Notice is hereby given to all prospective bidders that plans and specifications on the subject project are modified as hereinafter set forth. This Addendum shall be attached to and form a part of the plans and specifications. All bidders must acknowledge receipt of this addendum on the Bid Form. In case of difference with previous addenda or communications, this addendum takes precedence.

It is the responsibility of all bidders to notify all subcontractors from whom they request bids and from whom they accept bids of all changes contained in this addendum.

PROJECT MANUAL

1. Item No. PM-1  
   Reference: 00010 – Table of Contents  
   Description:  
   - Add section 02791 Playground Surfacing Tiles.  
   - Add section 13705 Motion Detection Security System.  
   - Delete section 07511 Built-Up Asphalt Roofing.

2. Item No. PM-2  
   Reference: 02791 – Playground Surfacing Tile  
   Description: Add section in its entirety.

3. Item No. PM-3  
   Reference: 07511 – Built-Up Asphalt Roofing  
   Description: Delete section.

4. Item No. PM-4  
   Reference: 07550 – Modified Bituminous Membrane Roofing  
   Description: Replace entire section.

5. Item No. PM-5  
   Reference: 08220 – Plastic Doors  
   Description: Replace entire section.

6. Item No. PM-6  
   Reference: 08411 – Aluminum-Framed Storefronts  
   Description:
- Delete 1.01 / A / 2 and other references to “Entrances”.
- 2.01 / A add to Oldcastle building envelope basis of design “DWC Non-thermal”.
- Add Winco Window Company to listed manufacturers. 3.04: delete hardware schedule for entrances. See section 08710.

7. Item No. PM-7
Reference: 08520 – Aluminum Windows
Description:
- Revise section 2.01, per attached.
- 3.02 / E: delete reference to nailing fin.

8. Item No. PM-8
Reference: 08710 – Door Hardware
Description: Add section 3.05 hardware schedule.

9. Item No. PM-9
Reference: 08911 – Glazed Aluminum Curtain Walls
Description: Delete 2.02 / I “sunscreen light shelf”.

10. Item No. PM-10
Reference: 11052 – Book Depositories
Description: Revise model # to:
(1) Book Return: Tekstar, “Model 10-8800”, or approved equal,

11. Item No. PM-11
Reference: 13705 – Intrusion Detection System
Description: Add section in its entirety.

12. Item No. PM-12
Reference: 13710 – Access Control
Description: Replace entire section.

13. Item No. PM-13
Reference: 13720 – Video Surveillance
Description: Replace entire section.

DRAWINGS

1. Item No. AD1-01
Reference: DRAWING A0.01 – COVER SHEET
Description: Various sheet title revisions to match sheets. Per sketch CA-01.

2. Item No. AD1-02
Reference: DRAWING A1.01 – SITE PLAN
Description: Remove misplaced dimensions and graphics from drawing. Revise Keynote 45. Per sketch CA-02.
3. **Item No. AD1-03**
   Reference: DRAWING A1.02 – INTERIM HOUSING PLAN
   Description: Remove misplaced dimensions and graphics from drawing. Add note to Legend. Per sketch CA-03.

4. **Item No. AD1-04**
   Reference: DRAWING A1.04 – FIRST FLOOR DEMO PLAN WEST WING
   Description: Revise Keynote 22. Per sketch CA-04.

5. **Item No. AD1-05**
   Reference: DRAWING A2.05 – ROOF PLAN
   Description: Revise Keynote 8 and applied where appropriate. Revise General Note 4. Per sketch CA-05.

6. **Item No. AD1-06**
   Reference: DRAWING A2.07 – SIGNS, FINISH PLAN & SCHEDULE
   Description: Add notes. Revise Interior Finish Schedule. Add and revise finish tags. Per sketch CA-06.

7. **Item No. AD1-07**
   Reference: DRAWING A2.08 -- SIGNS, FINISH PLAN & SCHEDULE
   Description: Add notes. Revise Interior Finish Schedule. Per sketch CA-07.

8. **Item No. AD1-08**
   Reference: DRAWING A4.00 – INTERIOR ELEV. WEST WING CLASSROOMS
   Description: Add Keynote 26 and locate as appropriate. Revise Keynote 10. Revise General Note 2. Per sketch CA-08.

9. **Item No. AD1-09**
   Reference: DRAWING A2.06A – PLANS, ELEV., & RCP PORTABLE B-8
   Description: Add note to drawing 1B. Per sketch CA-09.

10. **Item No. AD1-10**
    Reference: DRAWING A2.06B -- PLANS, ELEV., & RCP PORTABLE B-10
    Description: Add note to drawing 1D. Per sketch CA-10.

11. **Item No. AD1-11**
    Reference: DRAWING A2.12 – ACCESSIBILITY DETAILS
    Description: Add notes to drawing 12. Per sketch CA-11.

12. **Item No. AD1-12**
    Reference: DRAWING A4.05 – ENLARGED FLOOR PLANS & INTERIOR ELEV.
    Description: Add notes to Keynotes 19 & 23 at all locations. Revise General Note 4. Per sketch CA-12.

13. **Item No. AD1-13**
    Reference: DRAWING A4.06 -- ENLARGED FLOOR PLANS & INTERIOR ELEV.
14. Item No. AD1-14
Reference: DRAWING A4.07 -- ENLARGED FLOOR PLANS & INTERIOR ELEV.
Description: Add notes to Keynotes 19 & 23 at all locations. Revise General Note 4. Per sketch CA-14.

15. Item No. AD1-15
Reference: DRAWING A4.11 -- ENLARGED FLOOR PLANS & INTERIOR ELEV.
Description: Add symbol to drawing 1C. Per sketch CA-15.

16. Item No. AD1-16
Reference: DRAWING A2.10 – WINDOW SCHEDULE
Description: Revise symbol on Window Schedule. Revise Schedule Abbreviations. Revise General Notes. Add notes to drawings. Per sketch CA-16.

17. Item No. AD1-17
Reference: DRAWING A1.05 – SECOND FLOOR DEMO PLAN WEST WING
Description: Add General Note 35. Per sketch CA-17.

18. Item No. AD1-18
Reference: DRAWING A6.01, A6.02, A6.03 – REFLECTED CEILING PLANS
Description: Revise Legend symbol to match graphic on drawing. Per sketch CA-18.

19. Item No. AD1-19
Reference: DRAWING A7.03 – EXTERIOR STAIR PLANS & DETAILS
Description: Revise drawing title. Add notes to drawing 15. Per sketch CA-19.

20. Item No. AD1-20
Reference: DRAWING A7.01 – LOBBY STAIR PLANS & DETAILS
Description: Add note to drawing 11. Per sketch CA-20.

21. Item No. AD1-21
Reference: DRAWING A7.02 – EXTERIOR STAIRS & SITE DETAILS
Description: Add references to Structural drawings for reinforcing. Revise dimension to drawing 19. Per sketch CA-21.

22. Item No. AD1-22
Reference: DRAWING A2.01 – FIRST FLOOR PLAN WEST WING
Description: Revise Keynote 18 and locate as appropriate. Per sketch CA-22.

23. Item No. AD1-23
Reference: DRAWING A7.04 – ENTRY PLAZA PLANS & DETAILS
Description: Add reference to structural drawings to drawing 18. Per sketch CA-23.

