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| Hydraulic Elevator Standards (November 25, 2010)   |
| OUSD Minimum Wheelchair Lift Standards (January 8, 2011)   |
| Fire Alarm Standards (December 9, 2013)  |
| Intrusion Alarm System Standards (December 13, 2013 and Revisions dated Feb. 10, 2014 and March 19, 2014)                              |
| Combination Fire Alarm and Intrusion Alarm System Standards (December 13,2013 and Revisions dated February 13, 2014 and March 19,2014) |
| OUSD Standard Network Build Specification (4/16/14)  |

| Specification Section / Description      | OUSD Educational Specifications and Design Guidelines  | Facilities Standards   | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|--|--|--|--------------|--------------------|----|--|
|  |  |  |              | Yes                | No |  |
| <b>DIVISION 1 - GENERAL REQUIREMENTS</b> |  |  |              |                    |    |  |
|  | INTRODUCTION: Create "a Full Service Community School District that serves the whole child, eliminates inequity, and provides each child with excellent teachers for every day." Sustainability is a guiding principle for all projects. OUSD's Design Guidelines align with design criteria established by the Coalition for High Performance Schools (CHPS) best practices. New Construction projects should adhere to all relevant specifications and design teams should actively engage the school community to gather additional input on the desired outcomes. Renovations/Modernizations shall adhere to these specifications so much as meeting the required specifications does not result in prohibitively high project costs. If a site or facility has features that make full implementation infeasible, design teams may explore alternative options in consultation with the District's Facilities Division and school leadership. | The architect is to include in the Construction Documents a new site egress map for posting at the site and inclusion in the site safety plans. NO EXCEPTIONS  |              |                    | X  |  |
| <b>DIVISION 1 - GENERAL REQUIREMENTS</b> |  |  |              |                    |    |  |
|  |  |  |              |                    |    |  |
| Specification Section / Description      | OUSD Educational Specifications and Design Guidelines  | Facilities Standards   | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|  |  |  |              | Yes                | No |  |
| <b>DIVISION 1 - GENERAL REQUIREMENTS</b> |  |  |              |                    |    |  |
| 1300 Submittal Requirements              |  | Provide 15 working days prior to initial submission of first such submittal a Submittal Schedule coordinating it with the Construction Schedule. No submittal will be reviewed until the Submittal Schedule is approved. Substitutions are to comply with the requirements of Document 00 71 00-2, Special Conditions - Section 4 "Substitution for Specified Items".  |              |                    | X  |  |
| 1500 Temporary Facilities                |  | Provide temporary fencing to isolate construction from occupants. Provide protection to ALL existing structures and its fixed contents finishes and grounds.   |              |                    | X  |  |
| 1505 Construction Waste Management       |  | All projects pursuant to OUSD Resolution No.: 0001-0051 are to comply with City of Oakland Construction and Demolition Debris Waste Reduction and Recycling Ordinance #12253 and the Alameda County Waste Management Authority's direction.  |              |                    | X  |  |
| 1600 Product Requirements                |  | All projects to include Master Specification Section 01600, Products Requirements  |              |                    | X  |  |
| <b>DIVISION 1 - GENERAL REQUIREMENTS</b> |  |  |              |                    |    |  |
|  |  |  |              |                    |    |  |
| Specification Section / Description      | OUSD Educational Specifications and Design Guidelines  | Facilities Standards   | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|  |  |  |              | Yes                | No |  |
| <b>DIVISION 1 - GENERAL REQUIREMENTS</b> |  |  |              |                    |    |  |
| 1742 Final Cleaning                      |  | All projects to include Master Specification, Section 01742, Final Cleaning. Conduct cleaning and waste disposal in compliance with city Of Oakland - Ordinance #12253. The contractor is responsible for the removal and disposal of ALL packaging for furniture whether furniture provided by OUSD or the contractor. Coordinate requirements with the Project Manager. All existing vinyl flooring shall be thoroughly stripped of old wax and have at least four (4) coats of a combination wax/sealer, or two (2) coats of sealer and four (4) coats of wax. Contractor shall submit for prior approval manufactures information on floor finish to be applied. All new floors shall have their factory seal stripped off and shall have a floor finish applied according to the requirements of Custodial Service. Coordinate all work including material with Custodial Services prior to commencement of work. |              |                    | X  |  |

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|-------------------------------------|--|--|--|--------------------|----|---|
|                                     |  |  |  | Yes                | No |   |
| <b>DIVISION 2 - SITE WORK</b>       |  |  |  |                    |    |   |
| 2220<br>Selective Demolition        |  | Salvage of material: Design profession is to review and coordinate with B&G items to be removed and to determine if salvage is desired. Deliver salvaged material to location in District as directed. Abatement of Hazardous Material: Coordinate with recommendation of District environmental consultant for abatement of hazardous material. District preference is for abatement of asbestos versus encapsulating.  |  |                    | X  |   |
| 2730<br>Paving                      | AC<br>At schoolyards/athletic courts that are being used for parking, provide higher density asphalt sections on areas that will be driven on by vehicles. | Conform with city of Oakland Public Works sidewalk code. Repaving: Incorporate paving fabric in overlay or in replacement A/C over compacted fill. AB is to be Certified as being free of hazardous material. Striping is to comply with ADA standards. AC section to comply with Geo Technical Report recommendations.  |  |                    | X  |   |
| <b>DIVISION 2 - SITE WORK</b>       |  |  |  |                    |    |   |
| Specification Section / Description | OUSD Educational Specifications and Design Guidelines  | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards  |
|                                     |  |  |  | Yes                | No |   |
| <b>DIVISION 2 - SITE WORK</b>       |  |  |  |                    |    |   |
| 2740<br>Resilient Paving            |  | Poured in Place (PIP) seamless, resilient safety surface conforming to ASTM F-1292-09 Head Form Drop Test and CPSC NBSIR-79-1707. Resiliency - 100% Memory. Troweled to smooth, even uniform surface. Slope to drain as indicated on plans. Color and texture shall be uniform throughout. Provide continuous key slot at entire perimeter per manufacturer's standards and requirements. Coordinate with the location and attachment of play equipment to produce a safe neat appearance. Depth of PIP surfacing to meet ASTM Impact Attenuation Standards for the fall height of the play equipment. | GTimepax Pigmented - PIP by Gametime, DURA TURF PIP by Sports Surfaces Specialties, Inc., or approved equal. |                    | X  | B&G: Preference is for Soft Surface Tiles by Sof Surfaces, Inc. - SoftTILE Premium Series. No other tile substitute has been reviewed and approved for implementation. Impact test results shall be provided as the same requirements for the PIP surfaces. |
| <b>DIVISION 2 - SITE WORK</b>       |  |  |  |                    |    |   |
| Specification Section / Description | OUSD Educational Specifications and Design Guidelines  | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards  |
|                                     |  |  |  | Yes                | No |   |
| <b>DIVISION 2 - SITE WORK</b>       |  |  |  |                    |    |   |

|                                      |  |  |  |  |   |   |
|--------------------------------------|--|--|--|--|---|---|
| Con't<br>2740<br>Resilient<br>Paving |  | Test Results: Impact Attenuation test results shall be provided to OUSD or OUSD's representative. These test results shall be certified by and submitted on independent testing laboratory letterhead. Test results shall meet or exceed USCPSC guidelines for impact attenuation. The cost for the testing is to be paid by the contractor. |  |  | X | The architect, landscape architect or design team are to avoid placing decomposed granite material adjacent to playground safety surfaces. From past experiences at OUSD the decomposed granite has migrated onto the safety surface to form a hazardous condition. |
| 2780 Unit Pavers                     |  | Extra Material: 2% of amount installed but no fewer than 10 insert units. Full size units for each size, color and pattern provided.   |  |  |   | B&G: Extra Materials are to be stored on site in designated secured area.   |
| 2800 Site Furnishings                |  | Extra Material: Bench Replacement Planks: Not less than 2 full size units for each type and size provided  |  |  | X | B&G: Extra Materials are to be delivered to the B&G Carpentry Department. Label material with site location of benches.   |

| Specification Section / Description                 | OUSD Educational Specifications and Design Guidelines  | Facilities Standards  | Manufacturer                 | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|---|--|---|------------------------------|--------------------|----|--|
|   |  |   |                              | Yes                | No |  |
| <b>DIVISION 2 - SITE WORK</b>                       |  |   |                              |                    |    |  |
| 2831 Chain Link Fences and Gate. Ornamental Fencing | Provide appropriate fencing to establish and secure the campus boundary while welcoming community use.   | Chain Link Fencing: 8 ft high with 1 inch mesh - 9 gauge coated wire with padlock hasp at gates. Provide knuckled top and bottom with end closed. Ornamental Fencing: 8 ft high that prohibits climbing. Locate fencing around building compound. |                              |                    | X  |  |
| 2882 Playground Equipment - Play Structures         | Locate play structures on the periphery of the school yard, but with buffer zones so that they are not immediately adjacent to property fence lines or buildings. Do not create "islands" that interfere with play courts. | Play Structures provided are to meet specific age and grade requirements.   | Game Time or approved equal. | X                  |    | B&G Preference is for playground equipment that are manufactured in the U.S.     |

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|-------------------------------------|---|--|--------------|--------------------|----|---|
|                                     |   |  |              | Yes                | No |   |
| <b>DIVISION 2 - SITE WORK</b>       |   |  |              |                    |    |   |
| 2900 Landscaping - Plants           | Comply with OUSD Vegetation Policy. Comply with water conservation and paving surfaces per CHPS. Consider Implementing principles of environmentally friendly landscaping in the Bar Area, as established by the Bay Friendly Landscape Guidelines. Include measures to protect landscaping areas from general foot traffic and student activities. | All plant material are to be indigenous to the climate zone, low water consumption, drought resistant and low maintenance. Avoid plants with stickers or thorns. All trees to be deep rooted. Do not locate trees near fence or building. Utilize deciduous shade trees to provide summer shading of buildings and parking lots. NO shallow rooting trees. Provide root barrier to prevent spread of roots under paving and buildings. |              |                    | X  | Review landscape plans with B&G Grounds Department prior to implementation. Avoid hiding areas in landscaping. Reduce use of plants that require a high-level of shearing. Non-fruit bearing trees in open areas is preferred. Fruit bearing trees may be planted in secured "Outdoor Classroom Gardens". Olive trees are NOT recommended as they drop seeds, pollen and fruits to the ground which creates a hazardous condition for the staff and students. NO LARGE BOULDERS |

| Specification Section / Description | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer | Substitute Allowed |    | Grounds (B&G), Custodial (CS) and Internet Technology (IT) |
|-------------------------------------|---|---|--------------|--------------------|----|--|
|                                     |   |   |              | Yes                | No |  |
| <b>DIVISION 3 - CONCRETE</b>        |   |   |              |                    |    |  |
| 3300 Cast<br>in Place Concrete      |   | <p>Regular Weight - 2,500 PSI<br/>           Light Weight - 3000 PSI<br/>           Steel Re-bars: ASTM 615 Grade 60</p> <p>WWM: ANSI/ASTM A-185 plain type, coil rolls, uncoated finish.<br/>           Vapor Barrier: ASTM E-1745 meet or exceed Class C. Structural Concrete Mix Design shall yield specified strength prior to 28 days.<br/>           Exposed slabs: non slip medium broom finish.<br/>           Non-exposed slabs: per requirement for finish floor material.<br/>           Design strength of concrete and all material are to be provided per the Structural Engineers design and specifications.</p> |              |                    |    | X  |

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|--|---|----------------------|----------------------|--------------------|----|--|
|  |   |                      |                      | Yes                | No |  |
| <b>DIVISION 4 - MASONRY</b>              |   |                      |                      |                    |    |  |
| 4900<br>Masonry Restoration and Cleaning |   |                      | Kenstone or Proscoco | X                  |    | B&G: Exterior CMU walls shall be covered with anti-graffiti sealant.             |

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|-------------------------------------|---|--|---|--------------------|----|---|
|                                     |   |  |   | Yes                | No |   |
| <b>DIVISION 5 - METALS</b>          |   |  |   |                    |    |   |
| 5500 Metal Fabrication              |   | Downspouts to be galvanized Schedule 40 steel pipe. All downspouts to have welded joints. Threaded and other collar joints are not acceptable. |   |                    | X  |   |
|                                     |   | Exterior metal to be hot-dipped galvanized after fabrication and painted.  |   |                    | X  |   |
|                                     |   | Metal stair nosing - extend full length of stairs.   | American Safety Tread Co. Tapered "Feracast" Style 4702 | X                  |    |   |



