

ALAMEDA UNIFIED SCHOOL DISTRICT



FACILITIES ASSESSMENT REPORT



JUNE 4, 2012

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Introduction

The Alameda Unified School District serves the City of Alameda which is nicknamed "The Island City" (or simply "the island"). It's boundaries encompass two islands as well as a small section of the mainland, and consists of the original historical settlement, along with the former Alameda Naval Air Station (now known as "Alameda Point") at the west end of the Island, 'Southshore' along the southern side of the Island, and the northern portion of Bay Farm Island (actually part of the mainland). Alameda Point, Southshore, and portions of Bay Farm Island are all former marshlands that were built up by dredging and filling with Bay sediments, which is a point of interest noted in the Executive Summary.

The 2010 U.S. Census reported that 72,316 people (98.0% of the population) live in households, with 1.2% living in non-institutionalized housing, and 0.8% are institutionalized. The population density is 3,214.9 people per square mile and composed of 50.2% White, 31.2% Asian, 11.0% Hispanic, 6.4% African American, 0.7% Native American, and 0.5% Pacific Islander. There are 30,123 households, of which 30.8% have children under the age of 18 residing, 45.2% are opposite-sex married couples, 12.4% have a female head of house, 4.4% have a male head of house, and 7.2% are unmarried partnerships. The average household size was 2.40, and there are 18,291 families (60.7% of all households), with an average family size of 3.06.

The 'age-profile' shows 15,304 people (20.7%) under the age of 18, with 7.4% aged 18-24; 28.5% aged 25-44; 29.9% aged 45-64, and 13.5% 65 and older. There are 32,351 housing units of which 14,488 (48.1%) are owner-occupied, and 15,635 (51.9%) are occupied by renters. The latest Census data suggests that the District should anticipate and be prepared for a stable, on-going, student population that is in line with the current 2011-12 population of 10,000 students over the next decade.

This Facilities Assessment Report will focus on seventeen (17) of the District's facilities, with the aim of identifying facility deficiencies and recommended improvements including;

- Deferred maintenance issues.
- Improvements to remediate physical, health, fire, life, safety, and accessibility issues, to comply with current Division of State Architect (DSA) building codes.
- Establishment of District wide standards for materials, equipment, and systems.

It is the intent of this report, to inform the District, its Board, and the public in general, of the issues and considerations that need vetting by those individuals involved, so that they can make beneficial and

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informed choices in the allocation of funds for continuation of the Island's distinguished public school programs.

Each site's Assessment Report provides an itemized review of facility deficiencies accompanied by recommended improvements, or need for further investigation, and the associated cost estimate for the suggested improvement. As is common with long established School Districts, many of the older facilities have served well with years of continuous use, accompanied with additions and improvements, to meet current needs. Some of these facilities may be recognized as beyond their designed service life from both a curriculum planning approach, and the structures age and efficiency in an era of energy conservation.

The District, along with its many community supporters, should recognize that some of its schools may need to be modernized, or replaced, to meet the demands of current and future educational needs, regulations, and the changing climate and socio-economic environment. This Assessment Report is submitted to the community at large, as a document with which to initiate a discussion to define a process for change. It is a tool to be used in reviewing and redefining the 2010-2015 Master Plan, and determining the Island's consensus opinion to achieve its goals. Other California school districts of the same size and enrollment, and faced with similar issues, have enacted a variety of measures to meet these challenges, which includes;

- Optimize enrollment and close campuses
- Underwrite School Bonds
- Request Parcel Tax increases
- Solicit non-profit, and philanthropic partnerships
- Apply for State improvement funds as they become available

It is the intent of this Facilities Assessment Report to help define the cost impact of maintaining these seventeen (17) sites into the coming decade, and inform the District of those sites that are the most expensive and problematic to maintain. Ultimately, the District's Board of Education and its public constituency will decide on the best course of action that serves the needs of the Island's unique culture and population.

End of Introduction

Project Team

Architect

Quattrocchi Kwok Architects, Santa Rosa, CA
Principal in Charge: Mark Quattrocchi
Project Manager: James (Jim) Rolfe

Civil Engineer

Brelje & Race Engineers, Santa Rosa, CA
Principal in Charge: Tom Jones

Structural Engineer

ZFA Structural Engineers, Santa Rosa, CA
Principal in Charge: Chris Warner
Project Manager: Jarred Barrilleaux

Mechanical Engineer

Costa Engineers, Napa, CA
Principal in Charge: Tony Costa
Project Manager: Chris del Core

Electrical Engineer

O'Mahony & Myer, San Rafael, CA
Principal in Charge: Pieter Colenbrander
Project Manager: Herman Lim

Consulting Cost Estimator

**Counterpoint Construction Services,
Sebastopol, CA**
Principal in Charge: Neil Bohn

Executive Summary

PURPOSE OF FACILITIES ASSESSMENT

The Alameda Unified School District directed the investigation of seventeen (17) active facilities, to identify those improvements and remedial up-grades, along with their associated costs, required to provide safe, secure and well-maintained campuses, appropriate to the needs of current and future educational programs for the foreseeable future.