24. Item No. AD1-24
Reference: DRAWING A2.09 – DOOR SCHEDULE
Description: Revise Door Schedule and Schedule General Notes. Per sketch CA-24.

25. Item No. AD1-25
Reference: DRAWING C1.0 – NOTES, LEGENDS, & ABBREVIATIONS
Description: Revise General Note 12 and Grading Note 1. Per sketch CC-01.
26. Item No. AD1-26  
Reference: DRAWING C3.0 – GRADING, DRAINAGE & UTILITY PLAN  
Description: Revise Fence and Gate Schedule. Per sketch CC-02.

27. Item No. AD1-27  
Reference: DRAWING C3.0 – GRADING, DRAINAGE & UTILITY PLAN  
Description: Revise note 20 and revise swing of Gate #2. Per sketch CC-03.

28. Item No. AD1-28  
Reference: DRAWING C3.0 – GRADING, DRAINAGE & UTILITY PLAN  
Description: Add hatching to lobby/plaza/ramp area. Add Fence #6 and Gate #11 southwest of North Wing. Per sketch CC-04.

29. Item No. AD1-29  
Reference: DRAWING C5.0 – CONSTRUCTION DETAILS  
Description: Added note to detail 8. Per sketch CC-05.

30. Item No. AD1-30  
Reference: DRAWING S0.01 – MATERIALS DATA & PROJECT INFORMATION  
Description: Added underpinning pier concrete design parameters. Per sketch CS-01.

31. Item No. AD1-31  
Reference: DRAWING S0.01 - MATERIALS DATA & PROJECT INFORMATION  
Description: Added excavation shoring requirements. Per sketch CS-02.

32. Item No. AD1-32  
Reference: DRAWING S0.01 – MATERIALS DATA & PROJECT INFORMATION  
Description: Added Supplemental Geotechnical Letter to Project Data. Per sketch CS-03.

33. Item No. AD1-33  
Reference: DRAWING S1.07 – TYPICAL DETAILS NO. 7  
Description: Revised mechanical unit anchorage to accommodate vibration isolator anchor bolt pattern. Per sketch CS-04.

34. Item No. AD1-34  
Reference: DRAWING S1.07 – TYPICAL DETAILS NO. 7  
Description: Added housekeeping pad detail. Per sketch CS-05.

35. Item No. AD1-35  
Reference: DRAWING S2.21 – SOUTH WING FOUNDATION PLAN  
Description: Added Plan Note 16 noting over excavation and fill requirements at the Lobby building pad preparation. Added Plan note 17 noting contractor shall review geotechnical information for difficult digging conditions into bedrock. Per sketch CS-06.

36. Item No. AD1-36  
Reference: DRAWING S2.22 – NORTH WING FOUNDATION PLAN & SOUTH WING FRAMING PLAN  
Description: Added Plan Note 20 noting over excavation and fill requirements at the Lobby building pad preparation. Added Plan Note 21 noting contractor shall review geotechnical information for difficult digging conditions into bedrock. Per sketch CS-07.
37. Item No. AD1-37
  Reference: DRAWING S3.11 – WEST WING BUILDING SECTIONS & ELEVATIONS
  Description: Added underpinning reference to section A. Per sketch CS-08.

38. Item No. AD1-38
  Reference: DRAWING S3.11 -- WEST WING BUILDING SECTIONS & ELEVATIONS
  Description: Added underpinning reference to section B. Per sketch CS-09.

39. Item No. AD1-39
  Reference: DRAWING S4.21 – LOBBY FOUNDATION DETAILS
  Description: Revised detail to move redundant line work in Section A. Per sketch CS-10.

40. Item No. AD1-40
  Reference: DRAWING M0.01 – SYMBOL LIST & GENERAL NOTES - MECHANICAL
  Description: Add note to general mechanical notes covering controls removal. Per sketch CM-01.

41. Item No. AD1-41
  Reference: DRAWING M1.01 – FIRST FLOOR DEMO PLAN – WEST WING – MECHANICAL
  Description: Add additional information to keynote 8. Revise sheet keynote in Boiler Room 119. Per sketch CM-02.

42. Item No. AD1-42
  Reference: DRAWING M1.02 – SECOND FLOOR DEMO PLAN – WEST WING – MECHANICAL
  Description: Add general sheet note. Per sketch CM-03.

43. Item No. AD1-43
  Reference: DRAWING M1.03 – FIRST FLOOR DEMO PLAN – SOUTH WING – MECHANICAL
  Description: Add general sheet note. Per sketch CM-04.

44. Item No. AD1-44
  Reference: DRAWING M1.04 – FIRST FLOOR DEMO PLAN – NORTH WING – MECHANICAL
  Description: Add general sheet note. Per sketch CM-05.

45. Item No. AD1-45
  Reference: DRAWING M2.01 – FIRST FLOOR PLAN – WEST WING – MECHANICAL
  Description: Add sheet keynote 11. Revise BMS controller location. Revise location of FC-1. Add location of TCP-1. Per sketch CM-06.
46. Item No. AD1-46
   Reference: DRAWING M2.03 – FIRST FLOOR PLAN – WEST WING – MECHANICAL
   Description: Add seismic joint to heating water supply and return (two locations). Per sketch CM-07.

47. Item No. AD1-47
   Reference: DRAWING M2.04 – FLOOR PLANS NORTH WING & 2ND FLOOR LOBBY - MECHANICAL
   Description: Revise sheet keynotes. Add location for TCP-2. Per sketch CM-08.

48. Item No. AD1-48
   Reference: DRAWING M4.01 – DETAILS - MECHANICAL
   Description: Add sheet to complete drawing set. Sheet added.

49. Item No. AD1-49
   Reference: DRAWING M5.01 – CONTROL DIAGRAMS - MECHANICAL
   Description: Revise controls diagrams and notes. Per sketch CM-09.

50. Item No. AD1-50
   Reference: DRAWING P1.00 – SITE PLAN – PLUMBING
   Description: Revised note reference to indicate P1.03. Per sketch CP-01.

51. Item No. AD1-51
   Reference: DRAWING P1.01U – FIRST FLOOR UNDERSLAB DEMO PLAN – WEST WING – PLUMBING
   Description: Added cap for waste line to be demolished. Per sketch CP-02.

52. Item No. AD1-52
   Reference: DRAWING P1.02 – SECOND FLOOR DEMO PLAN – WEST WING – PLUMBING
   Description: Dishwasher, booster, and disposal shown to be demolished. Fire sprinkler piping and hoses shown to be demolished. Per sketch CP-03.

53. Item No. AD1-53
   Reference: DRAWING P1.04 – FIRST FLOOR NORTH WING – DEMO PLAN – PLUMBING
   Description: Vent for existing water closet to be demolished shown capped at ceiling. Per sketch CP-04.

54. Item No. AD1-54
   Reference: DRAWING P2.01U – FIRST FLOOR UNDERSLAB DEMO PLAN – WEST WING – PLUMBING
   Description: Added storm drain to be rerouted through the new lobby. Per sketch CP-05.