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|-------------------------------------|---|--|--------------|--------------------|----|--|
|                                     |   |  |              | Yes                | No |  |
| <b>DIVISION 5 - METALS</b>          |   |  |              |                    |    |  |
| 6101<br>Rough Carpentry             |   | Mill stamped S-Dry. Maximum Moisture 19% prior to installation. Lumber shall exhibit no growth of fungus when installed. |              |                    |    | X  |
| 6200      Finish<br>Carpentry       |   | All lumber to be Kiln Dry. All casework to be WIC certified custom grade.  |              |                    |    | X  |

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|--|---|---|--|--------------------|----|--|
|  |   |   |  | Yes                | No |  |
| <b>DIVISION 7 - THERMAL and MOISTURE CONTROL</b> |   |   |  |                    |    |  |
| 7100 Waterproofing                               |   | Under Slab - requirements dependent on condition of site. Consult with Soils Engineer / Architect and water proofing consultant if required. Seal ALL seams and penetrations.   | Fortifiber Corp.: "Moistop Ultra" or Stego Industries: "Stego Wrap". | X                  |    |  |
| 7190 Water Repellants                            |   | Heavy Duty clear masonry sealer   | Rainstopper  | X                  |    |  |
| 7310 Asphalt Shingles                            |   | 30 Years Nail Fasteners - NO Staples. Installation guaranteed against wind failure up to 60 MPH.  |  |                    | X  |  |
| <b>DIVISION 7 - THERMAL and MOISTURE CONTROL</b> |   |   |  |                    |    |  |
| Specification Section / Description              | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|  |   |   |  | Yes                | No |  |
| <b>DIVISION 7 - THERMAL and MOISTURE CONTROL</b> |   |   |  |                    |    |  |
| 7410 Thermoplastic Polyofefin (TPO)              |   | Single Ply roofing - Mechanically attached or fully adhered. Installer to have minimum 3 years experience. Warranty: Provide total system warranty no dollar limit guarantee for 20 years year period signed by the Contractor, manufacturer and installer. In years two, five, ten and fifteen of the Warranty, the manufacturer shall provide roof inspections, preventive maintenance, and housekeeping services. FACILITIES PREFERENCE  |  |                    | X  |  |
| <b>DIVISION 7 - THERMAL and MOISTURE CONTROL</b> |   |   |  |                    |    |  |
| Specification Section / Description              | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|  |   |   |  | Yes                | No |  |
| <b>DIVISION 7 - THERMAL and MOISTURE CONTROL</b> |   |   |  |                    |    |  |
| 7510 Built Up Bituminous Roofing (BUR)           |   | Three Ply, Type VI glass fiber sheets with modified bitumen cap sheet with granular surfacing. Rating: Factory Mutual I-60 rating. Perlite insulation to taper roof slopes to drain at low slope installation. General Note - Roofing: All roof drains are to be tested prior of roofing work. Provide for complete tear off of existing roofing. Roof mounted equipment and lines are to be supported in manner as to permit roof replacement without their removal. Warranties: Contractor 2 yrs and 15 years for material. |  |                    | X  | B&G PREFERENCE. Review with Facilities Director for Approval.                    |
| 7620 Sheet Metal Flashing and Trim               |   | Hot dipped galvanized 24 gauge minimum.   |  |                    | X  |  |

| 7631<br>Gutters and Related<br>Flashing          |  | Downspouts to be<br>galvanized Schedule 40<br>steel pipe. See Division 5 -<br>Metal Fabrication  |  |                    | X  |  |
|--|--|--|--|--------------------|----|--|
|  |  |  |  |                    |    |  |
| Specification Section /<br>Description           | OUSD Educational Specifications<br>and Design Guidelines | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings &<br>Grounds (B&G),<br>Custodial (CS) and<br>Internet Technology<br>(IT) Standards |
|  |  |  |  | Yes                | No |  |
| <b>DIVISION 7 - THERMAL and MOISTURE CONTROL</b> |  |  |  |                    |    |  |
| 7720<br>Hatches                                  | Roof   | Aluminum construction with<br>mill finish - 11 gauge.<br>Review and coordinate<br>Intrusion Alarm<br>requirements - Division 16 -<br>Electrical  |  |                    |    |  |
| 7840<br>Stopping                                 | Fire   | Fire Marshall approved - UL<br>or WH classified systems.   |  |                    |    |  |
| 7920<br>Joint Sealers                            |  | Silicon Sealant - Exterior<br>application for concrete,<br>masonry, glazing and door<br>frames.  | Tremco   | X                  |    |  |
|  |  | Interior Building Sealants -<br>provide appropriate type of<br>sealant for material in<br>contact. Acrylic- emulsion,<br>one part, non-sag, mildew<br>resistant.                           | Pecora Corp:<br>"AC-20"<br>Sonneborn:<br>"Sonclac"<br>Tremco: "Tremco<br>Acrylic Latex 834"  | X                  |    |  |
|  |  | Sanitary Sealants - One part<br>mildew resistant silicone,<br>formulated with fungicide;<br>for sealing non-porous<br>substrates around ceramic<br>tile, plumbing fixtures and<br>showers. | Dow Corning Corp:<br>"786 Mildew<br>Resistant"<br>Sonneborn:<br>"Scholastic Ominplus"  | X                  |    |  |
|  |  |  |  |                    |    |  |
| Specification Section /<br>Description           | OUSD Educational Specifications<br>and Design Guidelines | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings &<br>Grounds (B&G),<br>Custodial (CS) and<br>Internet Technology<br>(IT) Standards |
|  |  |  |  | Yes                | No |  |
| <b>DIVISION 7 - THERMAL and MOISTURE CONTROL</b> |  |  |  |                    |    |  |
| Con't<br>7920<br>Joint Sealers                   |  | Acoustical Sealants -<br>provide type of acoustical<br>sealant as applicable for<br>concealed joints and<br>exposed joints.  | Pecora Corp:<br>BA-98"<br>Tremco: "Tremco"<br>Acoustical Sealant"<br>Pecora Corp: "AC-20<br>DTR"<br>USG: "Sheetrock"<br>Acoustical Sealant | X                  |    |  |

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|---------------------------------------|--|--|--|--------------------|----|---|
|                                       |  |  |  | Yes                | No |   |
| <b>DIVISION 8 - DOORS and WINDOWS</b> |  |  |  |                    |    |   |
| 8110<br>Steel Doors and Frames        | All classroom doors should provide a view panel, either within the door itself or adjacent to the strike side of the door.   | HM Doors and Frames: 14 gauge: Hot dipped galvanized; Seamless welded edges and faces.<br>Hardware Reinforcement: Hinges #7 gauge; Locksets #10 and surface applied hardware #12 gauge.<br>Door Reinforcement : 14 gauge, Fabricate with welds at ALL ends and at 3 inches on center.  | Curries, Steelcraft                          | X                  |    |   |
| 8120<br>Aluminum Doors and Frames     |  | Monumental wide style, wide rail entrance doors.   | Kawneer Series #500 with 12 inch bottom rail | X                  |    |   |
| 8210<br>Wood Doors                    | All classroom doors should provide a view panel, either within the door itself or adjacent to the strike side of the door.   | INTERIOR APPLICATION ONLY Solid Core - 1-3/4" or as required. All internal frame edges bonded to core, solid stave wood core.  |  |                    | X  |   |
|                                       |  |  |  |                    |    |   |
|                                       |  |  |  |                    |    |   |
|                                       |  |  |  |                    |    |   |
| Specification Section / Description   | OUSD Educational Specifications and Design Guidelines  | Facilities Standards   | Manufacturer                                 | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards                |
|                                       |  |  |  | Yes                | No |   |
| <b>DIVISION 8 - DOORS and WINDOWS</b> |  |  |  |                    |    |   |
| 8210<br>High Abuse Doors              |  | FRP finished foam core doors with reinforced metal frames and continuous hinges. Provide at all secondary school entries and other high use areas. See Outline Specs - Section 8710 - "Hinges" for limitation of use.  | Special - Lite SL-17                         |                    | X  | B&G: All exterior doors should be FRP finished doors with continuous hinges and Norton closers. |
| 8520<br>Aluminum Windows              | Fit windows with shading systems to reduce glare and solar heating effects throughout the day. Maximize the utility of operable windows for passive ventilation. Integrate non-glare windows in designs. | Window: Single glazed from interior - all welded or factory sealed corners. Factory applied Class 1 anodized finish. Wall sections - 1/8" thick or 2" tubular sections. Tubular type sections at windows 4 feet or greater in width. Provide restrictor blocks with maximum 5 inch opening for hung windows.   | Blomberg, Vista Wall, Kawneer or Efco        | X                  |    |   |
|                                       |  |  |  |                    |    |   |
|                                       |  |  |  |                    |    |   |
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|                                       |  |  |  | Yes                | No |   |
| <b>DIVISION 8 - DOORS and WINDOWS</b> |  |  |  |                    |    |   |
| Con't 8520<br>Aluminum Windows        |  | Window Hardware:<br>Handles: Cam Type<br>Hinges: S/S 4 bar hinges. Provide with "restrictor blocks"<br>Remote Operation: Provide 7 feet long pole/hook with rubber end.<br>Catches: Spring type at Transom hopper vents.<br>Fasteners: Stainless Steel<br>Window Guards: Perforated metal, 63% open, powder coated galvanized steel.<br>ALL INSTALLED WINDOWS FIXED AND/OR OPERABLE ARE TO BE FIELD TESTED FOR WATER INFILTRATION PUSJANT TO ASTM E1105. |  |                    | X  |   |

| 8521 Aluminum Windows - Portable Building Projects Only        |   | Extruded anodized with fixed and operating sash, minimum AAMA Grade C-60. Minimum section depth - 1-1/2" thick. One hopper vent per sash.  |   |                    | X  |  |
|--|---|--|---|--------------------|----|--|
|  |   |  |   |                    |    |  |
|  |   |  |   |                    |    |  |
| Specification Section / Description                            | OUSD Educational Specifications and Design Guidelines               | Facilities Standards   | Manufacturer                                      | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|  |   |  |   | Yes                | No |  |
| <b>DIVISION 8 - DOORS and WINDOWS</b>                          |   |  |   |                    |    |  |
| 8600 Skylights   | Maximize the utility of operable skylights for passive ventilation. | Flat panel skylight system. Retro fit existing skylights with sloped curb. ALL INSTALLED SKYLIGHTS ARE TO BE FIELD TESTED FOR WATER INFILTRATION PURSUANT TO ASTM E1105.   | Kalwall 12" X 12" "Tuckerman Grid. No known equal |                    | X  |  |
| 8710 Door Hardware   |   | Finish: 626 (Satin Chrome) or as required to match existing uniform site standard.   |   |                    | X  | See B&G - OUSD Door Hardware Specifications Guidelines dated December 4, 2009    |
| 8710 Door Hardware - Hinges: Hanging Devices                   |   | Continuous Hinge: FRP Doors - full length, mortised heavy duty continuous hinges. For labeled doors - specify S/S hinge. If an obstruction of more than 2-13/16" prevents the door from opening 180 degrees or against the adjoining wall, than specify wide throw butts. Specify (4) wide throw butts for a standard height door. ALL NEW EXTERIOR DOORS ON SECONDARY SCHOOL CAMPUS ARE TO BE FULL LENGTH MORTISED CONTIUOUS HINGE. | Ives 224HD - Finish CL                            |                    | X  |  |
|  |   |  |   |                    |    |  |
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|  |   |  |   | Yes                | No |  |
| <b>DIVISION 8 - DOORS and WINDOWS</b>                          |   |  |   |                    |    |  |
| Con't 8710 Door Hardware - Hinges: Hanging Devices             |   | Butt Hinges: Heavy duty ball bearing. See Specification Section 08710 for additional hinge options to have doors open 180 degrees or against adjacent wall. ALL HINGES TO HAVE NON-REMOVABLE PINS and TAMPER PROOF SCREWS  | Hager #BB1168 x 626 X NFP                         |                    | X  |  |
| 8710 Door Hardware - Locksets and Latch sets: Securing Devices |   | Cylindrical Locks:   | Schlage ND Series x Rhodes with "Vandigard" lever |                    | X  | Schlage ND Series x Rhodes with US26D Finish                                     |
|  |   | Passage Lock   | ND10S   |                    | X  | ND10S  |
|  |   | Privacy Lock   | ND40S   |                    | X  | ND40S  |
|  |   | Faculty Restroom Lock: "Hotel" function lockset with modification to enable only a "push" function and disable the "push and turn" function  | ND85PD  |                    | X  | ND85PD   |
|  |   | Interior Office Lock: "Classroom function" lockset with no button function inside and keyed cylinder on other side   | ND94PD  |                    | X  | ND92PD - Push Button B&G acceptable with ND94PD per Facilities standards         |
|  |   | Classroom Security Lock  | ND95PD  |                    | X  | ND95PD   |
|  |   |  |   |                    |    |  |
| Specification Section / Description                            | OUSD Educational Specifications and Design Guidelines               | Facilities Standards   | Manufacturer                                      | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |

