the SCA DM and the date on which the form was approved.

D. Outstanding Violations

1. Be sure to include <u>all</u> current outstanding DOB and ECB violations, including open items not related to the 'referred' or 'additional' items.



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- 2. Include the Violation Number(s) and Description(s) in the first column labeled "Violation No. / Description".
- 3. Use codes A, B, C, or D for Open Violations <u>not in the proposed Scope</u> and add 'X' in the second column for any of the Violations which are addressed in the Referred Item(s). For codes A and B, indicate the Design Number(s) for the <u>other</u> projects which have addressed or will be addressed with the referenced Violations. <u>Do not</u> indicate A, B, C, or D <u>if this project</u> alone will address the violation.
- 4. If any Violations are addressed in proposed 'SCA Additional Recommended Items', indicate code 'D' and include a note in the 'Comment(s)' column.

E. Building History

- 1. <u>Purpose</u>: The Building History should contain a brief narrative of the building's history based upon data obtained from research of the Alchemy files, the CIP Database, and other sources. It should also mention recent and current projects at the building.
- 2. <u>Introduction (General)</u>: Provide an introduction which includes the school name and facility code, list of school organizations housed in the building, student and staff population, year of original construction completion and year of completion of any additions.
- 3. <u>School Population and Grade Levels</u>: In the Introduction, include the total current number of students and staff, and the grade levels served. Based upon input by the School Principal, note if any changes in school population or grade levels served are anticipated in the future.
- 4. <u>Architect(s)</u>: In the Introduction, include the name of the Architect of the original building and subsequent additions if known.
- Description of Existing Building: Include a brief, but comprehensive description of the existing building (including number of floors, Gross Building Area, accessibility, list of public assembly spaces and locations, number of classrooms, building structure (typical framing, floor and roof construction), exterior wall, window/glazing systems, roofing, etc.)
- 6. <u>Description of Site</u>: Include a brief, but comprehensive description of the building site (including key site features, surrounding streets, site accessibility, site utilization, landscaping, and site paving).
- 7. Reference to Drawings in Building & Site Description: In conjunction with the above-referenced descriptions, include references in the text to 1) an annotated existing site plan; 2) existing floor plans; and 3) existing exterior elevations which may be reviewed along with the description. The existing site plan should indicate existing site utilization, location of entrances, and other key site features. Include the above drawings in the 'Scope Drawings' or 'Reference Drawings' sections of the Appendix.
- 8. <u>Total Number of Classrooms</u>: In the Building Description, include the total number of classrooms in the building. (This is especially important if classrooms will be affected during the project construction and construction phasing is required.)
- 9. <u>List of Previous and Future Projects</u>: Include a list of previous and in-progress or planned projects in tabular format organized by the year construction was completed (year of "actual construction completion from the CIP database). Include Descriptive Project Title, Design Number (D#) and Low Level Work Number(s) (LLW#), if available, from SCA CIP Database or Alchemy. Include information from the CIP Database, Alchemy and other sources. In the list of previous projects, include the date (year) of project documents, as well as date (year) of "actual construction completion" from the CIP database. Refer to 'Establishing the Scope of Work: CIP Projects' and 'Retrieve Background Information' earlier in this section.
- 10. Future Projects in Five Year Capital Plan: Check the Five Year Capital Plan (see DOE Website) and SCA's CIP Database for future planned projects at the school. Indicate all known future projects. If none are identified, please include a sentence below the list of projects stating: "No other projects at this school are scheduled in the DOE Five Year Capital Plan FY(Years; start-finish)." If other projects are scheduled, consult with the DPM to investigate the status of the other projects to determine if there may be coordination of work required.

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F. Findings and Recommendations

- 1. <u>General</u>: Each LLW Category should have a "Findings and Recommendation" section. All findings should be numbered in outline format and have a one to one correlation with the recommendations. This is intended to clearly identify the deficiencies in the 'Finding' section and the resulting 'Recommendation'. Items referred to in the 'Recommendations' should include statements in the 'Findings' that correspond with the appropriate description of the existing condition or deficiency which 'justifies' the Recommendation. Include alternative approaches explored (if any) and indicate the recommended option.
- 2. <u>Organization</u>: Organize 'Findings and Recommendations' by <u>LLW Categories and Node subcategories</u>, starting with the 'DOE Referred Items' and followed by any 'Reso A' and 'SCA Additional Recommendations'. If one or more of the categories are not applicable, indicate "N/A" in the space provided.
- 3. <u>Break-down of Larger Categories of Work</u>: Some LLW Categories cover a very large amount of work. It is recommended that the 'Findings & Recommendations' be broken into smaller subsections as appropriate. When there are several 'Nodes' for a single LLW#, consider breakdown of the work by individual 'Nodes' or other building components. LLW's and/or 'Nodes' may also be further sub-divided by discipline (i.e. Architectural, Structural, HVAC, Electrical, etc.). Exterior masonry, for example, may include multiple facades; so it may be appropriate to give each its own subsection. The reader should not be required to read many pages of findings before getting to the recommendations. Refer to DPM/DM for good examples of Findings and Recommendations meeting SCA requirements. Some of the Scoping Guidelines also contain examples.
- 4. <u>Cause of Deficiencies</u>: The 'Findings' should include the description of the deficiencies and what, in the AEOR's professional opinion, is judged to be the cause. Summarize the findings of any probes and/or tests performed to confirm conditions and cause(s) of defects. In the Scope Report, note if probes or testing are planned, but not yet completed. If applicable, describe the probes and/or testing to be performed with estimated completion date(s).
- 5. <u>Collateral Damage</u>: Repair of collateral damage related to the referred items shall also be included in the scope of work as part of the Work. If interior damage has been caused by water infiltration due to roof or wall deficiencies, for example, include the interior repairs with the repair of roof or wall deficiencies.
- 6. <u>Photo Documentation of Findings</u>: In the numbered pictures referred to in the 'Findings', add photo 'close-ups' as necessary to allow a view of the cited deficiencies. Include reference to photos in bold text in the findings, such as **(Photo #1)** or **(Photo #2)**.
- 7. Record the locations and extent of deficiencies and proposed work on sketches of plans and building elevations and include in the Appendix of the Scope Report.
- 8. <u>References to 'Scope' and 'Reference' Drawings</u>: Add references to specific Appendix Sections and sketch numbers where the above-noted 'Scope Drawings' or 'Reference Drawings' can be found.
- 9. Exterior Building Envelope Projects: If an Exterior Building Envelope project, scope all exterior components, using the BCAS report as a checklist of items. Be sure to address all deficiencies noted in the BCAS report, as well as documented findings from the AEOR's site investigation. Refer to the Building Envelope Scoping Guidelines for further guidance.
- 10. <u>Confirmation of Existing Conditions</u>: The AEOR, as part of their independent investigation, must confirm actual existing conditions. The AEOR should not rely upon the condition descriptions in the BCAS report or items identified by school personnel, without further investigation and assessment. Include findings based upon the AEOR's independent investigation and assessment based upon site inspection and confirmed reports from the Custodian, Principal, or other school representatives.