METHOD OF ASSESSMENT

To accomplish this, Quattrocchi Kwok Architects and our team of Consultants, conducted facility assessments and document reviews, including site visits with District Maintenance Staff that gave us valuable insight into each sites unique deficiencies and assets. We visually surveyed the existing conditions at each campus, with follow-up reviews at selected sites that were more complex, or had a greater number of issues. For documentation, we took on-the-spot notes and photographs of each site during the walkthroughs, with the aim of illustrating typical examples of facility deficiencies, and Division of State Architect (DSA) non-compliant construction or Code requirements.

Additionally, the District provided our team with electronic scans of drawings for the 17 campuses that were included in their 2010 Master Plan. These drawings documented the school's original buildings, as well as modernization and relocatable projects added over the years, that greatly assisted in the illustrating of campus Site Plans, and their associated spreadsheets and photos that follow. The evaluation of information gathered from our visual inspections and documentation, combined with information provided by District staff, its roofing consultant, site principals, and instructors, helped in the production of this Facility Assessment Report.

Of special note are recent Bond Measure "C" improvements completed by the District, for the modernization of student and staff toilets and classroom sinks at all its facilities, to comply with current DSA accessibility codes. We checked to confirm that those recent upgrades, designed to meet the 2007 California Building Code (CBC), were completed, still in good condition, and meet the current 2010 CBC. The exception to the category of district wide upgrade, are the District Offices, located at Alameda High School. The District Offices along with portions of the original historic Alameda 3-story classroom building, are being separately reviewed and are not a part of this report.

SITES IN THE REPORT

As noted in the Introduction, (17) District facilities, are included in this Report, as follows;

- Academy of Alameda (formerly Chipman Middle School)
- Alameda High School
- Bay Farm Elementary School
- Amelia Earhart Elementary School
- Edison Elementary School
- Encinal High School
- Franklin Elementary School
- Haight Elementary School
- Lincoln Middle School
- Longfellow/Woodstock Child Development Center (formerly Longfellow E.S.)
- Donald Lum Elementary School
- Frank Otis Elementary School
- William Paden Elementary School
- Ruby Bridges Elementary School
- Washington Elementary School
- Will C. Wood Middle School
- Woodstock Education Center

Assessment Inclusions

The Project Team evaluated each facility in the following areas:

- **Architectural:**

- Site inspection of the building envelope and finishes, identifying areas where surfaces and components are nearing the end of their useful life and where corrective repairs are needed.
- Identify areas where day-lighting and natural ventilation can be incorporated to reduce energy consumption.
- Identify areas on each campus that require renovations to meet current Accessibility, Health, or Building Code requirements.
- Identify areas where improvements are needed to meet current student safety standards, such as door hardware, security systems, and window glazing.
- Survey existing facilities to recommend District wide standards for wall/floor finishes, doors/hardware, windows, toilet accessories, lockers, roofing, and paint standards.

- **Structural:**

- Site review of structural conditions of the buildings. Noting damage to members or unusual cracking or configurations.
- Review of existing building plans for structural systems and general lateral resistance performance. Note seismic rehabilitations as we become aware of them through the review of drawings. State opinions regarding the general performance of the building systems based on this review.
- Where deficiencies are noted, indicate possible repair scope to aid in a cost estimates.
- Evaluate the foundation types with the potential of liquefaction based on published site maps, and recommend remediation measures to protect life and limb.
- Perform separate DSA procedure 08-03 reports of select buildings at Encinal High School and Washington Elementary School which have not been seismically upgraded or appear to be deficient upon a quick evaluation of the existing building plans.

- **Plumbing:**

- Evaluate the condition of existing plumbing fixtures and systems. District wants to discontinue use of waterless urinals.
- Review hot water heating systems, and recommend upgrades, or replacement. Further Cost-Benefit analysis and future utility rate projections will be required.

- Recommend improvements and repairs to decrease maintenance, energy, and water consumption, and improve performance.
- Survey existing fixtures and equipment, and select recommendations for adoption of District wide standards.
- **Site Utilities:**
 - Evaluate condition and performance of storm drainage system.
 - Evaluate condition and adequacy of fire department access and hydrant location.
 - Review record drawings and interview maintenance staff to identify underground utilities issues.
 - Evaluate paving, walkways, and site drainage for remaining service life.
 - Evaluate site accessibility, including parking and pathways and identify areas where they do not meet ADA requirements.
 - Evaluate roadways, parking lots, and play areas, identifying suggested repairs and improvements.
- **Electrical:**
 - Review adequacy of main electrical service at each campus. Recommend upgrades or replacement at older campuses.
 - Review existing lighting systems and propose improvements to increase lighting performance and improve classroom and site environments.
 - Identify areas where lighting controls can be added to decrease electrical usage.
 - Review current fire alarm system and identify any improvements necessary to meet current DSA or District standards.
 - Survey existing fixtures and equipment, and select recommendations for adoption of District Standards.
- **Heating, Ventilation and Air Conditioning:**
 - Review adequacy and efficiency of existing mechanical systems, and analyze the older boiler/radiant heat systems, for upgrade or replacement.
 - Review mechanical control systems where they occur and recommend where new Energy Management Systems (EMS) can be beneficial. Cost-Benefit analysis and future utility rate projections are required for accurate modeling, and are not included in this report.
 - Identify areas where systems and controls can be modified to provide better control of environment and energy efficiency.
 - Survey existing fixtures and equipment, and select recommendations for adoption of District Standards.