| Description  | Design Guidelines                                     |   |   | Yes                | No | Internet Technology (IT) Standards  |
|--|---|---|---|--------------------|----|---|
|  |   |   |   |                    |    |   |
| <b>DIVISION 8 - DOORS and WINDOWS</b>  |   |   |   |                    |    |   |
| Con't<br>8710<br>Door Hardware -<br>Locksets and Latch<br>sets: Securing Devices |   | Storage Lock: Storage rooms to have lockset that has a lever that locks automatically when door is shut, but releasable from interior and keyed cylinder on other side. Storeroom lock is for TRUE Storage Rooms only (i.e. room designated solely for storage usage.   | ND96PD  |                    | X  | ND96PD  |
|  |   | Student Toilet Room: Provide push plates and fixed pull handles with a separate deadbolt with accessible thumb latch for egress function only. All doors with this requirement shall have a label that requires door to remained unlocked when building is occupied. Students must not be able to lock themselves in the toilet rooms   | Push Plate: Trimco #1001-3 Pull Plate: Trimco #1017-3 Pull Plate (punched for cylinder turn piece) Deadbolt: Schlage B663P with ADA thumb latch |                    | X  | B&G preference is for applying the deadbolt (B663P) at restrooms with exterior access door only. Coordinate and review with Project Manager.  |
|  |   |   |   |                    |    |   |
| Specification Section / Description  | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer  | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards  |
|  |   |   |   | Yes                | No |   |
| <b>DIVISION 8 - DOORS and WINDOWS</b>  |   |   |   |                    |    |   |
| 8710<br>Door Hardware - Exit<br>Devices  |   | Positive Latching NOT Required: CD 98 NL x 990 NL or CD 98 NL x 990 NL x CD98 EO<br>Positive Latching REQUIRED: 98L-2-F x 994L or 98L-2-F x 994L x 98EO-2-F<br>Provide with KEYED DOGGING CYLINDER and with pull trim at exterior entrances. All paired doors to have removable keyed mullion with only one heavy duty handle on exterior and no dummy trim.  | VonDuprin   |                    | X  | B&G - Provide exit devices on exterior perimeter doors and portables. HEX DOGGING ONLY - No cylindrical dogging. All mullions to have a set of #154 stabilizers. Von Duprin: X99NLx990NL "Trim Pull"; X99NLx990NL "Trim Pull" x XP99PT x 990DT; "Dummy Trim" x SNB X KR4954 Mullion x 154 (at pairs); 99L-2-F-996L-NL-R (F rated single doors); 99L-2-F-996L-NL-R x 99Eo - F x KR9954 Mullion x 154 (F pairs)   |
|  |   |   |   |                    |    |   |
| Specification Section / Description  | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer  | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards  |
|  |   |   |   | Yes                | No |   |
| <b>DIVISION 8 - DOORS and WINDOWS</b>  |   |   |   |                    |    |   |
| 8710<br>Door Hardware -<br>Keying: Key System                                    |   | All keying is to be keyed into District restrictive, Schlage Everest/Primus - no substitutions. Interior doors shall utilize the same keyway with blank side bitting. All cylinder cores in "D" series handles are to be fixed (removable only after the lockset has been disassembled). All cylinder cores in deadbolts/panic hardware that required disassembly of latch mechanism shall be interchangeable core. All cylinders to be factory keyed and shipped with split construction key system. A/E to include key schedule in bid specifications. Keying requirements are to be coordinated and verified with B&G Locksmith manager. | Schlage   |                    | X  | Keyway: Verify with B&G for the keyway to be provided at specific sites. (Everest Primus, Everest D, 1246, 1247, and 1248) All cylinder cores in "ND" series handles are to be fixed. All cylinder cores in dead bolts/panic hardware shall be interchangeable cores. Keying by contractor. ND Series: 20-765 Cylinder Exit Device Outside Trim: 20-757 IC Rim Cylinder Keyed Removable Mullion: 20-771 1C Mortise Cylinder Keying Schedule is to be reviewed and approved by B&G Locksmith Department. |

| Specification Section / Description                   | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer  | Substitute Allowed |    | (B&G), Custodial (CS) and Internet Technology (IT)   |
|---|---|---|---|--------------------|----|--|
|   |   |   |   | Yes                | No |  |
| <b>DIVISION 8 - DOORS and WINDOWS</b>                 |   |   |   |                    |    |  |
| Con't<br>Door Hardware Keying:<br>Key System          |   | Extra Material: Provide minimum 2 full boxes of key blanks. Deliver key blanks to B&G Locksmith department. |   |                    | X  | Sample of OUSD Keying Standard:<br>Grand Master<br>Site Master<br>Maison Staff Rest Rooms<br>Boy's and Girl's Rest Rooms to be keyed to Site Master and Grand Master Key ONLY. Key Rooms with assigned bittings, site master and grand master ONLY; Exterior Entry and Interior Fire Doors, Boiler Rooms, and Store Rooms are to be keyed to Site Master and Grand Master Keys ONLY. Stamp Keys with the Biting Label ONLY. Biting schedule will be provided by OUSD B&G Locksmith. Final Keying Schedule is to be reviewed and approved by B&G Locksmith. |
|   |   |   |   |                    |    |  |
| Specification Section / Description                   | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer  | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards   |
|   |   |   |   | Yes                | No |  |
| <b>DIVISION 8 - DOORS and WINDOWS</b>                 |   |   |   |                    |    |  |
| 8710<br>Door Hardware - Coordinator                   |   |   |   |                    |    | PROVIDE COORDINATOR ONLY WHEN REQUIRED BY FIRE CODE.<br>Ives COR x FL x MD (Storage and utility rooms)   |
| 8710<br>Door Hardware - Flush Bolts                   |   |   |   |                    | X  | Ives FB31P (Automatic / Metal Doors / Storage & Utility Rms); Ives FB41P (Automatic / Wood Doors / Storage & Utility Rms); Ives FB51P (Manual / Metal Drs / Storage & Utility Rms); Ives FB61P (Manual / Wd Drs / Sto. Rms) B&G preference is NOT to utilize Flush Bolts as they are high maintenance hardware.  |
|   |   |   |   |                    |    |  |
| Specification Section / Description                   | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer  | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards   |
|   |   |   |   | Yes                | No |  |
| <b>DIVISION 8 - DOORS and WINDOWS</b>                 |   |   |   |                    |    |  |
| 8710<br>Door Hardware - Door Closers: Closing Devices |   |   | Norton 7575<br>LCN #4011 or #4111 - pursuant to side of door pull |                    | X  | Norton: 7500<br>Falcon: SC71 RW/PA (Alternate)<br>Provide long arms where required to accommodate wide throw hinges.<br>Door Silencer: Ives SR64<br>ALL DOOR FRAMES ARE TO BE REINFORCED AT FRAME, SOFFIT, AND FACE. NO EXTRA DUTY ARMS.   |
|   |   |   |   |                    |    |  |
| Specification Section / Description                   | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer  | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards   |
|   |   |   |   | Yes                | No |  |

| DIVISION 8 - DOORS and WINDOWS                       |   |   |  |                    |    |   |
|--|---|---|--|--------------------|----|---|
| Specification Section / Description                  | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards  |
|  |   |   |  | Yes                | No |   |
| 8710 Door Hardware - Stops / Holders                 |   | All exterior doors to have door hold-opens where code permits. All primary interior doors on campuses with interior corridors shall have door hold-opens. For Floor mounted holders, mount within 3" of wall.   | Floor Mount: Trimco #1283-2S or #1283-3S<br>Wall Mount: Trimco #1283-4S or #1283-5S<br>Model # depending on required length of strike.<br>NO KNOWN EQUAL |                    | X  | Holders: Ives WS45 or FS43 (Automatic Holders & Stops)<br>Door Stops: Ives FS436/R435 (Interior Floor Stop); FS18S (Security Floor Stops); WS401/WS402 (Wall Stops). PROVIDE SOLID BACKING at WALL HOLDER LOCATIONS; FLOOR MOUNT WHEN WITHIN 3 INCHES OF WALL.  |
| 8710 Door Hardware - Bumpers                         |   | Provide in locations where a stop is necessary and Stops / Holders will not work.   | Glynn-Johnson NO KNOWN EQUAL   |                    | X  |   |
| DIVISION 8 - DOORS and WINDOWS                       |   |   |  |                    |    |   |
| 8710 Door Hardware - Thresholds                      |   | Provide shape as required or approved equal.  | Pemko or approved equal. Pivot Hinge - Rixson  |                    | X  | National Guard Products (NGP) - Standard 1/2" x Jamb Depth x Full width of opening. 322 (1/2" x 3") at Carpet and Floor Mats. Threshold Notes - Architect to coordinate with project conditions. Set thresholds in a full bed of butyl-rubber or polyisobutylene mastic sealant complying with requirements in Division 7 - "Thermal and Moisture Protection". Use 1/4" fasteners, red-head flat heat sleeve anchors (SS/FHSL). |
| DIVISION 8 - DOORS and WINDOWS                       |   |   |  |                    |    |   |
| 8710 Weather Stripping                               |   | New Door Application: Utilize concealed brush door sweeps for HM doors with inverted bottom channel.<br><br>Existing Door Application: Utilize a surface mounted brush sweep.<br><br>Exterior Doors: All exterior doors to be fitted with 45 degree, brush style weather stripping. | Pemko 90100CP or approved equal<br><br>Pemko 309AP or approved equal<br><br>Pemko #45041CP or approved equal   |                    | X  | Door Sweep: NGP 600A (Surface Mount Brush Sweep) Smoke/Weather Seal: NGP A626A (@ Jamb) x 706A (@ Headers on doors with closers) Smoke Seal: 2525B (1/4 x 3/8 Silicone Bulb with adhesive tape) Mullion Seal: NGP 5100 - Black Finish   |
| 8710 Latch Protectors                                |   | Provide at all exterior lever set doors   |  |                    |    | Ives LG12   |
| 8710 Astragal / Coordinators / Automatic Flush Bolts |   | Avoid where possible.   |  |                    |    | Astragal: NGP 600 set (Surface Mount Brush Astragal Set); NGP 139SS (Where required by Fire Code) Astragal/Edge set may be by HM doors manufacturer. Mullion Seal: NGP 5100   |
| 8710 Kick Plates                                     |   | Armor plates - 10 inches high   |  |                    |    | Kick Plate / Mop Plates: Ives 8400 Series   |
| DIVISION 8 - DOORS and WINDOWS                       |   |   |  |                    |    |   |
| Specification Section / Description                  | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards  |
|  |   |   |  | Yes                | No |   |



|                             |  |  |   |  |   |                       |
|-----------------------------|--|--|---|--|---|-----------------------|
| 8710<br>Pulls / Push Plates |  | Cast alloy - ADA complying   |   |  | X | Ives 8200/8300 Series |
| 8710<br>Door Louvers        |  | All exterior door louvers to be heavy duty vandal resistant  | Anemostat PLSL heavy duty louver with 12 gauge grill. |  | X |                       |
| 8800<br>Glazing             | Integrate non-glare windows in design. | Standard Glazing - 1/4 inch laminated glass consisting of 2 layers minimum 1/8 inch thick float glass with 0.030 inch thick tinted polyvinyl butyl interlayer. Type of glazing will vary by elevation and location as determined by consultant. Provide wired or tempered glass per code. Replace ALL polycarbonate and Plexiglas with 1/4 inch laminated glass. All installed windows and glazing are to be field tested for water infiltration pursuant to ASTM E1105. |   |  | X |                       |