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- 11. Quantification of Recommendations: 'Recommendations' should <u>include quantification</u> of the repair/replacement for the proposed scope. Refer to Scope Drawings to clarify location and quantities as appropriate. The quantities should match those in the Scope Estimate. Quantities in recommendations shall be in bold text in parentheses with units, such as (350 SF) or (110 LF).
- 12. Additional Surveys, Borings, Tests, Probes or Roof Cuts: Identify if additional surveys, borings, tests, probes, or roof cuts will be required. Notify the Design Project Manager (DPM) or Design Manager (DM) if any of these items are necessary in order to develop the final recommendations.
- 13. <u>SCA Additional Recommended Items</u>: Consult with DPM or DM to determine whether items should be included as 'SCA Additional Recommendations' or addressed in a future project, as maintenance items, etc.

G. Appendix

General

- 1. See comment under Table of Contents above for Appendix Organization.
- 2. Appendix Sections shall be numbered for ease of referencing. Retain the organization and numbering of the Appendix Sections from the latest Scope Report Template.
- 3. Provide tabs and cover sheets (including Appendix number and descriptive title) before each Appendix Section.

Photos

- 1. Photos should all be numbered, captioned and ordered according to the Findings. Key Plans should be provided showing the location and orientation of each photo. Include general views of the building and detailed photos of the deficiencies noted for referred and additional items.
- 2. Document existing conditions by <u>captioned</u> color photos to substantiate the findings. Number all photographs and label with <u>descriptive titles referring to the location and deficiencies being</u> shown below each photograph related to specific findings.
- 3. Photos should be referenced in the location in the text of the Findings where words describe the condition that the picture shows. The Photos should therefore follow in the order of the text. (For example, Finding #1 may reference Photos #1, 2, 3, and 4. Finding #2 may reference Photos #5-10.)
- 4. The photos should be numbered in sequential order. Do not start numbering over for each LLW. There should not be more than one of each number used for photos.
- 5. Provide pictures that clearly illustrate the specific deficiencies noted to clearly 'justify' action. Provide <u>more</u>, rather than <u>less</u> photographs to support the recommendations. If a building element is deteriorated, it must be seen in the photo. Take a close–up or retake the photo from a different angle if needed. Include close-up views as required to clearly show the deficiencies.
- 6. Generally, do not put more than two photographs on one page for added visibility.
- 7. Provide separate 11" x 17" Key Plans (Site Plan, Floor Plans and/or Elevations as appropriate) at the beginning of the "Photos" Section to show location and orientation of each photo. Alternatively, indicate photo locations on the "Existing Condition" Scope Drawings and refer to these drawings on the cover sheet of the "Photos" Section.

Scope Drawings

 Record the locations and extent of deficiencies and proposed work on drawings included in the Appendix of the Scope Report. In the Findings & Recommendations, add references to the specific Appendix Sections and sketch numbers where the above-noted 'Scope Drawings' can be found.



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- 2. Provide drawings which help the reader to understand the findings & recommendations. Floor plans are a minimum requirement. Provide Building Elevations, Site Plan(s), Sections, Details and other drawings as appropriate. Put notes on drawings to explain the findings and recommendations. Legible and clear hand-written notes on existing drawings are acceptable.
- 3. In the Scope Drawings Appendix, provide "Existing Condition" or "Damage Mapping" drawings that record the location(s) and extent of deficiencies observed on annotated plans, elevations and other drawings as appropriate. Also prepare corresponding "Recommended Work" drawings which graphically describe the recommendations.
- 4. For Building Envelope Projects, provide an annotated set of "Existing Condition" floor plans and/or ceiling plans indicating the location(s) of observed and reported leaks and areas of interior damage. Provide interior elevations if needed for clarity.
- 5. Include a list of "Scope Drawings" on the cover sheet of the Appendix Section.

Reference Drawings

- Include drawings from Alchemy that contain general information about the school and those
 pertinent to the components and systems discussed in the Scope Report. Always include an
 Overall Site Plan and Floor Plans. Provide a copy of drawings showing Exterior Building
 Elevations, Sections and/or Details as appropriate to the scope of work. The Overall Site Plan
 should be referenced in the Building History in the description of the site and its amenities.
 Plans, Elevations, and Sections should be referenced in the Building History in the description
 of the Building.
- 2. Include a copy of selected drawings from the original Construction Documents and subsequent renovations which may be relevant to the project.
- 3. Include a list of "Reference Drawings" on the cover sheet of the Appendix Section. In the List of Reference Drawings, indicate the project name or description of the document set and LLW descriptions (including D#, LLW#'s and year documents were completed), followed by the name and title of individual drawings included. For ease of referencing, add sequential "R" numbers (R001, R002, etc.) for all Reference Drawings included in the Appendix.

Test Reports

- Include a copy of test reports documenting the detailed investigation and testing performed to develop the findings and recommendations for the proposed project. Reports may include, but are not limited to, documentation of exploratory probe findings, Non-Destructive Testing (NDT), material testing, roof cuts, borings, geotechnical reports, balancing reports, and others as appropriate to the scope of work.
- 2. The Findings and Recommendations in Section F of the Scope Report shall summarize and be coordinated with the Findings and Recommendations found in the Test Report(s). In the body of the Findings and Recommendations, include references to specific Test Report(s) in the Appendix for additional detailed information.

Outstanding Violations Printouts

- 1. Include a copy of the "Property Profile Overview" page from the DOB website in the Appendix section "Outstanding Violations Printouts" following the cover page as the first page of this section.
- Include print-outs of outstanding (open) DOB and ECB Violations from the DOB website. Do not include lists of resolved or closed items.
- 3. Confirm that all open DOB and ECB Violations are noted and included in the Summary of 'Outstanding Violations' in the body of the report (Section D).