- **Communications and Technology:**
 - Review current data and phone infrastructure, and typical classroom standards, for compliance to existing District Standards.
 - Assess condition of phone, clock/bell, and P.A. systems, and recommend where upgrade or replacement is required.
 - Identify needed improvements for service mains, lighting, lighting controls, fire alarm, security, and data infra-structure.
 - Survey existing fixtures and equipment, and select recommendations for adoption of District Standards.

CONSULTANT'S ASSESSMENT OUTLINES

Civil Engineering Analysis

The civil analysis focused on site accessibility issues based upon current ADA rules applied by DSA to school sites as a part of site modernizations. The analysis was intended to be comprehensive, even though not all improvements would be triggered by any given project. Our goal was to identify to the greatest extent possible areas where existing campus improvements fell short of current regulations. In these areas, the District does have some liability exposure to lawsuits brought by individuals or groups alleging lack of equivalent access related to out of date ADA accommodations in site improvements. To evaluate the existing conditions, we performed extensive measurements of existing cross and longitudinal slopes on flatwork, ramps, and pavements throughout all campuses. We used a four foot long Smart Level for this purpose, and checked it for adjustment frequently. While these devices are not as precise as a survey, they are generally reliable for determining if a particular surface along a designated path of travel has a cross slope in excess of 2.00%, a longitudinal slope in excess of 5.00% without railings, or a longitudinal slope in excess of 8.33% with railings. We also reviewed the length of all ramps to determine if they included level landings at 30 ft maximum on center as the law requires.

An item that appears frequently in the older campuses is that the landings outside of accessible doors have thresholds that exceed ¼" in height differential (elevation differential between finished floor and finished exterior grade outside the door), and did not have the required "level" landings at each door. A level landing must be two feet wider on the strike side and one foot wider on the hinge side of the door, and must extend out from the door for a distance of at least 5 ft, with a slope in any direction that does not exceed 2%. These conditions were found throughout the older campuses, and in general will be quite expensive to remedy.

We also reviewed the path of travel from the public way to the front of the school, and for circulation within the campus, and from the campus to outdoor play areas, measuring cross and longitudinal slopes for compliance, and looking for offset joints exceeding ¼" in height. We closely reviewed the number of ADA stalls at each campus to be sure that the minimum number required by code were provided (all campuses complied with this regulation), and to determine if slopes within the stall and unloading zone, the signage, striping, dimensions, and ramps associated with each ADA stall met current requirements and noted deficiencies. We

also looked for ADA Student drop off zones at each site, and noted if they were missing or where improvements were needed.

There were several schools that had no onsite parking provided. In each of these locations a parallel ADA stall, and frequently a separate parallel ADA unloading zone, were designated in the public street along a school frontage. It is likely that these facilities complied with regulations that were in effect at the time that they were instituted, but none of them meet current standards. We acknowledge that the standards associated with parallel ADA stalls and unloading zones are among the least well documented of all ADA parking types. In California, Caltrans has developed a standard that they use for such facilities, and we included a drawing of their standard with our exhibits, and used this standard to measure compliance of the facilities we found during our site inspections. In virtually every instance, making improvements to upgrade ADA parallel stalls and student drop offs will be a costly undertaking, and one that is unlikely to result in full compliance. This is because at each location that we observed, the stalls had been designated on an older street that had been overlaid any number of times as part of routine maintenance by the public agency. However, the result of this is that the cross slope within the parallel ADA stall area in every instance significantly exceeded 2%. We saw no practical remedy for this deficiency, and included that notation in our analysis.

We also conducted visual inspections of the asphalt pavement surfaces at all schools, and made an evaluation of the type of remedial work that would be required to extend, if possible, the useful life of the pavements for at least several years. Where pavement exhibited a low level of wear, and showed little signs of deterioration, no recommendations for immediate action were made. This is not intended to imply that a routine pavement maintenance program should not be carried out throughout the District to prolong the life of these pavements. At most sites, there were areas of pavement that showed some deterioration, in which case crack filling, seal coating, and restriping was recommended. Where more severe wear was observed, crack filling, pavement fabric, and overlay was recommended. In a few locations where the pavement structural section appeared to be substantially failed, complete removal and rebuilding of the section is recommended.

A number of sites directly adjoin the Bay. For these sites, we reviewed the currently available FEMA/FIRM mapping to determine if any portions of the sites were shown as subject to inundation. None of the sites was found to be in this category. Copies of portions of the

representative FIRM maps, along with a legend plate, have been provided to accompany our analysis.