| Specification Section / Description    | OUSD Educational Specifications and Design Guidelines  | Facilities Standards   | Manufacturer               | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards  |
|--|--|--|----------------------------|--------------------|----|---|
|  |  |  |                            | Yes                | No |   |
| <b>DIVISION 9 - FINISHES</b>           |  |  |                            |                    |    |   |
| 9220<br>Metal Lath and Portland Cement |  | Gypsum/Keenes Cement Finishes - to match existing building finish for interiors of toilet rooms  |                            |                    | X  |   |
| 9250<br>Gypsum Board                   |  |  |                            | X                  |    | B&G: When possible, avoid using drywall joint compounds that require more than 24 - 48 hours to dry completely. Joint compounds that take longer to dry are typically covered by paint before fully dry, leaving the joint compound extra vulnerable to cracking. |
| 9270<br>Tackable Wall Board            |  | Fiber Insulation Board: 1/2" thick; ASTM C208 Class A Commercial Std CS42 Class A beveled edge.<br>Vinyl Wall Covering: Calendared base color, backing shall be sheeting or non-woven fabric.<br>Class III Flame Spread  |                            |                    | X  |   |
|  |  |  |                            |                    |    |   |
| Specification Section / Description    | OUSD Educational Specifications and Design Guidelines  | Facilities Standards   | Manufacturer               | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards  |
|  |  |  |                            | Yes                | No |   |
| <b>DIVISION 9 - FINISHES</b>           |  |  |                            |                    |    |   |
| 9300<br>Ceramic Tile                   | Ceramic tiles or other waterproofing materials should be used on restroom walls from floor to ceiling. | Specify recycled content products. At Middle Schools and High School - ceramic tile walls to be full height from floor to ceiling.<br>Floors: Slip resistive finish<br>Walls: Gloss finish - NO matte or textured finish.<br>Provide latex-epoxy mortar and grout in toilet rooms. Extra Material: Provide 5% of amount installed or minimum 1 carton of field and half carton of accent tile in full size units for each type, composition, color, pattern, shape and size. | American Olean or Dal Tile |                    | X  | B&G: Preferred finish for kitchens. Provide epoxy grout. Extra Materials are to be stored on site in designated secured area.   |
|  |  |  |                            |                    |    |   |
| Specification Section / Description    | OUSD Educational Specifications and Design Guidelines  | Facilities Standards   | Manufacturer               | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards  |
|  |  |  |                            | Yes                | No |   |
| <b>DIVISION 9 - FINISHES</b>           |  |  |                            |                    |    |   |

|                                      |  |   |  |   |  |   |
|--------------------------------------|--|---|--|---|--|---|
| 9500<br>Acoustical Panel<br>Ceilings |  | Grid: Exposed heavy duty 24" X 48" grid.<br>Ceiling Panels: Mineral Ceiling Panels, NRC Range 0.50 - 0.60; STC Range 30 - 34, white fissured finish.<br>CHPS Projects: NRC Range 0.80. Architect to confirm and specify required product. Extra Material: Ceiling tile - 5% of amount installed with a maximum of 10 cartons in original packaging of each type, pattern, and size provided. Provide 2% of amount installed for suspension system components of each exposed component and size installed.. | Armstrong - "Ultima" or "Ultima High NRC" or "Fire Guard" where fire rating is required. |   |  | B&G: Recommends that Armstrong 895 ceiling panels be established as the standard for OUSD. Extra Materials are to be stored on site in designated secured area. |
|                                      |  |   |  | X |  |   |

| Specification Section / Description | OUSD Educational Specifications and Design Guidelines | Facilities Standards | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|-------------------------------------|---|----------------------|--------------|--------------------|----|--|
|                                     |   |                      |              | Yes                | No |  |

**DIVISION 9 - FINISHES**

|                            |  |   |   |   |  |   |
|----------------------------|--|---|---|---|--|---|
| 9650<br>Resilient Flooring | Flooring material should be durable and scratch resistant. Flooring should promote furniture mobility. | Sheet Flooring (Linoleum): To have fully fused seams and treated with 2 coats LinoBase sealer prior to traffic. Specify low VOC adhesives and seam sealers. Factor trained and certified installers are required. Extra Material: Linoleum - 5% in roll form with minimum less than 10 LF. Furnish in full roll width form of each different composition, color and pattern. VCT - 1 box for every 50 boxes or fraction thereof with minimum 100 SF. Provide full size units of each type, color, pattern and size installed. Rubber Base - 10 LF for every 500 LF or fraction thereof. Furnish in standard full length for each color. Rubber Stair Treads: 1 box for every 50 boxes or fraction thereof. Furnish in full size units for each color, pattern and size installed. | Forbo: "Marmoleum" Forbo Installers to be "Master Mechanic" certified. Tarkett: "Veneto" or approved equal. |   |  | CS: All (N) flooring shall have their factory seal stripped off and shall have a floor finish applied according to the above requirements pursuant to the requirements of OUSD. B&G: VCT is the preferred resilient flooring. VCT may be used with approval by the Director of Facilities. Extra Materials are to be stored on site in designated secured area. |
|                            |  |   |   | X |  |   |

| Specification Section / Description | OUSD Educational Specifications and Design Guidelines | Facilities Standards | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|-------------------------------------|---|----------------------|--------------|--------------------|----|--|
|                                     |   |                      |              | Yes                | No |  |

**DIVISION 9 - FINISHES**

| 9660<br>Terrazzo Flooring                             | Waterproof materials should be used on restroom floors.     | Epoxy Terrazzo per NTMA guidelines. Provide terrazzo with integral base. Use in conjunction with a U/L listed "slip resistant" sealer. Preferred flooring for restrooms.  | Dex O Tex<br>Cheminert<br>Terrazzo Flooring<br>or approved equal |                       | X  |   |
|---|---|---|--|-----------------------|----|---|
| 9670<br>Fluid Applied<br>Flooring - Epoxy<br>Flooring |   | Self leveling urethane mortar system designed for monolithic application. Provide integral cove base. Include chemical, heat and skid resistant epoxy novolac coating over flooring. Flooring to be applied at all kitchens. Application for restrooms required approval by Director of Facilities.   |  |                       | X  | B&G: Preferred flooring for kitchens.   |
|   |   |   |  |                       |    |   |
| Specification<br>Section /<br>Description             | OUSD Educational<br>Specifications and<br>Design Guidelines | Facilities Standards  | Manufacturer   | Substitute<br>Allowed |    | Buildings & Grounds<br>(B&G), Custodial (CS)<br>and Internet Technology<br>(IT) Standards   |
|   |   |   |  | Yes                   | No |   |
| <b>DIVISION 9 - FINISHES</b>                          |   |   |  |                       |    |   |
| 9680<br>Carpeting                                     | Avoid carpeting and rugs in classrooms.                     | Specify low VOC adhesive and seam sealers. Provide carpet-seaming layout. Use largest sections possible to minimize seams. Carpet Tile is preferred over sheet / roll products. Modular Tiles - 24 inches square tile. Carpet to comply with Sustainable Carpet Assessment Standard (NSF/ANSI 140) Platinum Level.<br>Extra Material: Carpet Tiles - 5% of amount installed but not less than 30 square yards. Provide full modular tiles of each type and color installed.<br>Carpet (Glue Down) - Extra Material is not required. | Collins and<br>Aikman:<br>"Powerbond<br>Infinity"                |                       | X  | B&G: Rolled carpet is not recommended. Preference is for Carpet Tiles. Extra Materials are to be stored on site in designated secured area. |
|   |   |   |  |                       |    |   |
| Specification<br>Section /<br>Description             | OUSD Educational<br>Specifications and<br>Design Guidelines | Facilities Standards  | Manufacturer   | Substitute<br>Allowed |    | Buildings & Grounds<br>(B&G), Custodial (CS)<br>and Internet Technology<br>(IT) Standards   |
|   |   |   |  | Yes                   | No |   |
| <b>DIVISION 9 - FINISHES</b>                          |   |   |  |                       |    |   |

|                  |  |   |   |   |  |  |
|------------------|--|---|---|---|--|--|
| 9900<br>Painting |  | GENERAL:<br>Specify low VOC paints and primers only. Do not paint over existing transparent finishes. Existing transparent finishes shall be refinished to match existing. ALL colors are to be selected by District from District standard color palette. Existing (E) surfaces to be repaired and prepared prior to painting. Three coat system over (E) painted surfaces or New (N) finishes to be 1 coat prime and 2 finish coats. All shop-primed items are to be fully re-primed in the field. Acid wash all galvanized materials. Etch and prime prior to finish painting and rinse thoroughly. Specify mildew retardant admixtures. | ICI, Kelly Moore, Sinclair and Pittsburgh |   |  | B&G preference is Kelly Moore.<br>Contractor to provide "As Built Brush Outs with Manufacturer's formula". |
|                  |  |   |   | X |  |  |

| Specification Section / Description | OUSD Educational Specifications and Design Guidelines | Facilities Standards | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|-------------------------------------|---|----------------------|--------------|--------------------|----|--|
|                                     |   |                      |              | Yes                | No |  |

**DIVISION 9 - FINISHES**

|                           |  |  |  |   |  |  |
|---------------------------|--|--|--|---|--|--|
| Con't<br>9900<br>Painting |  | INTERIOR:<br>Interior Plaster / Gypsum Board: Interior Acrylic Enamel<br>Corridors: Semi-Gloss<br>Classrooms: Semi-Gloss<br>Offices: Eggshell<br>Toilet Rooms: Semi-Gloss<br>Service Areas: Eggshell<br>Kitchens: Semi-gloss enamel<br>Wood: Opaque Finish - Semi Gloss Acrylic Enamel.<br>Transparent Finish - specify product compatible with existing finish and if possible low VOC. Refinish to match existing.<br>Interior Metal Doors and Frames: Acrylic Semi-Gloss Enamel<br>Interior Misc. Metals: Sheen to fit circumstances. | ICI Dulux Professional<br>ICI Devoe High Performance Coatings - "Life Master -Ori 4213".<br>Type of paint to be applied per manufacturer's specifications. |   |  |  |
|                           |  |  |  | X |  |  |

| Specification Section / Description | OUSD Educational Specifications and Design Guidelines | Facilities Standards | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|-------------------------------------|---|----------------------|--------------|--------------------|----|--|
|                                     |   |                      |              | Yes                | No |  |

**DIVISION 9 - FINISHES**

|                                    |  |  |  |  |  |
|------------------------------------|--|--|--|--|--|
| <p>Con't<br/>9900<br/>Painting</p> |  | <p>EXTERIOR:<br/>Exterior Stucco: Semi-gloss, 100% Acrylic Latex<br/>Wood (opaque): Gloss, 100% Acrylic Latex<br/>Misc. Ferrous Metals: 100% Acrylic, Semi-Gloss Enamel<br/>Ferrous Metal Gutters, Downspouts, Doors, Flashing, etc.: 100% Acrylic, Semi-Gloss Enamel<br/>Exterior Guardrails and Handrails: Aliphatic Urethane, Gloss Enamel<br/>Aluminum: 100% Acrylic Latex, sheen to match existing.<br/>Extra Material: 2 gallons unopened for each color and sheen installed. Provide non-flammable cabinet to store extra paint as required by the Oakland Fire Department.</p> | <p>ICI Devoe High Performance Coatings - "Life Master Pro 4216", Low VOC, Acrylic Semi-Gloss Enamel.<br/>ICI Devoe High Performance Coatings - "Devthane" 379 UVA, Aliphatic Urethane, Gloss Enamel.<br/>ICI Devguard 100% Acrylic Latex<br/>Type paint to be applied per manufacturer's specifications.</p> |  | <p>B&amp;G: Exterior CMU walls shall be protected with anti-graffiti sealant. Store all paint extra material on site in designated secured area. Label all Extra Material containers including but not limited to the following: Manufacturer's name, product name, stock number and/or generic type of paint, color with instruction for reducing where applicable. Label to include color, texture, and room locations. Provide "as built" brush outs on 8-1/2" X 11" labeled with manufacturer color/formula and location. Extra Materials are to be stored on site at designated secured area.</p> |
|                                    |  |  |  |  |  |