Applicable BCAS Report Pages

1. Include the "Asset Data" pages (first 2-3 pages) and applicable portions of the BCAS Report relevant to the 'Referred' and 'Additional' Recommendations in the Appendix. For Exterior



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- Building Envelope projects, include all pages related to exterior components, including Foundation Walls, Vaults-Bunkers and other below-grade elements.
- 2. Annotate a copy of the BCAS Report with note(s) and/or arrow(s) or other markings to identify specific deficiencies_relevant to the findings for 'Referred' and 'Additional' items. Confirm that all portions of the BCAS Report relevant to the 'Referred' and 'Additional' Recommendations are included in this Appendix section.

Meeting Minutes & Correspondence

- 1. Include copies of all meeting minutes of all meetings that occurred during the scope phase.
- Include copies of correspondence on the project relevant to the preparation of the report.
 Specifically include any DSF or DOE correspondence related to conditions identified in referring the project to the SCA for action.

Scope Estimate

A preliminary construction cost estimate shall be included in the Scope Report. See <u>Estimating</u> <u>Guideline</u>s in the CIP Exhibits section of the website.

The cost estimate shall be broken down by LLW items and shall follow exactly the sequence of LLW's on the cover page and in the 'findings and recommendations' of the scope report. All the Items and quantities should also match line by line with the Recommendations. Provide the scope estimates per LLW# and total on the "Cost Summary of Recommendations" section of the scope report.

The Scope Estimate shall include a detailed breakdown of each item with quantities, unit prices and totals.

General Conditions, Overhead and Profit shall be included in each unit price.

Provide costs for options if appropriate.

Provide Design Contingency, Escalation, and Phasing for each LLW#. Phasing costs shall include the premium for labor due to after hours work (5% for projects under the Project Labor Agreement (PLA) and 50% for those that are not subject to the PLA), Custodial Fees, Site Security, and any other phasing considerations.

Asbestos/ Hazardous Materials: Provide costs for abatement of Asbestos, Lead-Based Paint (LBP), PCB and other hazardous materials based on review of existing surveys and walk-thru of the facility. If surveys are not available, provide an allowance assuming materials likely to contain hazardous materials. A 10% allowance shall be allocated for abatement in Phase 1 until testing can be performed during Phase 2. Projects with substantial demolition will require a higher percentage allowance. Discuss with the DPM if this will cause the budget to be exceeded.

<u>Cost Estimate/Scope Report Distribution</u>: At no time should any cost estimate information be forwarded to the Principal or any other entity outside of the SCA. Only edited versions of the Scope Report deleting references to cost and schedules shall be provided <u>by the DPM or DM and only</u> upon request. Reso A projects tend to be especially sensitive in nature due to greater involvement by the school community and local politicians. The AEOR shall alert the DPM immediately if there are any potential problems anticipated during the scope development phase, so that the SCA's Reso A Coordinator can be notified to take proper action.



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I. Updating of Scope Reports

The approved Scope Report shall be used as a basis of work to be implemented during the Design Phase. Proposed deviations during the Design Phase must be submitted in writing and submitted to the DPM/DM for approval. Amendment of the Scope Report is strongly recommended to reflect any adjustments to scope approved during design or construction.

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SECTION III - DESIGN & BIDDING PROCESS - PHASE 2

A. Overview

The Design Process (Phase 2) should result in a complete set of construction/contract documents for the Bid and Award Process. The AEOR shall have checked the documents for constructability, coordination and conformance to SCA standards and all regulatory agency requirements. This phase also includes bid and award of the project.

B. Project Assignment

1. Notification of Project Assignment:

- a. <u>Consultant AEOR</u>: An e-mail notification by the Design Project Manager (DPM) is addressed to the Consultant Project Manager and/or Partner-in-Charge. The notification shall indicate the due date for the submission of the final contract documents. If for any reason the Consultant cannot meet the designated due date, the Consultant shall notify the DPM immediately so that a new schedule can be discussed. The Consultant shall complete or update the <u>Project Plan</u> form indicating the names of the project team that will be assigned to the project and the design milestone dates. This form must be forwarded to the DPM within three (3) days of the project being assigned.
- b. <u>In-House AEOR</u>: Subsequent to scope completion, a design schedule is prepared by the DM and distributed to all involved in the design phase of the project.

2. Authorization to Proceed (ATP) to Design:

- a. Upon completion of scope phase, an ATP Request is routed for design phase basic services by the DPM and an ATP is subsequently issued by the Consultant Contract Funding Unit (CCFU) to the consultant. The Consultant AEOR shall receive an email notification that an ATP has been generated for design phase basic services.
- b. At the end of design, a revision to the design phase basic services fee may be required if there is a 20% variance (+/-) between the scope estimate, used to calculate the initial design phase basic fee, and the design estimate.

3. Design Schedule:

- a. <u>Consultant AEOR</u>: A <u>Design Phase Log</u> shall be updated weekly and emailed to the DPM to track the schedules of all the Consultant's projects in Phase 2. The timeliness of the submittal of this log shall be used as a criterion for evaluating the Consultant's adherence to schedule on the Consultant Performance Evaluation.
- b. <u>In-House AEOR</u>: The assigned schedule is tracked and reviewed by the DM prior to the weekly studio progress meeting.

C. Design Milestones:

1. Phase 2 Kickoff Meeting: The AEOR shall schedule this meeting. It is critical that the DPM, the PO, the AEOR, and all sub consultants attend to review the final approved scope report to ensure that all parties have a clear understanding of the scope of work. This meeting should be held at the school to view the findings firsthand. For Reso A projects, the Principal or designee must be in attendance. The AEOR should present a copy of the approved layout (for science labs, libraries,



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playgrounds, etc) which was signed off by the Principal during the Scope Phase. Refer to PG 3.1.2, *Project Information Documents*.