Our analysis of fire systems and access was based upon visual observations at each site, on the nature of the public street access at each school, and any onsite paved areas that were either designated for, or could serve as emergency vehicle access roads to provide more direct access to fire vehicles to more remote portions of the campus. Where access was deficient, it was noted. We also observed the location of offsite fire hydrants surrounding the school served by the public system, and looked for evidence of any onsite private fire hydrants, and made recommendations as appropriate. We further observed for fire sprinkler systems at each site (limited numbers), and where appropriate, noted that due to the massing of the buildings, that it would be unlikely that code required fire flows could be achieved solely from fire hydrants, as the 50% reduction in required flow is only available to sites where the buildings have fire sprinklers.

Relative to underground wet utilities (sewer, water, fire, storm drain) it is virtually impossible to access the condition of these facilities or know the age of and pipeline materials used to construct them. Instead, we relied on comments provided by District maintenance personnel who accompanied our site inspections, to provide observations of ongoing or significant system defects, which they were aware of, reviewed those site issues, and included comments on them in the recommendations. A detailed video inspection survey is recommended for sewer and storm drain systems at all sites, which will provide materials that can be used to develop an opinion on the condition and need, for specific repairs at each campus.

Finally, some schools, notably Bay Farm Elementary, are showing signs of significant site settlement which over time has resulted in many of the exterior flatwork improvements tilting away from the buildings, which are often constructed on pilings, making them relatively stable. While recommendations were made for near term fixes in many of these areas, these improvements should not be undertaken without completing a detailed geotechnical analysis of the specifics of the site, including recommendations for materials and methods that should be employed to replace the failed flatwork to create ADA accessibility for the site(s) that will maintain compliance over time.

For each site, we have provided an aerial photo image of the site, as a key map, tying the individual assessment comments in the report section to a specific location on the site, so that

the reader can have a better understanding of the location and concentration of the areas where remedial work is recommended.

Structural Engineers Analysis

ZFA Structural Engineers has located drawings for the vast majority of buildings in the Alameda Unified School District Assessment Report. The District has a large inventory of non-wood framed buildings, which traditionally are more vulnerable to damage during a seismic event due to their weight and non-ductile detailing. It appears that the District undertook a concerted seismic strengthening program between 1991 and 2001. During this period, a large percentage of their buildings underwent voluntary seismic upgrade that was not code mandated, and as such, does not ensure a known or guaranteed level of performance. In our opinion, however, the structural solutions were consistent with the standard of practice in their time, and in most cases appear to have reduced the seismic hazard by addressing the most critical deficiencies. In general, unless specifically noted in a campus assessment, seismic strengthening would not be a high priority for the District. However, ZFA has identified three buildings at Encinal High School and the Washington Elementary School buildings that have been addressed in Special Reports that can be found in the Appendix that follows. Through a separate project, we have performed a similar review of the District Offices at the Historic Alameda High School.

Due to the nature of Alameda's location and historic land-fill development, several sites are located on highly compressible soil. While the vast majority of foundation systems are on piles which mitigate this condition, some campuses exhibit excessive settlements issues. In some instances site walkway canopies were not installed on as deep a foundation system and have considerable settlement. In other cases some foundations are spread foundations and have slowly settled over the years. However, in most of these cases, they are not of significant structural concern. These issues have been addressed in specific summaries for each campus.

Mechanical Engineers Analysis Outline

A thorough and complete analysis was performed at each of the District's various campus heating systems, which predominantly includes a natural gas-fired central boiler plant as the primary source of heating. Unlike the District's electrical provider, these boiler systems operate on PG&E natural gas which is subject to a fluctuating, and unpredictable consumer market.

Many of these systems; boilers, pumps and piping have reached the end of their useful “service life” which may force a decision on whether or not to upgrade them. That decision is not within the scope of this Report, which would need to be determined from a more thorough cost/benefit analysis, however, at the direction of the District, we have indicated in several spreadsheets of older facilities to completely replace boiler heating systems with new high efficiency package HVAC units

A few schools with newer equipment have a campus wide ‘Trane Tracer’ energy management system in place, but they are not remotely monitored. The District has expressed the desire to eventually upgrade to a “district wide” energy management system/program for all its campuses.

None of the schools have a centralized air-cooling system for classrooms. However, some campuses have individual air conditioning units, usually placed at computer classrooms, server rooms, and classrooms with large south facing windows. These systems are in fair to good condition, but do not appear to have been professionally installed in many cases.

Generally speaking, plumbing systems throughout the District have received fixture upgrades to meet the current accessibility codes, and are in good condition. This has included the use of “waterless” urinals over the past 6 -8 years, which the district has found to be an expensive maintenance issue. Therefore, various campus reports will recommend the replacement of the waterless urinals, with the low-flow type.

Electrical/ Communications Engineers Analysis

Alameda Municipal Power has provided the District with a very favorable electrical power rate over time, and in the last 10 to 20 years, campuses have been modernized with power and signal system upgrades, but not with energy management or co-generation systems to reduce utility consumption. The following assessment topics apply in general to all the schools, with any exceptions noted under the individual school analysis.

- **ELECTRIC SERVICE:** In general, new electrical services with new main switchboards have been installed at schools as part of past modernization projects. Existing main switchboards and existing power distribution systems, including existing panels, remain in use and are typically back-fed from the new main switchboard. At some schools, new

panels were included in the upgrades. Surge Protection Devices (SPD's) or Transient Voltage Surge Suppression (TVSS's) were not observed at panels or distribution boards.