| Specification Section / Description             | OUSD Educational Specifications and Design Guidelines   | Facilities Standards  | Manufacturer  | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards                                  |
|---|---|---|---|--------------------|----|---|
|   |   |   |   | Yes                | No |   |
| <b>DIVISION 10 - SPECIALTIES</b>                |   |   |   |                    |    |   |
| 10110 Chalkboards, Markerboards, and Tackboards | Dry erase markerboards should utilize non-toxic low VOC/no odor markers and thus not require chemical board cleaners. Provide magnetic whiteboards.   | Porcelain Enamel Markerboards are standard replacement. Provide both standard and heavy duty map rails. Heavy duty map rails are to be mounted above board. No seams in boards up to 16 feet in length.   | Heavy duty map rails: Rand McNally or approved equal. Tackboards: Fabricmate or approved equal. | X                  |    | B&G: Do not recommend specifying sliding white board systems as they are hard to maintain.                        |
| 10170 Solid Composite Toilet Compartment        |   | Solid Color Reinforced Composite Partitions (SCRC) with "GraffitiOff" surface. Hardware: 18-8, type 304 S/S with satin finish. Partitions to utilize head-rail brace mount system. Fasteners to be either factory installed threaded brass inserts or through bolted, S/S pin in head Torx sex bolt fasteners and shall withstand direct pull force exceeding 1,500 pounds per fastener.  | Bobrick Sierra - 1090 Series  | X                  |    |   |
| 10260 Corner Guards                             |   | Molded corner guards with closure caps top and bottom.  | Construction Specialties: "Acrovyn"   | X                  |    |   |
| <b>DIVISION 10 - SPECIALTIES</b>                |   |   |   |                    |    |   |
| Specification Section / Description             | OUSD Educational Specifications and Design Guidelines   | Facilities Standards  | Manufacturer  | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards                                  |
|   |   |   |   | Yes                | No |   |
| 10400 Signage                                   | Install lit signage that clearly identifies the main entry point to a campus. Post a campus map that highlights and provides clear directions for spaces commonly used by the community. Provide display space or electronic signage to communicate school news and information. Clearly identify/label all buildings on the exterior and rooms on the interiors. | All signage to comply with ADA & Title 24 requirements. Parking Lot: 0.125" aluminum panel with baked porcelain enamel finish mounted to 3" galvanized steel post set in 12" diameter X 36" deep concrete footing. Room: Integral color with fussed raised lettering and California Braille. Install with vandal resistant fasteners. Room and building designations are required to be approved by designated District Representative. | Room - ASI "Incast" or approved equal.  | X                  |    | B&G: Coordinate location of sign and identity/label for all buildings on the exterior and rooms on the interiors. |
| 10500 Metal Lockers                             |   | All steel construction with powder coat finish. Provide hasps for padlocks. Install with concealed fasteners and vandal resistant fasteners where exposed. Provide Gym Lockers ONLY. No hallway lockers are to be provided.   |   | X                  |    |   |
| <b>DIVISION 10 - SPECIALTIES</b>                |   |   |   |                    |    |   |
| Specification Section / Description             | OUSD Educational Specifications and Design Guidelines   | Facilities Standards  | Manufacturer  | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards                                  |
|   |   |   |   | Yes                | No |   |
| 10520 Fire Protection Specialties               |   | If battered, replace with units using minimal glass lite.   |   | X                  |    |   |
| 10800 Toilet Accessories                        |   | All toilet accessories are to be surface mounted and installed with concealed fasteners where possible or vandal resistant fasteners when fasteners are exposed.  |   | X                  |    |   |
|   |   | Toilet Paper Dispenser - Stainless Steel Multi Roll   | Gamco TTD-5, TTD-6 or TTD-7 Bobrick B-2888  | X                  |    |   |
|   |   | Toilet Seat Cover - 1/4 fold chromed metal. Provide at Staff Restrooms ONLY   | James River #25131500/4001 Bobrick B-221  | X                  |    |   |
|   |   | Grab Bars - Heavy duty, 15 gauge, S/S tubing, welded 11 gauge flanges, concealed mounting. Safety grip finish, no peening.  | Bobrick B-6806  | X                  |    |   |
|   |   | Sanitary Napkin Disposal  | Bobrick B-270   | X                  |    |   |
|   |   | Soap Dispenser - S/S, Install above sink  | Bobrick B-2112  | X                  |    |   |

|                                      |   | Paper Towel Dispenser - Roll Towel Dispenser. Architect to also specify and locate ADA compliant paper towel dispenser. | Bobrick B-2860 -to be mounted in front access; unit projects too far for side access compliance. | X                  |    |  |
|--------------------------------------|---|---|--|--------------------|----|--|
|                                      |   |   |  |                    |    |  |
|                                      |   |   |  |                    |    |  |
| Specification Section / Description  | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|                                      |   |   |  | Yes                | No |  |
| <b>DIVISION 10 - SPECIALTIES</b>     |   |   |  |                    |    |  |
| Con't<br>10800<br>Toilet Accessories |   | Student Toilet Room Mirror and Shelf - 22 gauge high polished S/S mirror with backing plates.                           | Bobrick B-1556   | X                  |    |  |
|                                      |   | Staff Toilet Room Mirror and Shelf.   | Bobrick B-1656 S/S   | X                  |    |  |
|                                      |   | Trash Receptacles - NIC Furnished and installed by District   |  |                    | X  |  |
|                                      |   | Handicapped Shower Seat   | American Standard "Pressalit"  | X                  |    |  |



| Specification Section / Description        | OUSD Educational Specifications and Design Guidelines   | Facilities Standards | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards  |
|--|---|----------------------|--------------|--------------------|----|---|
|  |   |                      |              | Yes                | No |   |
| <b>DIVISION 11 - EQUIPMENT</b>             |   |                      |              |                    |    |   |
| 11400<br>Food Service Equipment            | All fixtures, appliances, and equipment shall meet OUSD CHPS standards and Energy Star requirements for low energy and water use. Ovens, stoves, steamers, and other equipment shall have sufficient capacity and power to fully cook meals as described in OUSD Nutrition Service "Nutrition Service Master Plan". |                      |              |                    | X  | Nutritional Services: Design team shall consult with Nutrition Services on ALL kitchen projects. All equipment are to be commercial grade and shall meet Energy Star requirements. All kitchen and food service projects are to comply with Alameda County Health Department requirements.<br>Kitchen Hoods: Provide Fire Suppression System for New and Renovation Projects per Nutritional Services directive in Section 13900 Fire Suppression System.<br>Paper Towel Dispensers - Provide towel dispensers that meet Custodial Services requirements. |
|  |   |                      |              |                    |    |   |
|  |   |                      |              |                    |    |   |
| Specification Section / Description        | OUSD Educational Specifications and Design Guidelines   | Facilities Standards | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards  |
|  |   |                      |              | Yes                | No |   |
| <b>DIVISION 11 - EQUIPMENT</b>             |   |                      |              |                    |    |   |
| 11650<br>Athletic and Recreation Equipment |   |                      |              |                    | X  | B&G: Interior Gymnasium scoreboards should be wireless or have integrated scoreboard systems to avoid surface routing of cords across gymnasium floor.  |
|  |   |                      |              |                    |    |   |

| Specification Section / Description            | OUSD Educational Specifications and Design Guidelines  | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards   |
|--|--|--|--|--------------------|----|--|
|  |  |  |  | Yes                | No |  |
| <b>DIVISION 12 - FURNISHINGS</b>               |  |  |  |                    |    |  |
| 12300 Casework                                 | All rooms shall have a variety of permanent storage options and a variety of lockable, securable, and easily accessible storage base and wall cabinets and closets.  | WIC "Custom Grade" certified. Formaldehyde free and low VOC adhesive. Shelving - 3/4 inch plywood core; Drawer bottoms to be fully let-in glued and blocked. Knuckle hinges and heavy duty ball bearing drawer glides. Extra Material: 5% of each type locks, hinges and pulls provided.   | Hinges: Blum   |                    | X  | B&G recommends Blum be the standard for ALL cabinet hinges. Drawer backsides should be designed to sustain heavy use. Extra Materials are to be delivered to the B&G Carpentry Department. Label all boxes with the site location. |
| 12350 Laboratory Casework                      |  | Hardwood frame with 1 inch epoxy resin tops. Provide safety lip or wire at all lab and lab supply storage shelves. Extra Material: 5% of each type locks, hinges and pulls provided.   | Taylor or Cambellrhea  | X                  |    | Extra Materials are to be delivered to the B&G Carpentry Department. Label all boxes with the site location.   |
|  |  |  |  |                    |    |  |
| Specification Section / Description            | OUSD Educational Specifications and Design Guidelines  | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards   |
|  |  |  |  | Yes                | No |  |
| <b>DIVISION 12 - FURNISHINGS</b>               |  |  |  |                    |    |  |
| 12500 Window Treatment                         | Fit windows with shading systems to reduce glare and solar heating effects throughout the day.   | Blinds: Provide new blinds at all new windows. Evaluate existing window coverings and replace as necessary to match existing. Provide heavy duty hardware and control cord and vinyl coated cloth tape. Shades: Provide one shade per lite. Cords - seine line; Slats - 1/2 inch mahogany; Pulleys - Sop pulley on all shades; Rollers - single notch; wooden. Extra Material: Horizontal Louver Slats - 5% of operating hardware and slats installed for each size units. Window Shades - 5% of full size units installed. Package ALL with protective covering for storage and identified with labels clearly describing contents and site location. | Blinds: Levelor "Century" with 2 inch metal blade.   | X                  |    | B&G: Window coverings should not be installed in gymnasiums. Extra Materials are to be stored on site in designated secured area.  |
| 12600 Multiple Seating - Retractable Bleachers |  |  |  | X                  |    | B&G: Gymnasium retractable seating are to be motorized.  |
|  |  |  |  |                    |    |  |
| Specification Section / Description            | OUSD Educational Specifications and Design Guidelines  | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards   |
|  |  |  |  | Yes                | No |  |
| <b>DIVISION 12 - FURNISHINGS</b>               |  |  |  |                    |    |  |
| 12700 Cafeteria Tables and Benches             | Provide comfortable, age appropriate furniture. Strongly consider reconfigurable furniture that supports group activities and can also be easily and safely collapsed and stored by a single adult. Provide storage for furniture, including tables - space requirement vary by grade level. | Provide new tables and benches at all new MP rooms and cafeterias. Evaluate condition of existing tables and benches and replace as necessary to match existing configuration. Field verification is required before ordering tables and benches. Install with vandal resistant fasteners.   | Nelson Adams or Palmer Snyder: (No known equals) - Recessed mounted, 2 table unit, NRM-6 TB-2 Unit. Provide with anti-jackknife device and compression of torsion springs to prevent table from lowering rapidly and assisting with raising table. Pockets to be 16 gauge steel. | X                  |    |  |
|  |  |  |  |                    |    |  |
| Specification Section / Description            | OUSD Educational Specifications and Design Guidelines  | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards   |
|  |  |  |  | Yes                | No |  |
| <b>DIVISION 12 - FURNISHINGS</b>               |  |  |  |                    |    |  |

|   |   |  |  |          |  |  |
|---|---|--|--|----------|--|--|
| <p>12931<br/>Bicycle and Skateboard<br/>Racks</p> | <p>Provide storage racks and dedicated lanes for bikes, scooters, and skateboard to meet the CHPS criteria for Human Powered Transportation. Locate racks directly off bike paths near an area with frequent foot traffic, preferably near the main entrance to the school grounds.</p> |  | <p>Skateboard racks:<br/>BoardLoch Spartan 14<br/>or approved equal.</p> | <p>X</p> |  |  |
|   |   |  |  |          |  |  |

| Specification Section / Description       | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards  |
|---|---|--|--------------|--------------------|----|---|
|   |   |  |              | Yes                | No |   |
| <b>DIVISION 13 - SPECIAL CONSTRUCTION</b> |   |  |              |                    |    |   |
| 13900<br>Fire Suppression System          |   | Provide fire suppression system per code for all commercial kitchen hoods. |              |                    | X  | Nutritional Services: New Construction - Provide fire suppression system for all new Kitchen Hoods.<br>Renovations / Modernization Projects - Upgrade existing Fire Suppression System in existing Kitchen Hood to all current code requirements. |
|   |   |  |              |                    |    |   |