- 2. **Specialty Testing:** The request to secure service for surveys, boring tests and probes should have been initiated during Phase 1. If not, this should be done immediately after commencement of the Design Phase. Refer to Section II for a further description of Specialty Testing.
- 3. **50% Design Phase Submission:** Projects over \$3.5 million will require full Quality Review at 50% submission. At the discretion of the DPM or Design Manager, projects under \$3.5 million may be reviewed at 50% based on the project's complexity.
- Detailed SHPO Submission: In the event that SHPO determines that the building is SHPO
 Eligible and a Detailed SHPO Submission is required for the project scope of work, the AEOR shall
 complete and provide the DPM or DM with the required documentation (See <u>Detailed SHPO</u>
 <u>Submittal Procedures</u>).
- 5. **IEH Submission:** Submit design drawings to IEH when design is developed to the extent that the type and locations of work are identifiable. Provide forms and documentation for Lead-Based Paint (LBP), Asbestos, PCBs and HazMat as appropriate to the scope of work.
- 6. **Regulatory Agency Submissions:** File Plans with BCC and other Regulatory Agencies as required for Approval. These submissions should be filed as soon as complete information needed for review and approval can be provided.

Typical Review Durations		Working Days
a.	BCC (1 st Review)	10 days (March-October) 5 days (NovFeb.)
b.	Fire Department: (Sprinklers, Fire Alarm)	5-10 days
c.	DEP: (RPZ, Industrial Waste-Science Labs)	20-30 days
d.	DPR: (Work on JOP)	20-30 days
e.	TA: (Work within 200' of TA structure)	20-30 days
f.	DEC: (Oil Tanks/Storage)	30-40 days
g.	Utility Service Providers (see below)	30-60 days

- 7. **Utility Service Provider (Con Edison) Issue Resolution:** If there are items relating to Con Edison that need resolution, the <u>SCA/Con Edison Issue Resolution</u> form shall be completed and sent to the DPM or DM as soon as issues are identified.
- 8. **100% Design Phase Submission:** Quality Review of complete and coordinated drawings and specifications.
- 9. **SCA Review/QC Meeting(s):** 1 to 2 weeks after receipt of 50% submission (if required) and 100% submission
- 10. **Phasing Plan and Project Duration:** To be provided by SCA Project Management in the form of a Phasing Exhibit. Coordinate with the Project Officer (PO) and obtain required revisions to the Division 1 specification sections.
- 11. **Final Contract Document Submission:** Compliance review of complete and coordinated drawings and specifications incorporating all previous SCA comments.
- 12. **Phase 2 Completion:** The Design Phase of a project is deemed complete when the Final Contract Documents are 'Turned Over' to Project Management by the DPM or DM for bid and award and all



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other required design phase submittals are provided and approved by the DPM/ DM. However, services during the Bid & Award phase, described below, are also considered part of Phase 2.

D. 50% Design Phase Submission Requirements

- 1. If required, the Consultant AEOR shall submit the 50% design (aka mid design) documents and preliminary cost estimate for Quality Review. The primary objective of the 50% submission is to communicate the approved scope of work and establish the basic organization and level of documentation anticipated in the Final Construction Documents. Design documents submitted will be reviewed for percent completion and general design and should reflect the intention of the work to be performed so they may be verified for conformance with the scope report.
- 2. The following drawings shall be provided as a minimum:
 - a. All plans (site, floor plans, ceiling plans as appropriate) and elevations clearly annotated and complete in describing the approved scope of the project. Also, provide wall or building sections if necessary to describe the scope of work.
 - b. On the above referenced plans, elevations, and sections (if required), add referencing indications where details and/or enlarged plans are anticipated in the Final Construction Documents.
 - c. Typical or representative details to describe the Design Intent.
 - d. T-series drawings including a cover sheet, preliminary list of drawings (complying with SCA standard format and drawing naming conventions, which are based on DOB numbering convention format), Summary of Work description, and initial draft of edits to General & Other Standard Notes, Symbols, Abbreviations, Site Plan, Location Plan and Graphic Legends to describe new materials cut in section (Materials Indications Legend) and other Legend(s), if required, with "hatches" and/or "line types" describing Work.
- 3. The 50% submission should also include a list of Specification sections intended to be used (edited Table of Contents is acceptable). Indicate the SCA Standard Specifications and unique project-specific specifications anticipated.
- 4. A construction estimate based on 50% complete design documents shall be provided at the 50% submission to confirm compliance with the approved budget. The cost estimate shall be in CSI format and shall include LLW# total cost (Refer to *Estimating Guideline* in the CIP Exhibit section of the website). If the cost estimate is over the approved budget, the AEOR shall provide written justification for the increase.
- 5. The AEOR shall transmit these drawings and specifications to the DPM or DM for transmittal to SCA Reviewers, QCCS, and the SCA Project Officer.
- 6. The AEOR is responsible for the submissions of its Sub-Consultants and their compliance with SCA standards and the approved scope of work and budget.
- 7. Quality Review of projects at 50% will be accomplished by a formal QC meeting if the project cost is over \$3.5 million. If the project cost is less than \$3.5 million, Quality Review may be accomplished by a scheduled meeting, and/or marked up drawings and specifications, and/or typewritten comments to the AEOR. The mark-ups and type-written responses to comments shall be returned with the resubmission of the documents.
- 8. Design Phase Update: The AEOR shall complete the Design Phase Update form, which is a letter that describes the progress of the project, approximately half-way through the design phase. The Design Phase Update is to be transmitted to the A&E Design Project Manager for review and approval. It will be distributed by the DPM to the Principal and the other recipients listed in the edited master contact form within one week of receipt.

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E. IEH Submission Requirements