- **POWER SYSTEMS:** In general, classrooms and offices appear to have adequate quantity of receptacles. At school sites with Libraries, Media and/or Computer Centers, cables are often routed on the floor, covered by rugs or enclosed in non-metallic threshold type covers, creating a tripping and safety hazard. In some classrooms and offices, similar methods are used to provide power or data connections in the middle of the room away from wall outlets.
- **TELEPHONE SERVICE:** Telephone/clock/speaker equipment (Rauland) and racks have been installed as part of past modernization projects. Rauland equipment has not been satisfactory, with reliability, parts and service causing continuous problems at all schools.
 - AUSD Facilities Director Robbie Lyng, expressed interest in a District-wide upgrade to replace all Rauland equipment with VOIP (Voice Over Internet Protocol) based telephone equipment, which allows telephone calls to be made over the computer network.
- **CATV SERVICE:** Schools do not have cable TV service.
- **EXTERIOR LIGHTING:** Typically wall packs are utilized for illumination of building perimeters and parking areas. Parking lots typically have some pole mounted luminaires with minimal illumination provided by nearby wall packs or street lighting. Covered walkways typically have surface mounted fixtures. Exterior lighting illumination levels were not evaluated, and are not within the scope of this Report. However, Jerome Thomas AUSD Head Custodian noted that it was 'dark' between buildings and on pathways to parking lots during back to school nights at several campuses.
- **LIGHTING:** Classroom lighting fixtures have been upgraded, typically with fluorescent fixtures with T8 lamps, and classroom lighting controls also have been updated, with bi-level and tri-level switching installed. Office areas typically have been upgraded with fluorescent fixtures with T8 lamps, with bi-level switching and some occupancy sensors provided.
 - The Facilities Director expressed interest in replacing selected existing lighting fixtures that have had excessive and continuous ballast replacement (over 300 ordered) and in standardizing the District's light fixtures as much as possible. Due to the great variety of

interior and exterior fixtures, it is expensive and difficult to maintain an inventory of the many lamp types (ie, fluorescents of different types and length, incandescent, mercury vapor, metal halide, high pressure sodium) to replace burned out bulbs.

- CONTROLS: Only timers are typically utilized for controlling exterior lighting. At some schools, selected exterior fixtures are furnished with photocells.
- EMERGENCY LIGHTING: Emergency egress lighting has been provided by dual lamp emergency battery packs and lighting fixtures with integral emergency battery packs. At some schools, emergency lighting inverters have been installed to provide backup power for selected fixtures. Although emergency egress lighting illumination levels are not within the scope of this Report and not evaluated, several schools appeared to have inadequate emergency egress lighting levels.
- EXIT SIGNS: Exit signs, some with integral emergency battery packs and/or dual lamps, have been installed. Low level exit signs have been provided at some schools.
- FIRE ALARM: Fire Alarm systems have been upgraded with new control panels with remote annunciators in main offices, Americans with Disabilities Act (ADA) compliant horn/strobes, and smoke detectors.
 - The Facilities Director requested the replacement of any Fire Alarm panels made by Siemens, due to on-going reliability and service issues.
- DATA SYSTEMS: District wide, Data systems have been upgraded with new Main (MDF) and Intermediate (IDF) Data Frame classrooms, and offices equipped on 2 or 3 walls with surface raceway providing power/data outlets; wireless transmission is installed at most schools.
- SECURITY SYSTEMS: Security systems are perimeter systems with door contacts and motion sensors in offices and classrooms. Systems at some schools have been upgraded, but wiring typically runs exposed in corridors and not in conduit.
- CLOCK SYSTEMS: Clock systems have been upgraded with new master programmers (Rauland telephone/clock/speaker equipment), and new clocks in classrooms. Clocks and speakers are typically surface mounted in a single combination enclosure. Clock reliability has been a District wide issue, with many new system clocks replaced by battery clocks due to inaccurate readings.

- The Facilities Director expressed an interest in a District-wide upgrade to replace all Rauland equipment.
- PUBLIC ADDRESS SYSTEM: Public Address systems have been upgraded, tied to telephone system (Rauland telephone/clock/speaker equipment) in classrooms and offices. Public Address system quality varies from school to school, some with no reported problems, others with non-functioning operations (ie, no all call, no voice mail).
 - The Facilities Director expressed an interest in a District wide upgrade to replace all Rauland equipment.

Architect's Portable Building Analysis

Over the last 30 years, the District has employed the use of "Portable" buildings at most of their campuses, as a means to add classroom capacity and reduce class size. Many of these structures have reached the end of their designed "service life" which arguably should not exceed 30 years, due to the nature of their construction materials, cost and design intent as temporary buildings. Where noted in the Facility spreadsheets, the District must determine if they should repair these units, replace in kind, or replace with permanent structures.

Some campuses have portable buildings that were installed on a concrete foundation, in lieu of the more common and less permanent, wood foundation installed directly on ground. We term the concrete foundation buildings "Modular" in lieu of "Portable", and generally recommend they receive upgrade as required, in lieu of replacement. Exceptions to this rule can be found in a few spreadsheets, such as the Wood Middle School assessment, where the District directed us to replace the 6th Grade Modular wings with new permanent classrooms.