| Specification Section / Description       | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer                    | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|---|---|--|---------------------------------|--------------------|----|--|
|   |   |  |                                 | Yes                | No |  |
| <b>DIVISION 14 - CONVEYING SYSTEMS</b>    |   |  |                                 |                    |    |  |
| 14240 Hydraulic Passenger Elevators       |   | REF: OUSD Minimum Hydraulic Elevator Standards dated 11/25/10<br>Type: Conventional holed hydraulic. (Roped hole less elevator is NOT permitted)<br>Capacity: 4000 / 4500 pounds<br>Type Loading: Class A<br>Door Opening: 2 speed side - 48 inch wide X 84 inch high<br>Cart Platform: 6' - 0" W X 8' - 4" D.<br>Speed: 150 FPM<br>Key: Recall switch - Innovation EX 516 barrel type key switch.<br>Cathodic Protection: Provide cathodic protection of Jack Cylinder Assembly. Provide certification that electrical neutrality of the cylinder is satisfied with a Galvanometer permanently wired and mounted in the controller. |                                 |                    | X  |  |
|   |   |  |                                 |                    |    |  |
|   |   |  |                                 |                    |    |  |
|   |   |  |                                 |                    |    |  |
| Specification Section / Description       | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer                    | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|   |   |  |                                 | Yes                | No |  |
| <b>DIVISION 14 - CONVEYING SYSTEMS</b>    |   |  |                                 |                    |    |  |
| Con't 14240 Hydraulic Passenger Elevators |   | WARRANTY: The Warranty period shall commence on the date of the issuance of the temporary operating permit by the State of California  |                                 |                    | X  |  |
| 14420 Vertical Wheelchair Lift            |   | Type: Drive shall be a ball bearing nut and screw or hydraulic pump and ram.<br>Capacity: 750 pounds<br>Doors: End Door - Minimum 32 inch clear opening; Side Door - Minimum 42 inch clear opening.<br>Platform: 38 to 40 inch width on loading side and 51 - 60 inches long.<br>Switches: Key Operated.<br>New Construction: Set in recessed pit for flush transition   | National Wheel-O-Vator Model BC | X                  |    |  |
|   |   |  |                                 |                    |    |  |
|   |   |  |                                 |                    |    |  |
| Specification Section / Description       | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer                    | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|   |   |  |                                 | Yes                | No |  |
| <b>DIVISION 14 - CONVEYING SYSTEMS</b>    |   |  |                                 |                    |    |  |
| Con't 14420 Vertical Wheelchair Lift      |   | Modernization Projects: Utilize manufacture ramp, upper and lower gates. REFERENCE: OUSD Minimum Wheelchair Standards dated January 8, 2011<br>WARRANTY: The Warranty period shall commence on the date of the issuance of the temporary operating permit by the State of California.  | National Wheel-O-Vator Model BC | X                  |    |  |

| Specification Section / Description   | OUSD Educational Specifications and Design Guidelines   | Facilities Standards  | Manufacturer                        | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards   |
|---------------------------------------|---|---|-------------------------------------|--------------------|----|--|
|                                       |   |   |                                     | Yes                | No |  |
| <b>DIVISION 15 - MECHANICAL</b>       |   |   |                                     |                    |    |  |
| 15050 General Mechanical Requirements | Sustainability is a guiding principle for all projects with design criteria established by the Coalition for High Performance Schools (CHPS), in order to "protect student and staff health, and enhance the learning environments of school children everywhere; conserve energy, water, and other natural resources, and reduce waste, pollution, and environmental degradation." Moreover, these elements should be made visible and prominent so that facilities become teaching tools. | Codes and Standards: Latest editions of CBC, CMC, CPC, CEC, ASHRAE Standards, NFPA Standards, SMACNA Standards. |                                     |                    |    |  |
|                                       |   | Valves - Ball valves are preferred for shutoff duty   | Nibco, Hammond, Milwaukee, Stockham | X                  |    |  |
|                                       |   | Calibrated Balance Valves - provided for balancing  | Bell and Gossett "Circuit Setter"   | X                  |    |  |
|                                       |   | Steam Traps   | Armstrong Hoffman                   | X                  |    |  |
|                                       |   | Steam Radiators - pneumatic thermostats or manually operated valves are preferred.                              |                                     |                    |    | B&G - Honeywell VP525A Pneumatic Radiator Valve and TP970 Thermostat Modernization Kit with Universal Adaptor. Not to be controlled with self contained thermostatic control valve. Provide heavy duty / student proof thermostat covers. Provide wire cages for ALL devices located in Multi Purpose Room and Gymnasiums. |
|                                       |   |   |                                     |                    | X  |  |

| Specification Section / Description         | OUSD Educational Specifications and Design Guidelines | Facilities Standards             | Manufacturer                                       | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|---|---|----------------------------------|--|--------------------|----|--|
|   |   |                                  |  | Yes                | No |  |
| <b>DIVISION 15 - MECHANICAL</b>             |   |                                  |  |                    |    |  |
| Con't 15050 General Mechanical Requirements |   | Gauges                           | Marsh, Danton, U.S. Gauge                          | X                  |    |  |
|   |   | Thermometers                     | Rochester, Palmer                                  | X                  |    |  |
|   |   | Access Doors                     | Milcor, Newman                                     | X                  |    |  |
|   |   | Expansion Loops                  | Metraflex, Metraloop                               | X                  |    |  |
|   |   | Pumps                            | Bell and Gossett, Paco, Taco, Armstrong            | X                  |    |  |
|   |   | Motors - Premium efficient types | General Electric, Gould, Lincoln, Central Electric | X                  |    |  |
|   |   | Motors - Starters                | Square D, Allen Bradley in NEMA enclosure          | X                  |    |  |

| Specification Section / Description             | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|---|---|--|--------------|--------------------|----|--|
|   |   |  |              | Yes                | No |  |
| <b>DIVISION 15 - MECHANICAL</b>                 |   |  |              |                    |    |  |
| 15250 Thermal Insulation for Mechanical Systems |   | Domestic HW & CW outside of building insulation envelope; Heating HW piping, steam and steam condensate return piping, chilled water piping, refrigerant suction piping, HW storage tanks, chiller barrels and supply and return ductwork. Ductwork insulation - R values as required by code. |              |                    |    | X  |

| Specification Section / Description   | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer  | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|---------------------------------------|---|--|---------------|--------------------|----|--|
|                                       |   |  |               | Yes                | No |  |
| <b>DIVISION 15 - MECHANICAL</b>       |   |  |               |                    |    |  |
| 15300<br>Fire Sprinkler System        |   | Codes and Standards: Latest editions of CBC, CFC, NFPA Standards 13, 20, and 24. Consultant design to include hydraulic design, hydraulic calculations, labor and material for a complete automatic wet pipe type fire sprinklers per NFPA 123 and applicable codes. Determine actual static and residual pressure for the campus. Include site backflow prevention, PIV, FDC, and fire sprinkler riser assembly. Coordinate all supervision wiring from tamper switches, flow switches, water flow indicators, and wiring to fire alarm system.   |               |                    | X  |  |
|                                       |   | Sprinkler Heads - Heavy duty type  | Star, Central | X                  |    |  |
| <b>DIVISION 15 - MECHANICAL</b>       |   |  |               |                    |    |  |
|                                       |   |  |               |                    |    |  |
| Specification Section / Description   | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer  | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|                                       |   |  |               | Yes                | No |  |
| <b>DIVISION 15 - MECHANICAL</b>       |   |  |               |                    |    |  |
| Con't 15300<br>Fire Sprinkler Systems |   | Piping: Schedule 40 black steel. ASTM A-135 or A-53, with UL approved ductile iron or cast iron threaded fittings. UL approved grooved fittings and associated coupling may be used. Schedule 10 UL approved pipe with UL approved groove fittings associated coupling may be used in pipe size 3 inches or larger except where exposed in gymnasium. General Notes for Piping: HVAC ducts and gravity flow plumbing piping shall have right of way over sprinkler piping. Grade piping for drainage and provide drain valves as required by Code. Piping shall be thoroughly flushed and proved clean before final connection are made. |               |                    |    |  |
|                                       |   |  |               |                    |    |  |
| Specification Section / Description   | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer  | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|                                       |   |  |               | Yes                | No |  |
| <b>DIVISION 15 - MECHANICAL</b>       |   |  |               |                    |    |  |

| 15400 Plumbing Systems              | Comply with East Bay Municipal Utility district (EBMUD) Section 31 - "Water Efficiency Requirement" guidelines for water efficient fixtures and reclaimed water (where available) to reduce sewage conveyance from toilets and urinals. All classrooms should be equipped with a sink and running water. Refer to the Materials Standards as well as the California Code of Regulations for details. Locate hydration stations throughout campus to provide easy access for students to drink and refill water bottles. Plumbing consultant is responsible to complete the application for "EBMUD Water Service Requirement - Section 31 Water Efficiency Requirements Checklist". | Water Closets: Floor mounted flush valve type when feasible. Wall mount fixture require approval by Facilities Director   | American Standard   |                    | X  | B&G - American Standard: Madera (Floor Mount) / Afwall (Wall Mount)              |
|-------------------------------------|--|---|---|--------------------|----|--|
|                                     |  | Urinals: Wall mounted flush valve type when feasible.   | American Standard   |                    | X  |  |
|                                     |  | Flush Valves  | Sloan Royal Flushometer   |                    |    | X  |
|                                     |  | Lavatories and Sinks: Provide CW only except for staff and severely disabled. At Kindergarten, T-K and CDC Classrooms - provide sinks appropriately-sized for both students and teachers.   | American Standard   |                    | X  | B&G - American Standard: Comrade or Roxalyn (without concealed arms)             |
|                                     |  | Faucets   | Chicago   |                    |    | X  |
|                                     |  | Drinking Fountains  | Interior: Haws 1119-14 heavy duty S/S<br>Exterior: Haws 1431 or 1441 cast aluminum or cast iron |                    | X  |  |
|                                     |  |   |   |                    |    |  |
| Specification Section / Description | OUSD Educational Specifications and Design Guidelines  | Facilities Standards  | Manufacturer  | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|                                     |  |   |   | Yes                | No |  |
| <b>DIVISION 15 - MECHANICAL</b>     |  |   |   |                    |    |  |
| Con't 15400 Plumbing Systems        | Locate hydration stations and water fountains throughout campus to provide easy access for students to drink and refill water bottles.   | Dehydration System: Combination DF / Bottle Filling Station at cafeteria & MP Room  | Elkay EXH2O Series or approved equal  |                    | X  | B&G - Students preference is for refrigerated unit                               |
|                                     |  | Hose Bibb   |   |                    |    | X  |
|                                     |  | Domestic HS & CW piping - Type L copper tubing, hard temper with wrought copper fittings at inside of building. Provide separate EBMUD meters for Domestic Water, Irrigation Water and Fire Service (Fire Sprinklers and Hydrants.) |   |                    |    | X  |
|                                     |  |   |   |                    |    |  |
| Specification Section / Description | OUSD Educational Specifications and Design Guidelines  | Facilities Standards  | Manufacturer  | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|                                     |  |   |   | Yes                | No |  |
| <b>DIVISION 15 - MECHANICAL</b>     |  |   |   |                    |    |  |



|                                    |  |   |   |  |   |   |
|------------------------------------|--|---|---|--|---|---|
| Con't<br>15400 Plumbing<br>Systems |  | Gas Piping Inside Building:<br>Schedule 40 black steel with<br>malleable iron threaded fittings<br>for pipes 2 inch or smaller. Class<br>150 welded fittings for pipes 2-<br>1/2 inches or larger. Label pipe<br>for "Natural Gas" in accordance<br>with CPC. |   |  | X | Provide isolation valves to allow<br>for school to continue to operate<br>if maintenance is required.         |
|                                    |  | Site Gas Piping Below Grade:<br>Polyethylene with ASTM D2513,<br>ASTM D3261, and ASTM D2683<br>fittings with fusion welded joints.  |   |  | X | B&G: Provide isolation valves to<br>allow for school to continue to<br>operate if maintenance is<br>required. |
|                                    |  | Soil, storm, and waste piping<br>underground and to 6 inches<br>above ground, and soil piping<br>above ground: Service weight<br>no-hub cast iron soil pipe and<br>fittings, asphaltic coated, CISPI<br>Std. 301 stamped.                                     | Underground<br>couplings: Anaco,<br>Husky, Clamp All, or<br>Mission<br>Heavyweight<br>couplings for joints<br>underground |  | X | B&G: Provide cleanouts for<br>waste and storm drainage<br>systems.  |

| Specification Section<br>/ Description | OUSD Educational Specifications<br>and Design Guidelines | Facilities Standards | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G),<br>Custodial (CS) and Internet<br>Technology (IT) Standards |
|--|--|----------------------|--------------|--------------------|----|--|
|  |  |                      |              | Yes                | No |  |

**DIVISION 15 - MECHANICAL**

|                                    |  |   |  |   |   |  |
|------------------------------------|--|---|--|---|---|--|
| Con't<br>15400 Plumbing<br>Systems |  | Waste pipe above ground from<br>lavatories and sinks, rainwater<br>leaders and overflows inside and<br>outside buildings above grade:<br>Schedule 40 galvanized steel<br>pipe with black cast iron drainage<br>fittings.  |  |   | X |  |
|                                    |  | Vent Piping: Service weight cast<br>iron soil pipe and fittings for<br>piping 3 inch and larger,<br>schedule 40 galvanized steel<br>pipe with black cast iron drainage<br>fittings for piping 2-1/2 inch or<br>smaller.   |  |   | X |  |
|                                    |  | Domestic Water Heaters: Gas<br>fire preferred. Electric tank for<br>under counter or electric<br>instantaneous type only for<br>remote areas or small loads.<br>Install per code and with ample<br>clearance for service. |  | X |   |  |

| Specification Section<br>/ Description | OUSD Educational Specifications<br>and Design Guidelines | Facilities Standards | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G),<br>Custodial (CS) and Internet<br>Technology (IT) Standards |
|--|--|----------------------|--------------|--------------------|----|--|
|  |  |                      |              | Yes                | No |  |