- 1. **IEH Survey & Design Submission for Lead-based Paint (LBP), Asbestos, and PCBs:** As soon as the design is developed to the extent that the type and locations of work are identifiable, and not less than six (6) weeks prior to the forecast turn-over date, a 90% or final design submission shall be made to IEH Survey & Design Unit for Lead-based paint (LBP), Asbestos, and PCB (LAP) survey and design. Documents to be submitted thru the DPM or DM for transmitting to IEH shall include the following:
 - a. <u>IEH Survey & Design Request Form</u> with the appropriate service type indicated (i.e. Lead-Based Paint (LBP), Asbestos, or PCBs. Testing for lead is required for exterior paint and for interior paint in Target Areas. LBP testing will be conducted in spaces where children age 6 years or younger may be present, including 1st and 2nd grades, kindergarten, and pre-K classrooms. LYFE Centers, Special Ed and Pregnant Student programs are also considered Target spaces. Depending on the nature of the construction work, common areas such as cafeterias and bathrooms that are frequented by these students will also be tested.
 - b. Two (2) complete sets of drawings and two (2) CDs shall be submitted thru the DPM or DM to IEH Survey & Design Unit. IEH will engage an Environmental Consultant to finalize the LAP Survey, and if required, abatement specifications and drawings. The DPM will be notified by IEH when the abatement specifications and drawings are complete and ready for transmittal to the AEOR for incorporation into the contract documents.
- 2. IEH Hazmat Submission for Hazmat Work: Projects typically requiring preparation of IEH HazMat plans and specifications include Underground and Above-Ground Petroleum Storage Tanks and/or Petroleum-Contaminated Soil Handling and Disposal. As soon as sufficient plan backgrounds for HazMat work areas are developed (at approximately 30% design completion), submit plan backgrounds to the IEH HazMat Unit thru the DPM or DM. When the final design is developed to the extent that the type and locations of work are identifiable, and not less than six (6) weeks prior to the forecast turn-over date, a 90% or final design submission shall be made to the IEH HazMat Unit for preparation of final HazMat drawings and specifications. Documents to be submitted thru the DPM or DM for transmitting to the IEH HazMat Unit shall include the following:
 - a. IEH HazMat Service Request Form with the appropriate service type(s) indicated.
 - b. For IEH HazMat services requiring the preparation of specifications and/or drawings, the following documents must be submitted thru the DPM or DM to the IEH HazMat unit:
 - 1 copy of the Final Scope Report and Geotechnical Report (if new or previous Geotechnical Reports are available)
 - 2 sets of 30% drawings/CD's (at 30% Design Submission)
 - 2 sets of 90% drawings/CD's (at 90% Design Submission)
 - c. IEH Hazmat Plans and Specifications:
 - The IEH HazMat Unit will provide an electronic version of the specifications and drawings (if applicable) to the AEOR prior to the 100% design completion date. An Engineer's estimate for the HazMat portion of the work will be submitted with the 100% Construction Documents.
 - In those cases where design drawings are prepared and DOB filing is necessary, the IEH HazMat Consultant will prepare both the PW-1 and TR-1 for the HazMat portion of the



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work and submit same to the AEOR for filing to BCC immediately after submission of the 100% Construction Documents.

F. Filing Plans with BCC and Other Agencies (See also, Section V – Building Department Code Compliance)

The AEOR is encouraged to sequence the design so that items that require filing with BCC and other Regulatory Agencies are developed first. When the design drawings are ready for BCC filing but no later than approximately 80% complete and not less than six (6) weeks prior to the forecast turn-over date, the following documents shall be submitted for initial BCC filing:

- a. Transmittal for Plan Examination Unit form for submitting required documents to BCC.
- b. Three (3) complete sets of drawings
- c. All forms for the particulars of the projects shall be submitted to the appropriate governmental agencies and departments and necessary approvals obtained.

The Consultant AEOR is strongly urged to utilize the services of a DOB-registered expediter in preparing and coordinating the BCC formwork.

BCC will determine if the file is in order. If it is not approved, objections will be issued by the BCC Plan Examiner and the DPM or DM will be notified of their issuance. Objections may consist of corrections to forms, modifications to drawings and a list of special and progress inspections required. Corrections shall be made by the AEOR/Sub-Consultant or the applicant's expeditor and shall be expeditiously resubmitted to BCC. This should be done as soon as the initial objections are obtained. The resubmittal shall include three (3) sets of signed and sealed drawings and forms. Any related resubmission to other city agencies resulting from these changes shall be executed accordingly. IEH ACP-5 submissions, ASB-4 and/or Asbestos Free Letters should be submitted to indicate that asbestos abatement is not required. For IEH HazMat projects, see filing requirements under E.2 above.

If the AEOR deems the scope of work for the project to be exempt from filing with BCC, a <u>Permit Exemption Certification Letter</u> must be signed and sealed and forwarded to the SPO for the project. Be advised that the work that is exempt should be filed if the contractor will need to obtain an 'After Hours' work permit from the DOB.

G. 100% Design Phase Submission Requirements

The AEOR shall submit drawings, specifications, and an updated detailed cost estimate (CSI format and LLW# totals) for review and approval by the Authority.

H. Quality Review(s)

- 1. The Quality Review is an overall review of the project by the A&E design review team, the Design Manager, DPM, QCCS, and the Project Officer. Within approximately 1 to 2 weeks of the initial 100% submittal, a Quality Control (QC) meeting will be scheduled. The AEOR and Sub-Consultants are required to attend (each trade should be represented). Refer to the SCA Procedural Guidelines for additional information on the <u>Constructability Review Process</u> and Quality Review Process.
- 2. Project design and conformance to SCA standards will be reviewed as well as various issues, such as:



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- Clarity of documents to prospective bidders
- Coordination of submitted documents
- Constructability

Decisions will be made by all parties present to resolve any problems and bring about consensus. The AEOR should bring a binder of photos that may be referred to during the meeting to assist all the reviewers in substantiating their design.

3. The AEOR shall make all necessary corrections called for and agreed upon at the QC meeting and resubmit the documents, with any marked up drawings and specifications and written responses from the QC meeting, within no more than ten (10) business days of the QC meeting. This set shall be submitted with a letter signed by the Partner-in-Charge attesting that the documents have been thoroughly reviewed in accordance with the AEOR's Quality Assurance Protocol.

I. Final Contract Document Submission Requirements

The Final Contract Documents shall be delivered to the DPM as follows:

- 1. Hard Copy (number of copies to be confirmed with the DPM or DM)
 - complete set of Mylar construction drawings
 - full size prints of construction drawings
 - specifications (unbound and double sided)
 - Final Cost Estimate (design contingency shall be deleted from the final construction estimate)
- 2. Electronic Media: Electronic files of drawings, specifications and estimate including a list of drawings and specifications. All computer files shall be submitted as per the SCA's <u>CADD Manual</u> found on the SCA website.
- 3. CIP Project Turnover Checklist (See Project Turnover Checklist)
- 4. Quality Assurance Certification Letter (See Sample Certification Letters)
- 5. Hard Copies and an Electronic File of the BCAS Update Form
- 6. A consolidated "Master List" of required Contractor submissions.
- 7. "Samples of Materials" and a "Color Schedule" and other required submittals described in the Consultant Contract.