Some "Portable" buildings that have reached the end of their service life are noted in the Assessment spreadsheets to be replaced with new more permanent "Modular" buildings. At many sites, both "Modular" and "Portable" buildings have exterior sheathing damage, but otherwise possess a remaining service life. In these cases, they have been noted to receive replacement cement board paneling, trim and repainting.

Organization of Facility Assessment Report

Each campus has been analyzed to determine a site's facility needs based on a detailed outline as described in the previous section '**Assessment Inclusions**'. The report itself is divided by TABS into separate sections for each campus included in the Report. The sites are in named order as noted in the Table of Contents.

The TAB sections include four parts:

- 1) Written Description of school site;
- 2) Aerial Site Plan with graphic keynotes;
- 3) Detailed Assessment Spreadsheet with associated costs;
- 4) Representative Photos referenced to assessment spreadsheets.

The Detailed Assessment Spreadsheet (item 3), identifies building or site deficiencies and provides a recommendation to remedy the specified deficiency. In some cases the recommendation may note that further research, testing or forensic investigation is required. The assessments and remedies have been divided into five (5) categories, based on site conditions, building systems, components, and equipment that are shown in yellow highlighting on the spreadsheets. These assessment categories are:

- 1) **Civil/Site Conditions** –primarily ADA compliance for wheelchair access to the school site, but also include fire, life, safety, and underground utility deficiencies.
- 2) **Architectural** – deferred and general maintenance issues, interior ADA compliance, and material finishes service life are common throughout.
- 3) **Mechanical/ Plumbing** –heating and energy management systems, plumbing in need of upgrading or replacement, including access to classroom sinks, cafeteria kitchens, and staff lounge kitchens.
- 4) **Electrical** – outdated lighting, service equipment, fire alarm, telephone/data, clock/speaker /bell, security systems, and including system service problems, and energy inefficiency issues.
- 5) **Structural** – identify seismic or other structural issues such as liquefaction, subsidence and uneven settlement, structural component service life and potential repair or replacement.

End of Executive Summary

Cost Estimate Summary

Purpose of Estimate Summary

The following Summaries of Total Costs are composite totals of all seventeen estimates, for the proposed remedies to issues noted in each of the Facility Assessment Spreadsheets, and are as follows:

- Summary of Total Costs by Site – Includes soft costs (design, consultant, plan check and inspection/testing fees) at 25% of the hard cost (actual construction cost), and District total.
- Summary of Construction Costs by Assessment Category – A breakdown of each campus for costs associated to the 5 assessment categories (Civil, Architectural, Mechanical/Plumbing, Electrical, and Structural). Includes a total for all Sites, and a total Soft Costs.
- Summary of Further Analysis Costs by Site – A breakdown of issues noted in the Assessment spreadsheets (pink cell highlights) that require further analysis. These are items noted by the assessment team that could not be estimated due to the unknown nature of the cause, or else required additional professional services that were not included in the scope of this report. Some of these items may list an estimated construction cost to remediate, but requires a design fee to produce the construction documents.

Explanation of Costs

Of equal importance with the identification of assessment needs, is the importance of a corresponding reliable estimate of project costs. Each planned improvement has been estimated by Neil Bohn, principal estimator, Counterpoint Construction Services, who visually inspected each site and referenced available existing construction drawings, in an effort to increase the Estimate's level of accuracy. Neil has many years of estimating and construction project management on public school projects throughout California.

Project Cost Inclusions

The Facilities Assessment Spreadsheets for each site identifies general construction needs which are the basis for the construction cost estimates. In addition to "hard" construction costs, other necessary costs (termed "soft costs") have been included to determine more accurate project costs. Construction contingencies have been included as a general 10% of base estimate. Other soft costs included are

design fees, Division of the State Architect and California Department of Education fees, and inspection fees as well as testing laboratory, bidding and other attendant costs.

Project Cost Exclusions

The project cost estimates do not include escalation multipliers, as has already been stated. Other exclusions are furniture, and other moveable fixtures, and equipment. For example, individual computers and servers are not included, as they are considered moveable equipment, but main and intermediate data racks and other backbone components are included.

Further exclusions from the project costs include; legal fees, bond counsel, financing consultants, and internal District administration costs. The estimate also does not include cost escalation over time, since construction schedules must first be determined, in order to project a construction cost increase.

Project Cost Assumptions

The Facilities Assessment Spreadsheets identify site specific deficiencies in each of the five (5) assessment categories. In addition, and in order to address the long term 30-year needs for each of its facilities, the District requested an allocation be included at each site, for the renovation or replacement of the following general items of facility maintenance;

- Replace all exterior windows with new aluminum frame, tempered, dual pane, Low-E, glazing (except Ruby Bridges E.S.).
- Replace all exterior doors with painted galvanized metal frame, with fiber-reinforced plastic (FRP) doors, and District Standard hardware with high-security keying.
- Replace all existing campus roofing without a current 15-year minimum warranty (see each Spreadsheet for recommended replacement or upgrade).
- Reseal and repaint all exterior walls, fascias, trims, gutters, and miscellaneous site features.
- Repaint all interior walls, surfaces, and other features.
- Replace all existing classroom/corridor flooring with new resilient flooring with walk-off entry carpet (except Ruby Bridges E.S.).
- Add Trash Enclosures per Health Dept regulation, at all campuses (except Ruby Bridges).