55. Item No. AD1-55
   Reference: DRAWING P2.01 – FIRST FLOOR PLAN – WEST WING – PLUMBING
   Description: Added waste piping from restrooms 214 and 226 above. Per sketch CP-06.
56. Item No. AD1-56
   Reference: DRAWING P2.02 – SECOND FLOOR PLAN – WEST WING – PLUMBING
   Description: Show piping, waste, and vent to new fixtures. Per sketch CP-07.

57. Item No. AD1-57
   Reference: DRAWING P2.03 – FIRST FLOOR PLANS SOUTH WING – PLUMBING
   Description: Added seismic joint piping and keynote. Added trap primers for floor drains in restrooms. Per sketch CP-08.

58. Item No. AD1-58
   Reference: DRAWING P2.04 – FLOOR PLANS NORTH WING & 2ND FLOOR LOBBY – PLUMBING
   Description: Piping shown for fixtures in staff toilet restroom. Added trap primers for floor drains in restrooms. Per sketch CP-09.

59. Item No. AD1-59
   Reference: DRAWING P2.05 – PORTABLE FIRST FLOOR PLANS – PLUMBING
   Description: Vent size increased to meet code requirement to match sewer size. Per sketch CP-10.

60. Item No. AD1-60
   Reference: DRAWING P2.06 – ROOF PLAN – WEST WING – PLUMBING
   Description: New vent thru roof shown. Per sketch CP-11.

61. Item No. AD1-61
   Reference: DRAWING P1.01 – FIRST FLOOR DEMO PLAN – WEST WING – PLUMBING
   Description: Fire sprinkler piping and hoses shown to be demolished. Sheet re-issued in entirety.

62. Item No. AD1-62
   Reference: DRAWING E0.01 – SYMBOL LIST & GENERAL NOTES - ELECTRICAL
   Description: Add symbol for circuit breaker with shunt trip. Revise multiple channel raceway to indicate receptacles every 3’ OC. Per sketch CE-01.

63. Item No. AD1-63
   Reference: DRAWING E1.00 – SITE PLAN - ELECTRICAL
   Description: Add circuit for exterior camera. Per sketch CE-02.

64. Item No. AD1-64
   Reference: DRAWING E1.01 – FIRST FLOOR DEMO PLAN – WEST WING - ELECTRICAL
   Description: Add BMS demo and phase note. Per sketch CE-03.

65. Item No. AD1-65
   Reference: DRAWING E2.01 – FIRST FLOOR PLAN – WEST WING – POWER
   Description: ADD power for temperature control panel ‘TCP-1’. Add ground bus. Add power for building management system. Remove 120V power for motorized damper, which are powered off TCP. Per sketch CE-04.
66. Item No. AD1-66  
Reference: DRAWING E2.01 – FIRST FLOOR PLAN – WEST WING – POWER  
Description: Add note to replace panel ‘CP-1’ at initial phase of project. Per sketch CE-05.

67. Item No. AD1-67  
Reference: DRAWING E2.02 – SECOND FLOOR PLAN – WEST WING – POWER  
Description: Add circuiting for receptacles in Teacher’s Lounge 225 from panel ‘CP4’. Per sketch CE-06.

68. Item No. AD1-68  
Reference: DRAWING E2.04 – FLOOR PLANS NORTH WING & 2ND FLOOR LOBBY – POWER  
Description: Add power for temperature control panel ‘TCP-2’. Per sketch CE-07.

69. Item No. AD1-69  
Reference: DRAWING E3.03 – FIRST FLOOR PLAN – SOUTH WING – LIGHTING  
Description: Add circuiting for lobby ‘C3’ lights. Revise add alternate description. Per sketch CE-08.

70. Item No. AD1-70  
Reference: DRAWING E3.04 – FLOOR PLANS NORTH WING & 2ND FLOOR LOBBY – LIGHTING  
Description: Revise add alternate description. Revise location of type ‘X3’ exit signs. Per sketch CE-09.

71. Item No. AD1-71  
Reference: DRAWING E4.01 – SINGLE LINE DIAGRAM  
Description: Revise elevator breaker and feeder rating. Revise panel ‘MOD’ to be NEMA 3R type. Per sketch CE-10.

72. Item No. AD1-72  
Reference: DRAWING E4.02 – PANEL SCHEDULES  
Description: Revise panel schedule ‘CP1’. Per sketch CE-11.

73. Item No. AD1-73  
Reference: DRAWING E4.02 – PANEL SCHEDULES  
Description: Revise panel schedule ‘CP2’. Per sketch CE-12.

74. Item No. AD1-74  
Reference: DRAWING E4.02 – PANEL SCHEDULES  
Description: Revise panel schedule ‘CP4’. Per sketch CE-13.

75. Item No. AD1-75  
Reference: DRAWING E4.02 – PANEL SCHEDULES  
Description: Revise panel schedule ‘A’. Per sketch CE-14.

76. Item No. AD1-76  
Reference: DRAWING E5.02 – DETAILS – ELECTRICAL  
Description: Add power for smoke curtain. Remove power for sump pump. Remove panel ‘ELEV’. Add circuit for elevator machine room, elevator cab, elevator shaft top and bottom receptacles and lights. Remove fusible

77. Item No. AD1-77
Reference: DRAWING FA0.01 – SYMBOL LEGEND & GENERAL NOTES – FIRE ALARM
Description: Add elevator curtain function to Operation Matrix. Per sketch CF-01.

78. Item No. AD1-78
Reference: DRAWING FA2.01 – FIRST FLOOR PLANS – WEST WING – FIRE ALARM
Description: Add sheet keynotes. Add control relay at elevator door. Revise smoke detector location at elevator door. Per sketch CF-02.

79. Item No. AD1-79
Reference: DRAWING FA2.02 -- SECOND FLOOR PLANS – WEST WING – FIRE ALARM
Description: Add control relay at elevator door. Revise smoke detector location at elevator door. Per sketch CF-03.

80. Item No. AD1-80
Reference: DRAWING FA4.01 – ONE LINE DIAGRAM – FIRE ALARM
Description: Add control relays One-Line Diagram. Per sketch CF-04.

81. Item No. AD1-81
Reference: DRAWING T1.00 – PERMANENT SITE PLAN - TECHNOLOGY
Description: Add pole for site security camera and mounting detail callout. Per sketch CT-01.

82. Item No. AD1-82
Reference: DRAWING T5.01 – DETAILS – TECHNOLOGY
Description: Add mounting detail for security camera on pole. Per sketch CT-02.

RFI RESPONSES
1. Question: Book Return Depositories – The Kingsley 0400 and 4001 model numbers shown as “Acceptable” are discontinued.  
Response: Spec updated with revised model.

2. Question: Kitchen Item – Please review the Kitchen as detailed on 1/ A4.12. There remains an object in this kitchen that is not specified. Is this a SS serving counter? Is the object to be provided new by the contractor, or is the object NIC as other kitchen items are? If provided by the contractor, please provide a detail and a spec. The unspecified rectangular object is 2'-6” wide and is 44” away from the face of nearest wall. 
Response: Yes it is a serving counter N.I.C.
3. **Question: Vetrotech VDS Lite Framing System** – Specification 8420 calls for a Vetrotech VDS Lite Framing System. Please clarify which openings on sheet A2.10 shall be VDS Lite Framing/Glazing Systems. Shall any door and frames be provided as part of the Vetrotech system?

   **Response:** Opening “Y” including corner and return. Yes: Door 220 A and Frame. These items are noted on schedule sheets.