J. Bid/Award Phase

During the Bid/Award Phase, the AEOR shall render the following services:

- 1. Interpret plans and specifications and answer RFIs in timely manner.
- 2. Prepare and issue addenda, amendments and supplementary drawings for the clarification of plans and specifications.
- 3. Attend pre-bid meetings of bidders.
- 4. Review bid breakdown and prepare a <u>Bid Analysis</u> comparing the low bid and the design estimate.

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SECTION IV - CONSTRUCTION PROCESS - PHASE 3

A. Overview

Phase 3 consists of services to be performed during the construction of the project. Phase 3 should result in a project completed within the established time and budget in accordance with the Contract Documents. This phase shall also include all applications and sign-offs necessary for the legal and proper occupancy of the premises. Although the project in Phase 3 is now managed by Construction Management, the AEOR is still under the supervision of A&E. Any revisions to drawings or specifications, or any actions taken by the AEOR on design related issues, except on minor or routine matters, should first be approved by the DM/DPM.

For Consultant design projects, refer to the Consultant Contract for what is considered Basic Services and what is to be paid as Additional Services. If there are any conflicts between this section and the terms of the Consultant Contract, the Consultant Contract shall govern.

B. Project Assignment

1. Notification of Project Assignment:

- a. <u>Consultant AEOR</u>: An e-mail notification by the Design Project Manager (DPM) is addressed to both the Consultant Project Manager and/or Partner-in-Charge. The notification shall indicate the date for commencement of Phase III Services. The Consultant shall complete the <u>Project Plan</u> form indicating the names of the project team that will be assigned to the project during the Construction Phase. This form must be forwarded to the DPM within three (3) days of the project being assigned.
- b. <u>In-House AEOR</u>: Subsequent to award of the construction contract and Contractor Notice to Proceed, a construction phase schedule is prepared by the DM and distributed to all involved in the construction phase of the project.

2. Authorization to Proceed (ATP) to Phase III Services:

a. The Consultant AEOR shall receive an email notification that ATP has been generated for the project. A&E needs a copy of the Contractor's NTP to generate the Consultant ATP.

C. Typical Phase III Services

1. Submittal Services

- As a deliverable submitted prior to completion of the Design Phase of Services, the AEOR, shall prepare a list of specifications to be used for the basis of the Contractor's trade payment breakdown schedule and "Master List" of required Contractor submissions for Close-out, including, but not necessarily limited to, all certificates of warranties, guarantees of building equipment and building components specified, training manuals and training of the operation and safety procedures, and identified percentages and total number of attic stock of building components specified.
- Process complete Contractor submittals within fourteen (14) calendar days of receipt, including review of, and appropriate action on Shop Drawings, Product Data, Samples and other submittals required by the Contract Documents.



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- Distribute submittals to the SCA, Contractor and/or AEOR's Technical Field Representative, as required.
- Maintain a master file of submittals using format approved by SCA.

2. Supplemental Documentation Services

- Prepare, reproduce and distribute supplemental Drawings, Specifications and interpretations in response to all Requests for Information (RFI) by the Contractor or the SCA within seven (7) calendar days.
- Forward the SCA's instructions and provide guidance to the Contractor through the Project Officer, relative to changed requirements.

3. Bulletins, Proposed Change Orders, and Change Orders

- Prepare, reproduce and distribute Bulletins containing drawings, specifications, estimates, and
 other supporting data as necessary to describe Work to be added, deleted or modified.
 Include a cover memorandum indicating any additional cost or credit to the Authority, and
 whether the item can be characterized as a field condition, change in program, or if the cost is
 attributable to a design error or omission.
- Prior to submitting the Bulletin to the Contractor or entering the Bulletin in Expedition, submit
 the above Bulletin information to the DPM/DM for review. If any deviations to SCA Standards
 are required, such changes may require TSS approval. Certain Bulletins may require approval
 by the SCA Director and/or Vice President of A&E prior to issuance. Upon approval of the
 Bulletin by the DPM/DM, issue the Bulletin and enter it into Expedition.
- If requested, review Proposed Change Orders (PCO) and Change Orders from the Contractor to confirm that the proposed work is not already included in the original contract, to determine the effect of any proposed changes on the work, and perform an analysis of the validity and reasonableness associated with labor, quality and quantity of materials. Forward the analysis and recommendations regarding PCO(s) and Change Orders to the SCA.

4. Interpretations and Decisions

- Interpretations and decisions of the AEOR shall be consistent with the intent of and reasonably
 inferable from the Contract Documents and shall be in writing or in the form of drawings. When
 making such interpretations and initial decisions, the AEOR shall not show partiality to either
 the SCA or the Contractor, and shall not be liable for the results of interpretations or decisions
 so rendered in good faith.
- The AEOR's final decisions on matters relating to the aesthetic effect shall be consistent with the intent expressed in the Contract Documents.

5. Record Drawings

- Review for general accuracy the Contractor's marked-up prints, drawings and other data certified by the Contractor on changes made during performance of the Work.
- Transmit the <u>reviewed</u> record drawings and general data, appropriately identified, to the SCA and others as directed.



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6. Amended Drawings

- The AEOR shall prepare Amended Drawings which accurately depict, but not be limited to, all
 revisions resulting from Addenda, Bulletins, Change Orders and other interpretations, orders
 or directions related to the Work. For Consultant AEOR's, refer to the Consultant Contract for
 a description of basic and additional services for preparation of Amended Drawings.
- The AEOR shall provide Amended Drawings, as indicated above and file, with applicable regulatory agencies, such as, but not limited to, the Authority's Building Code Compliance Division, at least twenty-one (21) days prior to "Substantial Completion".
- Generally, Bulletins which contain code-related requirements or refer to items requiring interim
 inspections may require submittal of Amended Drawings to BCC for review and approval over
 the course of construction well prior to "Substantial Completion" in order to insure that BCC
 inspections occur with filed drawings.

7. Observation Services

- The AEOR shall visit the site with sufficient frequency to become generally familiar with the
 progress and quality of the Work to ensure that the Work is in accordance with the Contract
 Documents. Visits shall be at intervals appropriate to the stage of the work, generally not less
 than once every two (2) weeks.
- The AEOR shall also attend job site meetings that are generally scheduled to coincide with regular site visits once every two (2) weeks, at the request of the SCA. The AEOR shall prepare meeting minutes for each meeting in a format approved by the Authority.
- The AEOR shall walk the construction and inspect the progress of the work and advise the Authority as to the quality of work and report on conditions not meeting the Contract Documents. Provide recommendations for corrective actions to the Authority in the form of a Non-Conformance Report (NCR), approved by the Authority. Discuss with the DPM/DM and PO prior to issuance. The AEOR shall provide a copy of all NCR's to the Authority within twenty-four (24) hours of the observation of the condition that does not conform to the Contract Documents.
- The AEOR shall maintain a log of all NCR's in a format approved by the Authority.