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- Replace all existing boiler/radiator heating systems with individual gas-fired unit ventilators (repaired boiler systems such as Lincoln, Encinal & Haight, to be eventually phased out).
- Replace all waterless urinals with District Standard urinal.
- Phase out all Fire Alarm panels and replace with District Standard “FireLite” systems.
- Replace all existing telephone/data systems and replace with District Standard ‘Voice over Internet Protocol’ (V.O.I.P) system.
- Replace all existing bell, clock & speaker (P.A.) systems with District standard VOIP system.
- Replace all existing interior light fixtures with new energy efficient T5 lamps with electronic ballasts (except Ruby Bridges E.S.).
- Add Occupancy Sensor lighting control at all classrooms.

Additional Estimate Information

Public School Construction Costs

Inherent in public school construction costs are issues that are not encountered in most other types of 'non-public' construction. Essential facility and prevailing wage laws are directly responsible for the significantly higher costs associated with public school new construction and modernization. Due to the nature of its public role and liability for occupants and other users, public school buildings and other facilities are designated as "Essential Facilities", which explains the use of many on them as disaster relief sites during emergency conditions. The 'essential facility' designation requires that the building be designed and built, occupied, and operational after an earthquake, which substantially increases its construction cost.

Prevailing Wage Law

California Prevailing Wage Law (Calif. Labor Code, 1720) increases the cost of public school construction, as compared to private sector work, by increasing the hourly wage rate of project workers as compared to private sector or non-union wages. The net effect of this law increases public school construction costs by as much as 30%.

Additional Phases

This Report is not intended to be a final assessment of all necessary improvements at any particular campus noted. It is intended to indicate the broad extent and probable expense to the District for its overall scope of upgrade and improvements at all (17) Sites. General issues of ADA access, systems upgrades, code compliance, and fire/life/safety have been addressed and defined. At a later date, proposed campus specific projects of improvement should use this Report only as a basis for a more thorough and rigorous analysis and definition of a project's scope of work.

End of Cost Estimate Summary

SUMMARY OF TOTAL COSTS by Assessment Site		
SITE / CAMPUS		TOTAL COSTS
		includes soft costs @ 25% of hard const. \$
1	Academy of Alameda	\$ 4,827,963
2	Alameda High School	\$ 19,550,331
3	Bay Farm Elementary School	\$ 2,594,313
4	Encinal High School	\$ 12,704,125
5	Earhart Elementary School	\$ 4,543,607
6	Edison Elementary School	\$ 4,382,856
7	Franklin Elementary School	\$ 2,636,859
8	Haight Elementary School	\$ 3,682,597
9	Lincoln Middle School	\$ 7,208,744
10	Longfellow C.D.C./ Woodstock NEA	\$ 4,889,280
11	Lum Elementary School	\$ 3,281,382
12	Otis Elementary School	\$ 3,614,938
13	Paden Elementary School	\$ 3,699,489
14	Ruby Bridges Elementary School	\$ 736,944
15	Washington Elementary School	\$ 5,063,850
16	Wood Middle School	\$ 7,728,054
17	Woodstock Educational Center	\$ 6,030,018
TOTAL COSTS for ALL CAMPUSES (does not include escalation)		\$ 92,347,385

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Summary of Construction Costs by Assessment Category

CATEGORY	Academy of Alameda	Alameda High School	Bay Farm Elementary School	Encinal High School	Earhart Elementary School	Edison Elementary School	Franklin Elementary School	Haight Elementary School	Lincoln Middle School	Longfellow/ NEA & CDC	Lum Elementary School	Otis Elementary School	Paden Elementary School	Ruby Bridges Elementary School	Washington Elementary School	Wood Middle School	Woodstock Educational Center	Total
1) Civil	\$ 693,046	\$ 1,748,656	\$ 613,595	\$ 1,694,530	\$ 1,047,222	\$ 727,400	\$ 58,420	\$ 937,860	\$ 827,100	\$ 1,088,556	\$ 351,178	\$ 978,510	\$ 760,616	\$ 17,500	\$ 947,873	\$ 835,860	\$ 1,023,228	\$ 13,658,103
2) Architectural	\$ 2,509,263	\$ 8,161,431	\$ 1,005,080	\$ 5,345,070	\$ 2,032,291	\$ 1,577,520	\$ 982,705	\$ 971,540	\$ 3,115,563	\$ 1,093,278	\$ 1,606,400	\$ 1,380,580	\$ 1,587,860	\$ 76,130	\$ 2,240,680	\$ 3,740,485	\$ 2,586,410	\$ 37,503,023
3) Mech/Plumb	\$ 249,060	\$ 3,113,036	\$ 202,400	\$ 716,400	\$ 179,273	\$ 793,488	\$ 457,288	\$ 747,755	\$ 1,199,894	\$ 949,080	\$ 236,600	\$ 365,360	\$ 212,040	0	\$ 463,620	\$ 796,068	\$ 590,560	\$ 11,022,860
4) Electrical	\$ 411,002	\$ 2,553,142	\$ 234,375	\$ 2,379,150	\$ 346,100	\$ 229,878	\$ 296,075	\$ 288,923	\$ 600,439	\$ 622,110	\$ 430,928	\$ 111,500	\$ 300,075	\$ 495,925	\$ 282,408	\$ 794,031	\$ 556,816	\$ 10,521,872
5) Structural	0	\$ 64,000	\$ 20,000	\$ 28,150	\$ 30,000	\$ 178,000	\$ 315,000	0	\$ 24,000	\$ 158,400	0	\$ 56,000	\$ 99,000	0	\$ 116,500	\$ 16,000	\$ 67,000	\$ 1,172,050
Total Construction w/o Soft Costs	\$3,862,371	\$15,640,265	\$2,075,450	\$ 10,163,300	\$3,634,886	\$3,506,285	\$2,109,488	\$2,946,078	\$5,766,995	\$3,911,424	\$2,625,106	\$2,891,950	\$2,959,591	\$ 589,555	\$4,051,080	\$6,182,443	\$4,824,014	\$ 73,877,908