4. **Question: HMF versus Vetrotech VDS Frames** – Specification 8110 calls for HM Doors and Frames manufactured by Deco Door, Republic Builders, Steelcraft or equal. Specification 8110 includes requirements for fire rated HM Doors and Frames. Specification 8420 calls for Vetrotech VDS Lites and includes requirement for the fire-rated construction of VDS door openings. There are several fire-rated door openings on the door schedule. How shall the contractor determine which window or door openings are fire-rated HMF as per 8110 and which openings are fire-rated VDS as per 8420?

   **Response:** Door schedule remarks for door 220 A revised to reference section 08420. Schedule note 8 revised to address all other rated doors.

5. **Question: Glazing Types** – Specification 8800 lists 8 different types of glazing types. Please clarify which glazing shall go into which window opening type. Reference sheet A2.10

   **Response:** All glass shall be type 5 except:
   - Type 6 glass assemblies at E, K, R, S, T.
   - Type 7 glass assembly at Y and door 220A.
   - Type 8 at rated doors except 220A.

6. **Question: Window Type X** – Window Type X on sheet A2.10 does not reference any framing details. Shall details be provided? What is the frame/glazing type?

   **Response:** This window assembly has been relabeled type Z. Details are called out in detail 9/A3.05.

7. **Question: Window and Door opening between rooms 220 and 222** – Please review the window wall between rooms 220 and 222, as noted on sheets A4.10 and A4.11. What shall the frame/glazing type be? Detail 1/A4.11 calls for window type X.

   **Response:** Correct: Window type X. Referenced details show standard storefront profiles per section 08411.

8. **Question: Corridor C04 Window Types** – Please provide the window framing/glazing types for the C04 corridor windows. One of the windows is specified as type X on sheet A3.03. The other window is not called out. Also note the type X window in question 8 above is an interior window, while this corridor C04 window is exterior. Please review and advise.

   **Response:** See item 6 above.

9. **Question: Door 222 in Room 222** – Please review the door and frame types for opening 222 in room 222. The door schedule calls for an AL door being installed in a HMF frame. This seems unusual, and outside of the ordinary. Please confirm the design intent.

   **Response:** Door schedule revised to reflect aluminum frame.

10. **Question: Window Wall in Room 220** – Please review the window wall in room 220. This wall goes between room 220 and the corridor. What shall the frame construction of this window be? What shall the glazing type be? Shall this window wall be of fire rated construction?

    **Response:** See items 3, 4, and 5 above.

11. **Question: Shade cloth** – Clarify shade cloth openness and procedures.
**Response:** Shade cloth as specified shall have 1% openness and shall have manufacturer’s standard metallic coating on interior side.

**END OF ADDENDUM ITEMS**

**ATTACHMENTS:**

**Project Manual:**
- Section 00010 3 Pages
- Section 02791 6 pages
- Section 07550 8 pages
- Section 08220 8 pages
- Section 08520 1 pages
- Section 08710 12 pages
- Section 13705 10 pages
- Section 13710 8 pages
- Section 13720 7 pages

**Drawings:**
- Architectural: CA-01 - CA-24 24 pages
- Civil: CC-01 - CC-05 5 pages
- Structural: CS-01 - CS-10 10 pages
- Mechanical: CM-01 - CM-09, Sheet M4.01 10 pages
- Plumbing: CP-01 - CP-11, Sheet P1.01 12 pages
- Electrical: CE-01 - CE-15 15 pages
- Fire Alarm: CF-01 - CF-04 4 pages
- Technology: CT-01 - CT-02 2 pages
DIVISION 2 - SITE CONSTRUCTION

Section 02223 Selective Site Demolition
Section 02224 Selective Building Demolition
Section 02230 Tree Removal, Site clearing, Stripping, and Grubbing
Section 02255 Shoring
Section 02300 Earthwork
Section 02310 Utility Trenching and Backfill
Section 02320 Pavement Subbase and Base Courses
Section 02510 Water System
Section 02530 Sanitary Sewer System
Section 02630 Storm Drainage System
Section 02750 Asphalt Concrete Pavement
Section 02765 Pavement Markings
Section 02787 Permeable Unit Pavers
Section 02788 Fog Seal
*A1 Section 02791 Playground Surfacing Tiles*A1
Section 02820 Fences and Gates
Section 02880 Playground Equipment

DIVISION 3 - CONCRETE

Section 03000 Concrete Work - General
Section 03100 Concrete Formwork
Section 03200 Reinforcing Steel
Section 03300 Cast-in-Place Concrete
Section 03301 Portland Cement Concrete for Civil Improvements
Section 03350 Concrete Finishing
Section 03360 Shotcrete
Section 03701 Post Installed Anchors
Section 03930 Externally Bonded Fiber Reinforced Polymer Strengthening System

DIVISION 4 - MASONRY (Not Used)

DIVISION 5 - METALS

Section 05120 Structural Steel & Miscellaneous Iron
Section 05300 Metal Decking
Section 05400 Cold Formed Metal Framing
Section 05500 Metal Fabrications
Section 05810 Seismic Joint Cover Assemblies

DIVISION 6 - WOOD AND PLASTICS

Section 06070 Wood Treatment
Section 06200 Finish Carpentry
Section 06410 Custom Casework
Section 06604 Plastic Paneling
DIVISION 7 - THERMAL AND MOISTURE PROTECTION

Section 07140 Fluid Applied Waterproofing
Section 07170 Bentonite Waterproofing
Section 07210 Building Insulation
Section 07260 Vapor Retarders
* A1
Section 07550 Modified Bituminous Membrane Roofing
Section 07620 Sheet Metal Flashing and Trim
Section 07650 Flexible Flashing
Section 07840 Firestopping
Section 07920 Joint Sealants

DIVISION 8 - DOORS AND WINDOWS

Section 08110 Steel Doors and Frames
Section 08212 Flush Wood Doors
Section 08220 Plastic Doors
Section 08311 Access Doors and Frames
Section 08349 Elevator Door Smoke Containment System
Section 08411 Aluminum Framed Storefronts
Section 08420 Fire Rated Steel Framed Entrances and Storefront
Section 08520 Aluminum Windows
Section 08710 Door Hardware
Section 08800 Glazing
Section 08911 Glazed Aluminum Curtain Wall

DIVISION 9 - FINISHES

Section 09100 Metal Support Assemblies
Section 09220 Portland Cement Plaster
Section 09250 Gypsum Board
Section 09262 Shaft Wall Assemblies
Section 09300 Tile
Section 09510 Acoustical Ceilings
Section 09640 Wood Flooring
Section 09650 Resilient Flooring
Section 09900 Paints and Coatings
Section 09960 High Performance Coatings
Section 09980 Vapor Emission Treatment Systems

DIVISION 10 - SPECIALTIES

Section 10100 Visual Display Boards
Section 10170 Plastic Toilet Compartments
Section 10200 Louvers and Vents
Section 10350 Flagpoles
Section 10400 Identification Devices
Section 10520 Fire Protection Specialties
Section 10671 Metal Storage Shelving
Section 10810 Toilet Accessories
DIVISION 11 - EQUIPMENT

Section 11052  Book Depositories
Section 11054  Library Stack System
Section 11481  Backstops