**DIVISION 15 - MECHANICAL**

|   |  |   |   |  |   |  |
|---|--|---|---|--|---|--|
| 15800<br>Heating, Ventilating<br>and Air Conditioning | Classroom ventilation should<br>provide comfortable temperatures.<br>Use passive ventilation and<br>sustainable design options when<br>possible. Avoid placing fans under<br>lights to eliminate flicker. Avoid A/C<br>when possible. All Classroom<br>should have independent control of<br>heating systems. Install interlock<br>system that would turn off heating<br>and cooling when doors and<br>windows are opened. Consider<br>methods to improve air quality. | Boilers - see manufacturer's<br>listed.<br>Modernization Projects: If<br>existing system is steam and it is<br>not feasible to change the entire<br>school to hot water, remain with<br>steam and replace existing boiler<br>with new cast iron sectional<br>boiler. Use forced draft burners<br>where necessary. | Ajax, Bryan,<br>Cleaver-Brooks or<br>approved equal.  |  | X | B&G: Locate Boilers at ground<br>floor or first floor only. Do not<br>locate Boilers on second floor.<br>Low NOx cast iron boilers is<br>preferred.  |
|   |  | Roof Top Packaged Heating and<br>Ventilating (HV) Units: Units<br>shall be gas fired with minimum<br>80% AFUE. Provide with<br>manufacturer's roof curb and<br>economizer.  | Trane, York,<br>Reznor, Sterling, or<br>approved equal.<br>Carrier is NOT an<br>approved equal. |  | X | B&G - ALL HV & HVAC units<br>provided must be compatible<br>with the Alerton BACnet System<br>with NO EXCEPTIONS Roof<br>Top units are preferred. Split<br>Systems are NOT to be<br>provided. Carrier is NOT<br>recommended as it is not<br>compatible with the OUSD EMS<br>controls without major<br>modifications. |

| Specification Section / Description                   | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|---|---|--|--|--------------------|----|--|
|   |   |  |  | Yes                | No |  |
| <b>DIVISION 15 - MECHANICAL</b>                       |   |  |  |                    |    |  |
| Con't 15800 Heating, Ventilating and Air Conditioning |   | Roof Top Packaged Gas-Electric Packaged HVAC Units: Gas fired with minimum 82% AFUE. Cooling EER/SEER shall be not less than that required by Title 24. Provide with manufacturer's roof curb and economizer.  | Trane, York or approved equal. Carrier is NOT an approved equal.                                   | X                  |    |  |
|   |   | Air Handlers: Provide with manufacturer's HW heating coil, economizer mixing box section, filter section, internal spring vibration isolation, and roof curb (for rooftop installations).  | Trane, York or approved equal. Carrier is NOT an approved equal.                                   | X                  |    |  |
|   |   | Indoor Furnaces: High efficiency condensing type furnace. Provide with minimum 20 year Burner warranty   | Trane, York or approved equal. Carrier is NOT an approved equal.                                   | X                  |    |  |
| <b>DIVISION 15 - MECHANICAL</b>                       |   |  |  |                    |    |  |
| Specification Section / Description                   | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|   |   |  |  | Yes                | No |  |
| <b>DIVISION 15 - MECHANICAL</b>                       |   |  |  |                    |    |  |
| Con't 15800 Heating, Ventilating and Air Conditioning |   | Outdoor Air Cooled Condensing Units: EER/SEER shall not be less than that required by Title 24   | Trane, York, or approved equal. Carrier is NOT an approved equal.                                  | X                  |    |  |
|   |   | Fans: Provide rooftop, cabinet, in-line or ceiling type as required. Provide manufacturer's roof curbs, back draft dampers, bird screens, etc. as applicable. For toilet room applications - provide two-speed fan with light on at high speed and light off at low speed. | Penn, Greenheck, Cook, or approved equal.  | X                  |    |  |
|   |   | Hot Water, Chilled Water, and up to 15 PSI steam piping above grade: Schedule 40 black steel pipe, ASTM A-53, threaded malleable iron fittings for 2 inches and smaller, standard weight ANSA B 16.28 welding fittings for sizes 2-1/2 inches and larger.                  | Victaulic or equal - cut or roll grooved type fittings for chilled water piping only is permitted. |                    | X  |  |
| <b>DIVISION 15 - MECHANICAL</b>                       |   |  |  |                    |    |  |
| Specification Section / Description                   | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|   |   |  |  | Yes                | No |  |
| <b>DIVISION 15 - MECHANICAL</b>                       |   |  |  |                    |    |  |
| Con't 15800 Heating, Ventilating and Air Conditioning |   | Steam Piping Greater Than 15 PSI Above Grade: Schedule 40 black steel pipe, ASTM A-53 with Schedule 40 ANSI B 16.9 welded fittings.  |  |                    | X  |  |
|   |   | Steam Condensate Return Piping, Including Pumped Return and Steam Vent Piping: Type K hard copper tubing with wrought copper solder fittings. Exposed piping at Boiler Room to be Schedule 80 black steel pipe with Schedule 80 ANSI B16.9 welded fittings.                |  |                    | X  |  |

|   |   | Air Conditioning Condensate Drain Piping: Type DWW copper tubing with wrought copper fittings.   |  |                    | X  |  |
|---|---|--|--|--------------------|----|--|
|   |   | Refrigeration Piping: Type L hard drawn ACR copper tubing with wrought copper fittings. All joints shall be made with Sil-fos.   |  |                    | X  |  |
|   |   |  |  |                    |    |  |
| Specification Section / Description                   | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|   |   |  |  | Yes                | No |  |
| <b>DIVISION 15 - MECHANICAL</b>                       |   |  |  |                    |    |  |
| Con't 15800 Heating, Ventilating and Air Conditioning |   | Ductwork: Galvanized sheet metal; aluminum sheet metal in wet areas and when handling moist air. Duct gauges as required by Code, SMACNA and ASHRAE Standards.   |  | X                  |    |  |
|   |   | Filtration: Provide all HV and HVAC equipment with 2 inch thick, U.L. Class II, 25 - 30% efficient pleated media disposable filters.   | Farr 30/30 or approved equal                               | X                  |    |  |
|   |   | Air Distribution Devices: Diffusers, registers, and grilles  | Titus, Krueger, Metalair, Tuttle, Bailey or approved equal | X                  |    |  |
|   |   |  |  |                    |    |  |
| Specification Section / Description                   | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|   |   |  |  | Yes                | No |  |
| <b>DIVISION 15 - MECHANICAL</b>                       |   |  |  |                    |    |  |
| Con't 15800 Heating, Ventilating and Air Conditioning |   | Execution: Provide expansion loops or expansion joints in piping with proper anchors for thermal and building expansion. Provide anti-vibration bases and hangers to insure systems will operate without objectionable vibration. Provide chemical treatment systems for all hot water and chilled water piping systems. |  |                    | X  |  |
|   |   | Commissioning: Provide testing and balancing reports for all air and water systems. Instruct District Personnel on operation and maintenance requirements for all systems. Commission all temperature control systems.   |  |                    | X  |  |
|   |   |  |  |                    |    |  |
| Specification Section / Description                   | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|   |   |  |  | Yes                | No |  |
| <b>DIVISION 15 - MECHANICAL</b>                       |   |  |  |                    |    |  |

|   |   |  |   |  |          |   |
|---|---|--|---|--|----------|---|
| <p>15900 Temperature Controls and Energy Management and Control System (EMCS)</p> | <p>HVAC systems should be centrally controlled and individual rooms should have controls to adjust this temperature up or down within a set range. During non-school hours, administrative custodial staff must be able to control the HVAC system for special events or community use. Climate controls should be compatible with the district energy management system. Install interlock system that would turn off heating and cooling when doors and windows are opened.</p> | <p>Work includes temperature controls for all HV, HVAC systems and equipment. Provide electric/electronic programmable time clocks, controllers, room temperature sensors, bypass timers, damper actuators, valve actuators, etc. Provide Title required sequences, include but not limited to night set-back and set-up, and pre-occupancy purge cycle. All temperature control wiring shall be in conduit. All contract drawings and documents are to specify that the Contractor is responsible for the installation of conduits and cabling connecting the EMCS to the network switch located at the MDF and/or IDF Rooms.</p> | <p>Temperature Controls: Siebe, Johnson, Honeywell, or approved equal.<br/>EMCS: Alerton BACnet System - No Known Equal</p> |  | <p>X</p> | <p>B&amp;G - EMCS: Alerton BACnet System (No Known Equal)</p> |
|   |   | <p>Commissioning: Commission all temperature control systems and instruct District Personnel on proper operation and maintenance.</p>  |   |  | <p>X</p> |   |
|   |   |  |   |  |          |   |

| Specification Section / Description           | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|---|---|---|--------------|--------------------|----|--|
|   |   |   |              | Yes                | No |  |
| <b>DIVISION 16 - ELECTRICAL</b>               |   |   |              |                    |    |  |
| 16100<br>Basic Materials and Methods          |   | Conduit: Rigid Steel; Intermediate Metallic (IMC); Coated Rigid Steel; PVC Type 40; Electrical Metallic Tubing (EMT); Flexible Conduit.   |              |                    | X  |  |
|   |   | Outlet Boxes: Pressed Steel Type; Cast Metal Type.  |              |                    | X  |  |
|   |   | Wire: Copper ONLY; Type THW or XHHW insulation for feeders; type THHN or THWN for branch circuits; 90 degrees centigrade insulation for high temperature areas; #8 AWG and larger - stranded. |              |                    | X  |  |
|   |   | Wall Switches: AC rated; heavy duty 20 amperes specification grade; 277 volts AC  |              |                    | X  |  |
|   |   | Floor Outlets: Adjustable, cast metal body type for ground level; steel type for above ground level. Single or multi compartment as needed for power, data, and telephone.                    |              |                    | X  |  |
|   |   |   |              |                    |    |  |
| Specification Section / Description           | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|   |   |   |              | Yes                | No |  |
| <b>DIVISION 16 - ELECTRICAL</b>               |   |   |              |                    |    |  |
| Con't<br>16100 Basic<br>Materials and Methods |   | Convenience Outlets: Shall be rated 15 and 20 amperes at 125 volts, specification grade. Weatherproof cover; GFCI type.   |              |                    | X  |  |
|   |   | Panel Boards: Copper busses; Bolt-on molded case breakers; Breakers with pad-locking tabs.  |              |                    | X  |  |
|   |   | Switches: "HD" Heavy Duty   |              |                    | X  |  |
|   |   | Pull Line: 1/8 inch diameter braided line of polypropylene or pull rope; 200 pound break strength.  |              |                    | X  |  |
|   |   | Pull Boxes: Concrete Box with concrete lid and hold-down bolts. Steel lids for larger boxes.  |              |                    | X  |  |
|   |   | Backboards: 3/4 inch plywood, AC grade.   |              |                    | X  |  |
|   |   | Terminal Cabinets: Metal cabinet with hinged door and lock.   |              |                    | X  |  |
|   |   |   |              |                    |    |  |
| Specification Section / Description           | OUSD Educational Specifications and Design Guidelines | Facilities Standards  | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|   |   |   |              | Yes                | No |  |
| <b>DIVISION 16 - ELECTRICAL</b>               |   |   |              |                    |    |  |
| Con't<br>16100 Basic<br>Materials and Methods |   | Lighting Contactors: Rated 30 Amps lighting load.   |              |                    | X  |  |