8. Expedition

Expedition is the SCA's central database for project communication and correspondence on all CIP projects, with the possible exception of some "Mentor" projects. The SCA shall provide the Consultant AEOR with remote access to Expedition and will also provide training for Expedition at its headquarters. The AEOR can refer to the monthly training schedule posted on the SCA website. The AEOR shall use Expedition following the Notice to Proceed (NTP) and is required to incorporate the following modules in their work with the SCA:

- Meeting Minutes
- Bulletins
- Request for Information
- Submittals

The AEOR and all its sub-consultants performing services under this contract are required to sign and submit the Confidentiality and Non-Disclosure Agreement. This document must be signed in



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duplicate by both Prime and sub consultants and submitted to the SCA before commencement of Work. All documents must contain original signatures.

9. Substantial Completion

Upon notice from the Contractor that the Work, or a designated portion thereof which is acceptable to the SCA, is sufficiently complete, in accordance with the Contract documents, to permit occupancy or utilization for the use for which it is intended, the AEOR shall:

- Perform an initial detailed inspection of all Work to verify compliance with all specialized inspection requirements and determine if the Work is substantially complete.
- If Work is <u>not</u> substantially complete, the AEOR shall provide a list of incomplete and/or deficient Work. For Consultant AEOR's, services to re-inspect the Work beyond the initial inspection for Substantial Completion may be considered an "Additional Service".
- If the Work <u>is</u> found to be substantially complete, the AEOR shall sign and seal the Authority's "Certificate of Substantial Completion" form and assist the Authority in obtaining a "Temporary Certificate of Occupancy" and "Certificate of Occupancy", if the project so requires one.

10. Project Close-Out

- After the Work has been deemed Substantially Complete by the Authority and the AEOR, the AEOR shall perform a detailed inspection and prepare a detailed "Punch List" with the Authority's representative for conformity and completeness of the Work.
- Upon notice by the Contractor that the Work is ready for final inspection and acceptance, perform a detailed inspection with the Authority's representative for conformity and completeness of the Work, including all "Punch List" items.
- Update the detailed "Punchlist" and notify the SCA and Contractor of any deficiencies found in follow-up inspection(s), if any.
- Perform final inspection with the SCA's representative to verify Final Completion of the Work.
- Recommend issuance of a Final Certificate for Payment.

D. Phase III Services if Requested by CM

1. Contractor Applications for Payment

Assist in the evaluation of Contractor's Application for Payment.

2. Maintenance and Operations Services

- Arrange for and coordinate instructions on operations and maintenance of equipment in conjunction with manufacturer's representatives.
- Review operations and maintenance manuals for the owner's use.



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3. Start-Up Assistance

- Participate in initial system startup and testing to determine conformance of operations to specification requirements.
- On-site assistance in the operation of building systems during initial occupancy.
- Assist in training of the DOE operation and maintenance personnel in proper operations, schedules and procedures.
- Assist the Project Officer in the administration and coordination of remedial work by the Contractor after final completion.

E. Technical Field Representative Services (at SCA's option, if authorized)

The following services shall be provided by the AEOR at the site, as directed by the SCA.

The Consultant AEOR shall be paid for these services on a reimbursable basis as provided in the AEOR's contract:

The SCA **may** require Technical Field Representative Services on large or complex projects. The Technical Field Representative may be one or more Architectural or Engineering disciplined persons as required by the construction taking place.

1. Resume and Qualifications

The Consultant AEOR will submit the résumé and qualifications of the Field Representative for the prior approval of the SCA.

2. Technical Field Representative Services

The Technical Field Representative shall respond to the direction of the SCA Project Officer and provide services which may include:

- Perform on-site observations of the progress and quality of the Work as may be reasonably necessary to determine in general if the Work is being performed in a manner indicating that the Work when completed will be in conformance with the Contract Documents. Notify the AEOR and the SCA immediately if, in the Technical Field Representative's opinion, work does not conform to the Contract Documents or requires special inspection or testing.
- Monitor the Contractor's construction schedules on an ongoing basis and alert the AEOR and the SCA if the Contractor is not on schedule or if there are conditions that may lead to delays in completion of the Work.
- Respond to requests for information from the Contractor within seven (7) calendar days and provide interpretations of Contract Documents.
- Review requests for changes by the Contractor, and submit them, together with recommendations, to the AEOR and the SCA.
- Attend meetings as directed by the AEOR and authorized by the SCA and report to the SCA on the proceedings.



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- Assist the SCA, upon request, in Negotiations with the Contractor relative to quantities of Work proposed to be added, deleted or modified.
- Observe tests required by the Contract Documents. Record and report to the AEOR and SCA on test procedures and test results; verify testing invoices to be paid by the SCA.
- Maintain records at the construction site in an orderly manner including correspondence, Contract Documents, Change Orders, Construction Change Directives, reports of site meetings, Shop Drawings, Product Data, and similar submittals; supplementary drawings, color schedules, requests for payment; and names, addresses and telephone numbers of the Contractors, Subcontractors and principal material suppliers.
- Maintain a log book of activities at the site, including weather conditions, nature and location of Work being performed, verbal instructions and interpretations given to the Contractor, and specific observations. Record any occurrence or Work that might result in a claim for a change in Contract Sum or Contract Time. Maintain a list of visitors, their titles, and time and purpose of their visit.
- Notify the AEOR and SCA if any portion of the Work requiring Shop Drawings, Product Data or Samples is commenced before such submittals have been approved. Receive and log Samples required at the site, and arrange for their examination recording the AEOR's approval or other action. Maintain custody of copies of approved shop drawings at the site.
- Observe the Contractor's record copy of the Drawings, Specifications, Addenda, Change Orders and other modifications at intervals appropriate to the state of construction and notify the AEOR and SCA of any apparent failure by the Contractor to maintain up-to-date records.
- Review Contractor's Applications for Payment and forward to the SCA with recommendations for disposition within 3 business days.
- Assist in and observe the startup of major systems and confirm the proper operation of said systems.
- Assist the SCA in conducting inspections to determine the date or dates of Substantial Completion and the date of Final Completion.
- Assist the SCA in obtaining documentation required of the Contractor at completion of the Work.
- Perform final inspection with the SCA's representative to verify final completion of the Work.
- Recommend issuance of final Certificate for Payment.