DIVISIONS 12 - FURNISHINGS

Section 12100  Art
Section 12494  Window Shades

DIVISION 13 - SPECIAL CONSTRUCTION

Section 13700  Electronic Safety and Security Basic Requirements
Section 13705  Motion Detection Security System
Section 13710  Access Control System
Section 13720  Video Surveillance
Section 13850  Fire Detection and Alarm

DIVISION 14 - CONVEYING SYSTEMS

Section 14240  Hydraulic Elevators
Section 14420  Wheelchair Lifts

DIVISION 15 - MECHANICAL

Section 15010  Plumbing Basic Requirements
Section 15020  Heating, Ventilating and Air Conditioning (HVAC) Basic Requirements
Section 15035  Expansion Fittings and Loops for HVAC Piping
Section 15055  Common Motor Requirements for HVAC Equipment
Section 15056  Common Motor Requirements for HVAC Equipment
Section 15058  Expansion Fittings and Loops for Plumbing Piping
Section 15060  Hangers and Supports for Plumbing Piping and Equipment
Section 15065  Hangers and Supports for HVAC Piping, Ductwork and Equipment
Section 15071  Vibration and Seismic Controls for Plumbing Piping and Equipment
Section 15072  Vibration and Seismic Controls for HVAC Equipment
Section 15075  Identification for Plumbing Piping and Equipment
Section 15076  Identification for HVAC Piping, Ductwork and Equipment
Section 15082  HVAC Insulation
Section 15100  Plumbing Piping
Section 15110  General-Duty Valves for Plumbing Piping
Section 15115  General-Duty Valves for HVAC Piping
Section 15120  Plumbing Devices
Section 15125  Meters and Gauges for HVAC Piping
Section 15180  Hydronic Piping Specialties
Section 15181  Hydronic Pumps
Section 15183  HVAC Piping
Section 15187  HVAC Water Treatment
Section 15191  Facility Fuel - Natural Gas Piping and Systems
Section 15400  Plumbing Equipment
Section 15410  Plumbing Fixtures
Section 15720  Modular Air Handling Units
Section 15745  Terminal Heat Transfer Equipment
**SECTION 02791**

**PLAYGROUND SURFACING TILES**

**PART 1 - GENERAL**

1.01 **SECTION INCLUDES**

A. Resilient, interlocking, playground safety surfacing tiles.

B. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

C. Related Section

1.02 **REFERENCES**

A. ADA - Americans with Disabilities Act
   1. 2010 ADA Standards for Accessible Design

B. ASTM - American Society for Testing and Materials

C. CPSC - Consumer Product Safety Commission

D. CPSI - Certified Playground Safety Inspector.

E. NPSI - National Playground Safety Institute

F. NRPA - National Recreation and Parks Association

1.03 **SYSTEM DESCRIPTION**

A. Performance Requirements
   1. Playground safety matting within playground equipment use zones shall meet or exceed the performance requirements of CPSC and ASTM F1292 that a surface yield both a peak deceleration of no more than 200g,
and a Head Injury Criteria (HIC) value of no more than 1,000g, for a head-first fall from the highest accessible portion of play equipment being installed. The Contractor is responsible for obtaining a determination from the safety surfacing manufacturer of the product depth required to meet performance requirements for all play equipment.

2. Playground safety matting intended to serve as accessible paths of travel for persons with disabilities shall be firm, stable and slip resistant and shall meet the requirements of CPSC and ASTM F1951.

3. An official authorized to certify on behalf of the playground safety matting shall sign a statement attesting that the surfacing meets the requirements of ASTM F1292 for a head-first fall from the highest accessible portion of installed play equipment.
   a. The impact attenuating qualities of the surfacing system shall not be diminished in the surface areas covering hardware.
   b. Testing of product shall include tests conducted over hardware.
   c. The statement shall be dated after the award of the Contract, shall state the Contractor’s name and address, and shall name the project and location. The statement shall also provide the name, address, and telephone number of the testing company, the date of the test, and the test results.

4. The authorized manufacturer’s representative shall certify upon completion of the installation that the safety surfacing has been installed in accordance with the manufacturer’s instructions and complies with all specifications.

5. Require the manufacturer to provide a Certificate of Insurance covering both product and general liability, of not less than $1,000,000 for a period of not less than 2 years.
   a. The issuing underwriter shall be AA-rated.

6. Require the installer of the play equipment to submit proof of liability insurance of at least $1,000,000 for a period of not less than 2 years from a reputable insurance company covering defects in materials, workmanship, and installation. This liability insurance shall cover any bodily harm resulting from a failure of play equipment due to installation defects.

7. The play area shall be inspected by a NPSI certified Playground Inspector as required by the California Playground Safety Regulations. Final Acceptance will not be granted until the project is certified to be compliant.

1.04 SUBMITTALS

A. Product Data: Submit manufacturer’s product data, including installation and subsurface instructions, color options card or brochure.

B. Samples: Submit manufacturer’s sample of 1 full tile, and 1 section of ADA ramp.

C. Test Reports: Submit certified test reports from qualified independent testing agency indicating results of the following tests:
   1. Impact Attenuation: ASTM F1292.
   2. Rubber Deterioration/Air Oven: ASTM D573.
   6. Tear Strength: ASTM D624.
   10. Flammability: ASTM D2859

D. Certificate of Compliance: Submit manufacturer’s certificate of compliance indicating materials comply with specified requirements.
E. Manufacturer's Project References
   1. Submit list of 5 successfully completed projects, in the past 3 years.
   2. Include project name and location; name of owner; telephone number and contact name; type and quantity of playground safety surfacing tiles furnished; and date of installation, service or maintenance organization.

F. Installer's Project References: Submit copy of manufacturer issued installation certification

G. Maintenance Instructions: Submit manufacturer's maintenance and cleaning instructions.

H. Warranty: Submit manufacturer's standard warranty.

1.05 QUALITY ASSURANCE

A. Qualifications
   1. Manufacturer
      a. Continuously engaged in manufacturing of playground safety surfacing tiles of similar type to that specified, with a minimum of 10 years successful experience.
      b. Furnished a minimum of 15,000,000 square feet of playground safety surfacing tiles of similar type to that specified.
   2. Installer: Manufacturer's representative or manufacturer's certified/authorized installer who is experienced in installation of the specified playground safety surface; shall supervise or inspect the installation to ensure that the safety surfacing meets the impact attenuation requirements.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage:
   1. Store materials in accordance with manufacturer's instructions.
   2. Playground Safety Surfacing Tiles:
      a. Store tiles in a dry area at a minimum temperature of 50 degrees Fahrenheit for a minimum of 72 hours before installation.
      b. Protect tiles from direct sunlight before installation.
   3. Adhesive: Store adhesive in a dry area at a minimum temperature of 50 degrees Fahrenheit.

C. Handling: Protect materials during handling and installation to prevent damage.

1.07 ENVIRONMENTAL REQUIREMENTS

A. Tile Temperature: Ensure surface temperature of playground safety surfacing tiles is a minimum of 50 degrees Fahrenheit at time of installation.

B. Air Temperature: Ensure air temperature is a minimum of 40 degrees Fahrenheit for a minimum of 24 hours before and during installation.