SUBTOTAL CONSTRUCTION COSTS = \$
SOFT COSTS @ 25% (No Escalation)

TOTAL COST for ALL SITES =

\$ 73,877,908

\$18,469,477

92,347,385

FURTHER DESIGN ANALYSIS REQUIRED			
by Assessment Site			
SITE / CAMPUS		ITEM	COST
1	Academy of Alameda	Civil - A review of plans suggests that trench drains flow north through the curb into the public street. Trench drains and connecting pipes should be cleaned and video inspected to determine if there are restrictions in the line, or any low points that slow drainage flow.	\$ 2,500
		Electrical - unclear if generator provides emergency backup power for egress lighting.	N.C.
2	Alameda High School	Structural - Academic Bldg. appears to have inadequate out-of-plane wall anchorage.	\$ 4,000
		Structural - Gym lacking low roof to wall anchorage at west wall N/S direction btw grids 13,14	\$ 4,000
3	Bay Farm Elementary School	Civil - Geotechnical Report with extensive soil boring and testing by a Consultant well versed in Bay Fill projects, is a required prerequisite to any work to remedy the subsidence issue.	\$ 75,000
		Structural - Analysis & design required based on Geotech analysis (design fee only)	\$ 20,000
4	Encinal High School	Structural - 2 story classroom bldg lacking lateral force resisting system in longitudinal direction	\$ 6,000
		Structural - Steel transverse moment frames at locker rooms are not to current day standards.	\$ 4,000
5	Earhart Elementary School	Architectural - Investigate If unvented insulation at roof joist framing, resulting in condensation and probable framing dry rot. (Analysis only)	\$ 4,000
6	Edison Elementary School	Structural - Bldg E attached to Classroom Buildings D, F during additions. (design fee only)	\$ 14,000
		Structural - No hold downs at any wood shear walls for Buildings D,F,B, and A (design fee only)	\$ 6,000
		Structural - Large collector forces at Multi-Purpose Building (design fee only)	\$ 8,000
7	Franklin Elementary School	Structural - Bldg A concrete shear walls appear to have inadequate reinforcement (design fee only)	\$ 12,000
		Structural - Bldg B has no seismic gap from adjacent 2 story bldg. (design fee only)	\$ 16,000
8	Lincoln Middle School	Structural - CMU shear wall between Gym & locker rooms appears to be lacking in length (design fee only)	\$ 4,000
		Structural - Bldg. C interior walls at middle seismic joints appear lacking in shear wall length (design fee only)	\$ 4,000
9	Longfellow C.D.C./ Woodstock	Structural - Exterior surface cracking at Admin/MP bldg. If structure renovated,further investigate soil and structure to limit cracking. (Soils Report & design fee only)	\$ 50,000
10	Washington Elementary School	Structural - 2-story Bldg. shearwall openings exceed limits (design fee only)	\$ 4,000
		Structural - Insufficient coupling beam support at 2 story concrete bldg. (design fee only)	\$ 8,000
11	Wood Middle School	Civil - Original plans show 12" storm drain in former baseball outfield. Due to playfields reconfigured, video inspect & clean drain lines to determine size, and obstructions. Replace if undersized (video & design only)	\$ 6,000
		Structural - Exterior braced frames at 2-story Bldg. do not have pier foundations, cannot find DSA Application number (design/ analysis fee only)	\$ 6,000
12	Woodstock Educational Center	Civil -Provide Geotech Report with extensive soil boring and testing by a Consultant well versed in Bay Fill projects, prior to planning any work to remedy the subsidence issue.	\$ 60,000
		Structural - Multi-Purpose Bldg. roof spans 90 feet to shear walls - design fee only	\$ 3,000
TOTAL FEES for ALL CAMPUSES			\$ 318,000