F. Contract Administration

If requested by SCA, the following services shall be provided:

- 1. Testing and Inspection Administration (relating to independent inspection and testing agencies):
 - Provide for the services of independent inspection and testing consultants, as required by the Construction Contract Documents.



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- Administration and coordination of field testing required by the Construction Contract Documents.
- Recommend scope, standards, procedures and frequency of testing and inspections.
- Arrange for testing and inspection on the SCA's behalf.
- Notify inspection and testing agencies of status of Work requiring testing and inspection.
- Evaluate compliance by testing and inspection agencies with required scope, standards, procedures and frequency.
- Review of reports on inspections and tests and notifications to the SCA and Contractor of observed deficiencies in the Work.

2. Furniture, Furnishings and Equipment Installation Administration

Assist the SCA in coordinating schedules for delivery and installation of the Furniture and Equipment.

3. Additional Design

Any additional design services which may be required must be approved in advance by the SCA's Design Manager.

G. Assignment of Projects in Close-Out

The AEOR may be requested to provide services, including but not limited to, the assumption of design responsibilities on projects for which they were not the original Architect/Engineer or record, and complete any necessary tasks to secure the Certificate of Occupancy of a relatively new school building or addition and satisfy the requirements of all applicable governmental agencies.

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SECTION V - BUILDING DEPARTMENT CODE COMPLIANCE

A. Overview

Under a Memorandum of Understanding with the NYC Department of Buildings, the SCA maintains an "in-house" Building Department with full review and approval authority (and most GC inspection functions) for DOE-owned properties. Under certain circumstances, such as lease facilities and small privately-funded projects, the project team must submit projects directly to the NYC Department of Buildings. The SCA's "in-house" Building Department is comprised of the Building Code Compliance Division (BCC) and Construction Inspection Division (CID). The Building Code Compliance Division (BCC) of the SCA is an in-house unit performing certain functions of the Building Department including plan review and application processing. The Construction Code Compliance Division (CID) serves in a quality control role for projects in construction and also for regulatory inspections for the trades, including MEP.

The SCA's In-House Design Studio utilizes the services of the In-House Expediting Unit. The Consultant AEOR is strongly urged to utilize the services of a DOB-registered expeditor to prepare and coordinate the DOB formwork, but should also attend all meetings with BCC to help facilitate the approval process.

B. Plan Submission Phase

- **1. Filing Plans with BCC for Approval** All Projects, other than those considered "Minor Alterations" or "Ordinary Repairs" as defined in <u>NYC Construction Code Section 28-105.4.2</u>, will require filing. The following documents shall be submitted to BCC for initial filing:
 - a. 'Transmittal for Plan Examination Unit', form for submitting required documents to BCC.
 - b. Three (3) complete sets of drawings signed and sealed.
 - c. The following forms and other forms necessary for the typical alteration project (without change in use) of the project shall be submitted as applicable:
 - NYC Department of Buildings Plan/Work Approval Application Form PW-1 for each applicant (Consultant/Sub-Consultant Architect and Engineer must submit separate applications for the project); signed and sealed on every page (one-sided copies only). Include DOB completed ASB-4 or an Asbestos Free Letter form from the AOR if an asbestos free building.
 - NYC Department of Buildings Schedule B form if plumbing, sprinkler or standpipe work is proposed.
 - NYC Department of Buildings Schedule C form if boiler, burner, fuel storage work is proposed.
 - NYC Department of Buildings PW-3, Cost Estimate
 - NYC Department of Buildings TR-1, Technical Report Statement of Responsibility
 - NYC Department of Buildings Form Al-I, Additional Information, for each applicant containing Self-Certification statement and answers to each and every objection

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- NYC Department of Buildings Form Al-I, Additional Information, for Owners Self-Certification statement (SCA A&E Director will sign as 'Owner')
- NYC Department of Environmental Protection Notification Forms ACP 5 (if no abatement is required),

2. Other Agency Filings & Approvals

The AEOR shall file with other governmental agencies having jurisdiction and obtain necessary approvals. Other agency approvals include, but are not necessarily limited to the following:

a. NYC Fire Department

Fire alarm systems must be reviewed by the Fire Department prior to approval by BCC. File NYC Department of Building Plan/Work Approval Application Form PW-1 at BCC in order to obtain a DOB number. The BCC plan examiner will stamp plans, "Ready for Fire Department Submission" when plans meet minimum requirements for filing. AEOR must file those plans at the Fire Department along with form M25-65. When plans are approved, Fire Department will stamp plans. AEOR must pick up plans at Fire Department and file those plans at BCC, through the DPM or Design Lead, with the PW-1 and asbestos form (also form TR-1 for fire stopping if required). BCC will process approval at DOB.

- b. NYC Metropolitan Transportation Authority (MTA)
 MTA approval is required for projects that are within 200 feet of MTA structure.
- c. <u>NYC Department of Environmental Protection (DEP)</u>
 Projects that may require sewer connection must be submitted and approved by DEP.
- d. <u>NYC Department of Transporation (DOT)</u>
 Projects performing work within the public right-of-way, sidewalks, utilities, etc. must be submitted and approved by DOT.

C. Resubmission of Disapproved Documents to BCC

BCC will determine if the file is in order. If not approved, it will be returned with objections to the AEOR. The Applicant or applicant's expediter may schedule an appointment with the BCC examiner via email to planreview@nycsca.org. Objections may consist of corrections to forms, modifications to drawings or list of progress or special inspections required. Corrections shall be made by the AEOR/Sub-Consultant or the applicant's expeditor and shall be expeditiously resubmitted to BCC through the DPM or Design Lead. This should be done as soon as the initial objections are obtained. Any related resubmission to other city agencies resulting from these changes shall be executed accordingly.

For documenting responses with BCC, a NYC Department of Buildings Form Al-1 is used. The Applicant must provide a response to each objection. For objections that cannot be resolved at the plan examiner level, a CCD-1 or ZRD-1 may be used for Code Determination or Interpretation.

For approval of revised documents, the applicant must submit three (3) signed and sealed sets of drawings.