C. Tile or Air Temperatures: Consult manufacturer's installation instructions for modified installation procedure when tile or air temperatures are above 85 degrees Fahrenheit.

1.08 WARRANTY

A. Materials and Workmanship: Playground safety surfacing tiles shall be warranted for defects in materials and workmanship for 10 years from date of completed installation.
B. Performance: Playground safety surfacing tiles shall be warranted to meet drop height performance requirements of ASTM F1292 for 10 years from date of completed installation.

1.09 MAINTENANCE

A. Provide 15 percent extra tiles and full ramp sections to the District for future patching

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturers: SofSURFACES, Inc., 4393 Discovery Line, PO Box 239, Petrolia, Ontario N0N 1R0, Canada. (800) 263-2363, “SofTILE KrosLOCK”, DuraSAFE Series; Ecore International, “Playguard Ultra”, or approved equal.

2.02 PLAYGROUND SURFACING TILES

A. Tiles:
1. Description: Resilient, interlocking, playground safety surfacing tiles.
2. Compliance: Meet and exceed CPSC guidelines for impact attenuation.
3. Material: Compression-molded, recycled rubber and binding agents.
4. Tile Locking: U-shaped male and female configuration on all 4 sides to lock tiles to adjacent tiles.
5. Top Edges: Chamfered.
6. Tile Bottom: Hollow core stanchion pattern.
7. Wear Layer: Combination of elongated SBR rubber and granulated crumb rubber, with pigmentation used to achieve color, with minimum 0.375-inch thick, “Plus Series”, as manufactured by SofSURFACES, Inc., or approved equal.
8. Size
   b. Installed: 24 inches by 24 inches.
9. Thickness
   a. Critical Fall Height 4 Feet: 2.25 inches.

B. Colors: Turf Green and Ocean Blue in checkerboard pattern.

C. Test Results:
1. Impact Attenuation, ASTM F1292:
   a. g-max Score: Less than 125.
   b. Head Injury Criteria (HIC) Score: Less than 700.
2. Freeze Thaw, ASTM C67: No deterioration.
4. Slip Resistance:
   a. ASTM E303:
      1) Dry: 51 minimum.
      2) Wet: 44 minimum.
   b. ASTM D2047:
      1) Plus: 0.533.
      2) Premium: 0.601.
5. Tensile Strength, ASTM D412: 0.661 Mpa.
6. Elongation at Break, ASTM D412: 68.5 percent.
7. Tear Strength, ASTM D624: 2.2 kNm.
8. Flammability:

2.03 ACCESSORIES

A. Corners:
   1. Prefabricated outside and inside corners.
   2. Material: Same as playground safety surfacing tiles.

B. Ramps:
   1. Prefabricated ADA Compliant Ramps: “SofRAMP ADA”.
   2. Material: Same as playground safety surfacing tiles.
   3. Ramp sections shall be mechanically fastened with recessed anchor bolts.
      a. Anchor bolts shall be covered and final surfacing shall conform to DSA’s access compliance requirements.

C. Adhesive: Furnished by manufacturer.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine areas to receive playground safety surfacing tiles. Notify Architect if areas are not acceptable. Do not begin installation until unacceptable conditions have been corrected.

3.02 PREPARATION

A. Prepare subsurface in accordance with manufacturer's instructions to ensure proper slope, support and drainage for playground safety surfacing tiles.

B. Asphalt Subsurface:
   1. Asphalt subsurface shall be as specified in Section 02750.
   2. Ensure asphalt is sound with no loose material or cracks over 1/8 inch wide.
   3. Ensure asphalt is a minimum of 14 days old.
   4. Test asphalt for moisture in accordance with manufacturer's instructions to ensure it has sufficiently cured and is dry.
   5. Scarify existing asphalt in accordance with manufacturer's instructions.
   6. Variations in Elevation: Repair variations in elevation of completed subsurface greater than plus or minus 1/4-inch over 10 feet in any direction.

3.03 INSTALLATION

A. Install playground safety surfacing tiles in accordance with manufacturer's instructions at locations indicated on the Drawings.

B. Ensure prepared subsurface and tiles are dry and clean.

C. Layout tile surface in accordance with manufacturer's instructions.

D. Apply adhesive in accordance with manufacturer's instructions for tile-to-tile as well as tile-to-base for all keystone and strategic tile rows.
E. Installation to be completed by a factory trained and certified installer.

3.04 FIELD QUALITY CONTROL

A. Installed Surface Performance Test: ASTM F1292
   1. Perform impact attenuation testing according to ASTM F1292 in presence of the Owner’s Representative within 30 days of installation.
      a. Confirm Impact Attenuation Performance of Surfacing Tiles:
         1) **g-max Score**: Less than 125.
         2) **Head Injury Criteria (HIC) Score**: Less than 700.
   2. Test Equipment Operator Qualifications: NRPA/NPSI CPSI certified.
      a. Trained in the proper operation of Triax test equipment by competent agency.
   3. Determine compliance with ASTM F1292, unless otherwise specified in this Section.

3.05 CLEANING

A. Remove adhesive spills from playground safety surfacing tiles in accordance with manufacturer’s instructions.

B. Clean tiles in accordance with manufacturer’s instructions.

3.06 PROTECTION

A. Protect playground safety surfacing tiles from foot traffic for a minimum of 12 hours after installation.

B. Protect completed tiles from damage during construction.

END OF SECTION*A1
SECTION 07550
MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes

1. Repair Work
   a. Remove all roofing to the structural deck.
   b. Prime concrete deck.
   c. Install tapered insulation where indicated on roof plan in hot asphalt.
   d. Install coverboard in hot asphalt.
   e. Install modified bitumen base ply in hot asphalt.
   f. Install cap sheet in hot asphalt.
   g. Flood and gravel repair area with clean river rock.

2. New roofs or roof replacement.
   a. Remove all roofing to the structural deck at existing locations, where indicated on the Roof Plan Drawing.
   b. Multiuse Building: Seal all joints in deck and install one layer of 1.5-inch polyisocyanurate. Cover thermal insulation with tapered insulation over entire roof area.
   c. At New Building Sections: Install thermal insulation, tapered insulation and a cover board over occupied space. Install just a gypsum coverboard at unoccupied space.
   d. Alternate #3: Install 1 layer of thermal insulation and a coverboard in hot asphalt.
   e. Install modified bitumen base ply in hot asphalt.
   f. Install cap sheet in hot asphalt.
   g. Flood and gravel with Title 24 approved adhesive.
   h. Install nailers to match height of new insulation at existing structures.

B. Products Installed But Not Furnished Under This Section
   1. Install flashings and accessories furnished under Section 07620.

C. Drawings and general Provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

D. Related Sections
   1. Section 01230 - Alternates: For alternates.
   2. Section 02224 - Selective Building Demolition: For selective building demolition requirements.

1.02 REFERENCES

A. ASCE - American Society of Civil Engineers
   1. 7 – Minimum Design Loads for Buildings and Other Structures.

B. ASTM - American Society for Testing and Materials

C. FM - Factory Mutual

D. UL- Underwriters Laboratory, Inc.

1.03 SUBMITTALS

A. Product Data: Submit certificates of compliance, manufacturer's specifications, installation instructions, and general recommendations for each roofing and insulation material required.
   1. Submit certificates of conformance, certified test reports, or other data indicating conformance of installation with the applicable reference standards.
   2. Provide approval letters from insulation manufacturer for use of their insulation within this particular roofing system type.
   3. Provide a sample of each insulation type.