|                                     |   | Ground Rods: 3/4" x 10 feet copper clad.   |  |                    | X  |  |
|-------------------------------------|---|--|--|--------------------|----|--|
|                                     |   | Transient Voltage Surge Suppressors (TVSS)   |  |                    | X  |  |
|                                     |   | Device Plates: Plates shall be 0.040 inch S/S, satin finish; Smooth plastic nylon.   |  |                    | X  |  |
|                                     |   | Metal Raceway: Metallic surface mounted raceway with full compliment of fittings. Non metallic raceway is NOT permitted.   | Wiremold 4000 type metallic or AL 4000 series        |                    | X  | IT: Provide metallic surface mounted raceway where applicable. Wiremold 4000 series or Hubbell 4750 Series. Non metallic raceway is NOT permitted. |
| 16461 Dry Type Transformers         |   | Transformer: General purpose, dry type, aluminum core, rated 480 Volts primary to 120/208 Volts secondary, 3 phase, 4 wires, 150 degrees C rise, ss0 degrees C insulation. Transformers to be K-Rated and shielded for areas with heavy computer use.  |  |                    | X  |  |
|                                     |   |  |  |                    |    |  |
| Specification Section / Description | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards   |
|                                     |   |  |  | Yes                | No |  |
| <b>DIVISION 16 - ELECTRICAL</b>     |   |  |  |                    |    |  |
| 16470 Switchboard                   |   | Freestanding switchboard with pull section, main section and distribution system. UL listed per UL 891; NEMA PB-2. Completely self supporting, 90 inches high, NEMA-1 or NEMA-3R. Rated (481/277) (120/208) Volts, 3 phase, 4 wires. A/C rating as required. Bus bracing at 65,000 RMS Symm. Amps. Tin plated aluminum bussing. Thermal magnetic breakers. Ground fault protected main breaker where required. Thermostat. | Square D, Simons ITE, Westinghouse, General Electric |                    | X  |  |
|                                     |   |  |  |                    |    |  |
| Specification Section / Description | OUSD Educational Specifications and Design Guidelines | Facilities Standards   | Manufacturer   | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards   |
|                                     |   |  |  | Yes                | No |  |
| <b>DIVISION 16 - ELECTRICAL</b>     |   |  |  |                    |    |  |

|   |  |   |                         |                           |    |   |  |
|---|--|---|-------------------------|---------------------------|----|---|--|
| 16500<br>Lighting                                   | Lighting should provide a comfortable classroom environment with appropriate visual conditions. Where possible there will be a combination of natural and artificial lighting. Artificial lighting should have brightness controls and zoned variable lighting controls. Outdoor space shall be well lite. | Ballasts: Electronic fluorescent ballasts, HPF >98%, <15% THD, NO PCB's, Class A, Thermally Protected, CBM Label; HID Ballasts, HPF, regulated.<br>Lamps: Fluorescent T8 and T5HO type; 25 watt; Clear HID type.<br>Luminaries shall be UL labeled.<br>Light Poles: Minimum 90 MPH wind rated with 1.3 gust factor.<br>EXIT Signs: High level EXIT signs shall be Back mounted and electrically (120/277 volts) illuminated. End, Top and Pendant Mounts ARE NOT permitted. Signs are to be vandal resistant with polycarbonate shields. Secure sign with tamper resistant fasteners. |                         |                           |    | X   | B&G: Up lights are not a good source of light and are difficult to maintain. Up lights need to be readily accessible with high efficiency bulbs (LEDs). Pendant light fixtures tends to accumulate dust and requires regular cleaning. Surface mounted light fixtures are preferred or provide pendant light fixtures with top covers. Lamps: Fluorescent 32 Watt T-8 (Majority of sites is installed with 32 Watt T-8 lamps). Preference is for no motion detectors at student restrooms. Provide motion sensors in corridor lighting except for N.L. Prefer locating lighting control system in central area such as Electrical Room by the Main Panel. Provide identification of fixture location when power packs are installed within the fixture. Avoid placing power packs on top of fixture. |
| <b>Specification Section / Description</b>          | <b>OUSD Educational Specifications and Design Guidelines</b>   | <b>Facilities Standards</b>   | <b>Manufacturer</b>     | <b>Substitute Allowed</b> |    | <b>Buildings &amp; Grounds (B&amp;G), Custodial (CS) and Internet Technology (IT) Standards</b> |  |
|   |  |   |                         | Yes                       | No |   |  |
| <b>DIVISION 16 - ELECTRICAL</b>                     |  |   |                         |                           |    |   |  |
| Con't<br>16500<br>Lighting                          |  | EXIT Signs: Floor Level Exit signs are to be back mounted with vandal and tamper resistant fasteners. NEW Construction - EXIT signs are to be hot wired with NO Exceptions unless approved by the Director of Facilities. Renovation and Modernization Projects - Non powered self luminous Photo luminescent EXIT signs are permitted. Radioactive Tritium EXIT signs are NOT permitted.   |                         |                           |    | X   |  |
| <b>Specification Section / Description</b>          | <b>OUSD Educational Specifications and Design Guidelines</b>   | <b>Facilities Standards</b>   | <b>Manufacturer</b>     | <b>Substitute Allowed</b> |    | <b>Buildings &amp; Grounds (B&amp;G), Custodial (CS) and Internet Technology (IT) Standards</b> |  |
|   |  |   |                         | Yes                       | No |   |  |
| <b>DIVISION 16 - ELECTRICAL</b>                     |  |   |                         |                           |    |   |  |
| 16700 Intercom/<br>Paging/Clock/ Signal<br>Controls | Equip classrooms with an intercom and bell system that allows administrators to deliver school-wide announcements and implement a bell schedule and a phone and paging system that can make and receive calls and enables communications with other classrooms & administrators.                           | Fully operable communication system for ALL schools - CDC/Elementary/MS/HS.   | Rauland - Telecenter VI |                           |    | X   | B&G: Telecenter VI may be tied in with OUSD networking system at OUSD option. Speakers - provide 14 gauge shielded copper wiring. Clocks - Cat 5e or Cat 6 cable. All cabling are to be installed in steel conduits.   |
| <b>Specification Section / Description</b>          | <b>OUSD Educational Specifications and Design Guidelines</b>   | <b>Facilities Standards</b>   | <b>Manufacturer</b>     | <b>Substitute Allowed</b> |    | <b>Buildings &amp; Grounds (B&amp;G), Custodial (CS) and Internet Technology (IT) Standards</b> |  |
|   |  |   |                         | Yes                       | No |   |  |
| <b>DIVISION 16 - ELECTRICAL</b>                     |  |   |                         |                           |    |   |  |

|                       |      |  |  |                                    |  |  |   |
|-----------------------|------|--|--|------------------------------------|--|--|---|
| 16721<br>Alarm System | Fire |  | Fully operable addressable automatic fire detection and alarm system. All wiring are to be installed in conduits. Provide "red" conduit in concealed areas.<br>Note: Heat detectors are required at ALL student toilet rooms. Confirm approval by DSA. | Simplex 4100ES - District Standard |  |  | B&G: Reference - OUSD Fire Alarm Standards (dated 1/18/13 with Revisions 1/24/13 and 6/5/13) & Combination Fire Alarm and Intrusion Alarm System Standards (dated 1/8/13 Revised 7/8/13).<br>Warranty Requirements: One month prior to the expiration of the warranty period, the installer shall provide a factory trained service representative to conduct a 100 percent test of the work performed. Any deficiencies found during that testing shall be corrected under the warranty agreement. |
|                       |      |  |  |                                    |  |  | X   |

| Specification Section / Description | OUSD Educational Specifications and Design Guidelines | Facilities Standards | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|-------------------------------------|---|----------------------|--------------|--------------------|----|--|
|                                     |   |                      |              | Yes                | No |  |

**DIVISION 16 - ELECTRICAL**

|                                 |  |   |   |  |  |  |
|---------------------------------|--|---|---|--|--|--|
| 16727<br>Intrusion Alarm System | Intrusion alarm should feature multiple control zones , allowing certain zones to be secured while other are open. | Furnish and install a complete intrusion alarm system including but not limited to all cables, motion detectors, wire guards, glass break detectors, alarm contacts, arming stations, central control unit, RJ31X phone jacks, sounders, etc. All wires and cabling are to be installed in steel conduits. Provide magnetic door contacts at all roof top hatches.<br>Key Pad: Verify and coordinate location of the Key Pad with Buildings and Ground. Key Pad is NOT to be located in any public areas. | Bosch/Radionics D941GV4 - Version 1 (Version 2 is NOT allowed) No known equal |  |  | B&G: Reference - OUSD Intrusion Alarm System Standards (December 13, 2013 and Revision dated 2/12/2014) and Combination Fire Alarm and Intrusion Standards (December 11, 2013 and Revision dated 2/13/2014) Installer must be ACE (Alarm Company Employee) licensed through the State of California Bureaus of Investigative Services, Department of Consumer Affairs.<br>Warranty Requirements: One month prior to the expiration of the warranty period, the installer shall provide a factory trained service representative to conduct a 100 percent test of the work performed. Any deficiencies found during that testing shall be corrected under the warranty agreement. |
|                                 |  |   |   |  |  | X  |

| Specification Section / Description | OUSD Educational Specifications and Design Guidelines | Facilities Standards | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|-------------------------------------|---|----------------------|--------------|--------------------|----|--|
|                                     |   |                      |              | Yes                | No |  |

**DIVISION 16 - ELECTRICAL**



|                        |  |   |              |  |  |   |  |
|------------------------|--|---|--------------|--|--|---|--|
| 16740 Telephone System | Equip classrooms with a phone and paging system that can make and receive calls, and enables communication with other classrooms and administrators. | Furnish and install a complete Telephone System. Verify with B&G if site will be converting to VOIP.<br>Outside Plant Cables: Multi-conductor gel filled cable.<br>Station Cables: Standard multi-pair twisted cable.<br>Connectors: RJ-11 standard telephone connector.<br>Accessories: Terminal blocks, cross connect cables, equipment cabinets, wire management and plywood backboard.<br>All cabling are to be installed in steel conduits. Coordinate the installation of the telephone system with the Rauland TeleCenter VI where applicable. | Avaya IP-500 |  |  | X | B&G: Project Manager is responsible for notifying B&G - TeleCom Dept. on any new and additions to the telephone system. B&G TeleCom Dept. is to confirm with AT&T if the existing service is sufficient and whether additional service is required and order additional service as required.<br>Design Team is to confirm, coordinate and identify with AT&T the responsible party for the installation of all and any trenching, conduit and cabling that will be required to the MPOE. |
|------------------------|--|---|--------------|--|--|---|--|

| Specification Section / Description | OUSD Educational Specifications and Design Guidelines | Facilities Standards | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|-------------------------------------|---|----------------------|--------------|--------------------|----|--|
|                                     |   |                      |              | Yes                | No |  |

**DIVISION 16 - ELECTRICAL**

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|-----------------------------------|--|--|--|--|--|---|--|
| 16745 Data Com-munications System | Appropriate cabling and outlets will be installed in each classroom to provide for a variety of network technologies and stand alone equipment. At least one wall will have powered and outlets running along the entire length of the room. Ground outlets should be provided when possible. All classrooms should have network access. It is OUSD's goal that all students should have access to Wi-Fi. Server rooms (MDF and IDF rooms) must be secure, and separate from other school functions and must be well-ventilated & temperature controlled to manage over heating and enable proper maintenance. | Furnish and install a complete data communications system.<br>Fiber Optic Cables: Cat. VI<br>Connectors: Fiber SC connectors, Copper RJ45, 8 conductor, Cat. VI<br>Copper Patch Panels: Cat VI, multi-port<br>Accessories: Equipment racks, equipment cabinets, wire management, inner duct<br>Installation: Provide complete installation and testing<br>Test Fiber optic cables (bi-directional for signal attenuation) and copper cables (signal attenuation, noise, NEXT, cable length, pair to pair continuity, DC loop back resistance). |  |  |  | X | IT: OUSD Standard Network Build Specification (4/16/14) Classrooms: 6 drops total - 2 drops to clock area 1 high (WAP) and 1 low, and 4 more on separate walls in pairs. Other Rooms: Office Area - 8 drops; Computer Lab - 36 drops; Library - 8 drops; MP Room - 8 drops; Gym - 4 drops; Cafeteria - 4 drops; Outside - 2 drops; and CDC Classroom - 4 drops.<br>Antenna Enclosure for Exposed Areas: Stahlin Non Metallic Enclosure, J Series - HPL. Raceways: Metallic surface mounted raceway shall be Wiremold 4000-type or Hubbell 4750 series surface mounted raceway. Non-metallic raceway is NOT permitted. B&G: Preference is for the MDF Room to be located directly adjacent to an exterior roof to allow placement of a HVAC roof top unit. A split system HVAC unit is not permitted. |
|-----------------------------------|--|--|--|--|--|---|--|

| Specification Section / Description | OUSD Educational Specifications and Design Guidelines | Facilities Standards | Manufacturer | Substitute Allowed |    | Buildings & Grounds (B&G), Custodial (CS) and Internet Technology (IT) Standards |
|-------------------------------------|---|----------------------|--------------|--------------------|----|--|
|                                     |   |                      |              | Yes                | No |  |

**DIVISION 16 - ELECTRICAL**

|                                  |  |                                |  |  |  |   |  |
|----------------------------------|--|--------------------------------|--|--|--|---|--|
| 16745 Assistive Listening Device |  | Wireless Large Area ALD System |  |  |  | X |  |
|----------------------------------|--|--------------------------------|--|--|--|---|--|