B. Shop Drawings
   1. Submit manufacturer's shop drawings indicating complete installation details of tapered insulation system, including identification of each insulation block, sequence of installation, layout, drain locations, roof slopes, thicknesses, crickets and saddles.
   2. Shop drawing shall include outline of roof, location of drains, complete board layout of tapered insulation components, thickness and the average "R" value of the completed insulation system.

C. Certificates
   1. Submit roof insulation manufacturer's certification that insulation fasteners furnished are acceptable to roof manufacturer.
   2. Submit roof manufacturer's certification that insulation furnished is acceptable to roofing manufacturer as a component of roofing system and is eligible for roof manufacturer's system warranty.
   3. Applicator shall provide letter certifying that work has been installed in accordance with specifications and manufacturer's written instructions.
   4. Submit manufacturer's certificate that roof system is adhered properly to meet or exceed the requirements of FM1-90.

D. Warranty: sample warranty of single source labor and material warranty for asphalt roofing for a period of 30 years.

E. Wind uplift calculation per ASCE 7-05 stamped by the roofing system manufacturer's California licensed structural engineer.

1.04 QUALITY ASSURANCE

A. Qualifications
   1. Manufacturer: Obtain primary roofing materials from a single manufacturer who specializes in this particular field of roofing and who has been so engaged, successfully, for a period of at least 10 years immediately prior to this Contract. Provide secondary materials as recommended by manufacturer of primary materials.
   2. Applicator: A firm with not less than 5 years of successful experience in installation of roofing systems similar to those required for this Project and who is acceptable to or licensed by manufacturer of primary roofing materials.

B. UL Listing: Provide labeled materials which have been tested and listed by UL in "Building Materials Directory" for application indicated, with UL or Warnoch Hersey Class A fire rated system for roof slopes indicated.

C. Pre-installation Conference: Before installing roofing system, conduct conference at Project site. Notify participants at least 5 working days before conference.
1. Meet with the District, Architect, roofing installer, materials manufacturer, the sheet metal installer, the roofing accessories installer, the mechanical and electrical sub-contractors, Contractor, testing laboratory in attendance.
2. Review methods and procedures related to roofing installation, including manufacturer’s written instructions.
3. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
4. Review flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing.
5. Review governing regulations and requirements for insurance, certificates, and inspection and testing.
6. Review temporary protection requirements for roofing system during and after installation.
7. Document proceedings, including corrective measures or actions required, and furnish copy of record to each participant.

D. Manufacturer Inspections: Submit weekly inspection reports, including photos, by the roofing system manufacturer’s technical representative to the District and the Architect during installation.

1.05 DELIVERY, STORAGE AND HANDLING:

A. Deliver materials to the site in their original unbroken containers or packages bearing the manufacturer’s name, and brand designation. In addition, liquid materials shall bear the date of manufacture and manufacturers recommended shelf life.

B. Store materials at the site in a dry location, raised above the ground and protected from physical damage. Store materials, other than sheet roofing, at temperatures between 40 degrees F and 80 degrees Fahrenheit. Do not store materials past their shelf life.
   1. Store insulation materials in a manner to protect them from the wind, sun and moisture damage from the project site. Any insulation that has been exposed to any moisture shall be removed from the Project Site.

C. If materials are stored on the roof, distribute the load so as not to exceed the designed live load limits of the roof construction.

1.06 PROJECT CONDITIONS

A. Do not install the insulation and sheet roofing during high winds; wet, damp or foggy weather or when there is moisture or visible dampness on the substrate surface.

1.07 WARRANTY

A. Manufacturer’s warranty shall be a total system labor and material warranty including all built up bituminous roofing. This warranty shall provide the District with a single source of liability by guaranteeing the waterproofing system, metal panels, modified bitumen roofing and metal edge system against leaks for a period of 30 years.

   *A1 1. Provide materials by the Garland Company, current warranty holder on all existing roofs.
      a. Warranty Number: 0400228.*A1

PART 2 - PRODUCTS

2.01 MANUFACTURERS


   *A1 1. Other Acceptable Manufacturers
2.02 MATERIALS

A. Use basic products of one manufacturer throughout. Materials which are not available from the basic manufacturer shall be approved by the manufacturer. In all cases, materials and application shall be in accordance with the requirements of this Specification.

2.03 MODIFIED BITUMINOUS MATERIALS

A. Base Sheet: Provide 1 ply of Garland StressBase 80, or approved equal, base sheet bonded to the prepared substrate with bitumen.

B. Modified Membrane: Provide STRESSPLY PLUS, or approved equal, 145 mil SBS (Styrene-Butylene-Styrene), mineral surfaced, rubber modified roofing membrane incorporating recycled rubber, fire retardant characteristics and reinforced with a fiberglass and polyester composite scrim, with the following properties.
   1. Tensile Strength (ASTM D5147): 2 in/min. at 73.4 ± 3.6°F MD 310 lbf/in CMD 310 lbf/in.
   2. Tear Strength (ASTM D5147): 2 in/min. at 73.4 ± 3.6°F MD 500 lbf CMD 500 lbf.
   3. Elongation at Maximum Tensile (ASTM D5147): 2 in/min. at 73.4 ± 3.6°F MD 3.5% CMD 3.5%.
   4. Low Temperature Flexibility (ASTM D5147): Passes -30°F.

C. The hot bitumen will consist of membrane adhesive, ASTM D312 Type IV special steep asphalt.

D. Flashings shall be 40 mil SBS modified membrane base flashing ply covered by an additional layer of mineral surfaced modified bitumen membrane.

E. Bituminous Materials
   3. Asphalt: ASTM D312 Type IV.

2.04 INSULATION MATERIALS

A. Thermal Insulation Properties and Approved Insulation Boards.
   1. Rigid Polyisocyanurate Roof Insulation; ASTM C1289, with the following properties.
      a. Qualities: Rigid, closed cell polyisocyanurate foam core bonded to heavy duty glass fiber mat facers.
      b. Thickness: Minimum 1.5 inches.
      e. Acceptable Products:
         1) ENRGY-3; Johns Manville
         2) Hytherm; Dow
         3) GAFTemp Isotherm R; GAF
         4) Approved Equivalent
   2. Tapered Perlite Roof Insulation; ASTM C728
      a. Qualities: Rigid, Factory tapered perlite insulation board, uncoated.
      b. Taper Thickness: 0” at low points.
      c. Tapered Slope: one fourth (1/4) inch per foot.
      e. Acceptable Manufacturers:
         1) Celotex.
2) Manville.
3) GAF Building Materials Corporation.
4) Approved Equivalent

B. Fiber Cant and Tapered Edge Strips: Performed rigid insulation units of sizes/shapes indicated, matching insulation board or of perlite or organic fiberboard, as per the approved manufacturer.
   1. Acceptable Manufacturers:
      b. Celotex
      c. Johns Manville
      d. GAF
      e. Approved Equivalent

C. Asphalt: ASTM D312, Type III Steep Asphalt.

D. Coverboards
   1. Over Insulation: 1/2-inch perlite or 1/2-inch coated wood fiber.
   2. Directly Over Metal Deck: 1/2-inch “Densdeck Prime” as manufactured by Georgia Pacific, or approved equal.

E. Insulation Screws Over Metal Deck: OMG ASAP.*A1

2.05 AUXILIARY MATERIALS

A. Sealant: Exterior polyurethane.

B. Title 24 Approved Surfacing: White Star 1 component, flexible, low odor, polyurea roof adhesive top coat, with the following performance requirements.
   1. Non-Volatile Content (ASTM D2369): 89%.
   3. V.O.C.: Less than 130 g/L.
   4. Viscosity: At 77 °F Brookfield viscometer 60 poise.
   5. Flash Point (ASTM D93): 120 degrees F.


D. Soft Metal Pipe and Drain Flashing: ZincJaks, www.zincjaks@com-innov.com, 0.018 solid zinc pipe flashings.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Roofing contractor shall be responsible for preparing an adequate substrate to receive insulation.
   1. Verify that work which penetrates roof deck has been completed.
   2. Verify that wood nailers are properly and securely installed.
   3. Examine surfaces for defects, rough spots, ridges, depressions, foreign material, moisture, and unevenness.
   4. Do not proceed until defects are corrected.
   5. Do not apply insulation until substrate is sufficiently dry.
   6. Broom clean substrate immediately prior to application.
   7. Use additional insulation to fill depressions and low spots that would otherwise cause ponding water.
   8. Verify that temporary roof has been completed.
3.02 GENERAL INSTALLATION REQUIREMENTS

A. Cooperate with manufacturer, inspection and test agencies engaged or required to perform services in connection with installing modified bitumen roofing system.

B. Protect other work from spillage of modified bitumen roofing materials, and prevent liquid materials from entering or clogging drains and conductors. Replace or restore other work damaged by installations of modified bituminous roofing system work.

C. Coordinate installing roofing system components so that insulation and roofing plies are not exposed to precipitation or left exposed overnight. Provide cut offs at end of each day's work to cover exposed ply sheets and insulation with 2 plies of #15 organic felt set in full moppings of bitumen and with joints and edges sealed with roofing cement. Remove cut offs immediately before resuming work.

D. Asphalt Bitumen Heating: Heat and apply bitumen according to EVT Method as recommended by NRCA. Do not raise temperature above minimum normal fluid-holding temperature necessary to attain EVT (plus 5 ºF at point of application) more than 1 hour prior to time of application. Determine flash point, finished blowing temperature, EVT, and fire-safe handling temperature of bitumen either by information from manufacturer or by suitable test. Do not exceed recommended temperature limits during bitumen heating. Do not heat to a temperature higher than 25º below flash point. Discard bitumen that has been held at temperature exceeding finishing blowing temperature (FBT) for more than 3 hours. Keep kettle lid closed except when adding bitumen.

E. Bitumen, Mopping Weights: For interply mopping, apply bitumen at the rate of approximately 25 lb. of asphalt per roof square (plus or minus 25 percent on a total job average basis).

F. Substrate Joint Penetrations: Prevent bitumen from penetrating substrate joints, entering building, or damaging roofing system components or adjacent building construction.

G. Apply roofing materials as specified herein unless recommended otherwise by manufacturer's instructions. Keep roofing materials dry before and during application. Do not permit phased construction. Complete application of roofing plies, modified sheet and flashing in a continuous operation. Begin and apply only as much roofing in one day as can be completed that same day.

H. Fume recovery system: shall be in operation at all times when kettle is lit.

3.03 INSULATION INSTALLATION

A1 A. Attachment with hot asphalt to concrete decks.
1. Remove roof and dispose of materials.
2. Broom clean concrete and prime with asphalt primer. At Multipurpose Building seal all joints in concrete T deck prior to priming.
3. Adhere thermal insulation in hot asphalt. One layer of 1.5-inch polyisocyanurate at existing buildings, expect at areas of patch work.
5. Install cover board in hot asphalt.
6. Install perimeter pressure treated Douglas Fir nailers at perimeter of buildings to match new insulation height.

B. Attachment of insulation to metal decks.
1. Where required, mechanically attach first layer of polyisocyanurate insulation.
2. Where no thermal insulation is required mechanically attach 1/2-inch gypsum coverboard.
3. Subsequent layers of insulation shall be adhered in hot asphalt.
4. Install tapered insulation to provide slope.
5. Install coverboard in hot asphalt over tapered insulation.*A1

*Addendum No. 1, 4/3/14
3.04 BASE PLY INSTALLATION

A. Base Ply: Install 1 base ply in 30 pounds per square of bitumen shingled uniformly to achieve 1 ply over the entire prepared substrate. Shingle in direction of slope of roof to shed water on each area of roof. Do not step on base rolls until asphalt has cooled, fish mouths shall be cut and patched.

B. Lap ply sheet ends 8 inches. Stagger end laps 12 inches minimum.

C. Extend ply 2 inches beyond top edges of cants at wall and roof projections and equipment bases. Seal top of flashing at end of day, every day.

D. Install base flashing ply to all perimeter and projection details.

E. Prime existing roof and lap onto existing roof a minimum of 6 inches.

3.05 MEMBRANE APPLICATION

A. Solidly bond the modified membrane to the base layers with specified asphalt at the rate of minimum 30 pounds per 100 square feet.

B. The modified membrane roll must push a puddle of asphalt in front of it with asphalt slightly visible at all side laps. Exercise care during application to eliminate air entrapment under the membrane.

C. Apply pressure to all seams to ensure that the laps are solidly bonded to substrate.

D. Install subsequent rolls of modified membrane across the roof as above with a minimum of 4 inch side laps and 8 inch end laps. Stagger the end laps. Apply the modified membrane in the same direction as the previous layers but stagger the laps so they do not coincide with the laps of the base layers.

E. Apply asphalt no more than 5 feet ahead of each roll being embedded.

F. Extend membrane 2 inches beyond top edge of all cants in full mopping’s of the specified asphalt as shown on the Drawings. Seal top of ply at end of day, every day.

G. Prime existing roof and lap onto existing roof a minimum of 12 inches.

3.06 FLASHING MEMBRANE INSTALLATION (GENERAL)

A. All curb, wall and parapet flashings shall be sealed with an application of mastic and mesh on a daily basis. No condition should exist that will permit moisture entering behind, around, or under the roof or flashing membrane.

B. Prepare all walls, penetrations and expansion joints to be flashed and where shown on the drawings, with asphalt primer at the rate of one gallon per 100 square feet. Allow primer to dry tack free.

C. The modified membrane will be used as the flashing membrane and will be adhered to an underlying base flashing ply per manufacturer’s recommendations and nailed off 8 inches on center at all vertical surfaces. Seal top of flashing at end of day every day.

D. The entire sheet of flashing membrane must be solidly adhered to the substrate.

E. Seal all vertical laps of flashing membrane with a 3 course application of Flashing Bond and fiberglass mesh.
F. Counter flashing, cap flashings, expansion joints, and similar work to be coordinated with modified bitumen roofing work are specified in other Sections.

G. Roof accessories, miscellaneous sheet metal accessory items, including piping vents and other devices to be coordinated with modified bituminous roof system work are in other Sections.

3.07 APPLICATION OF SURFACING

A. Aggregate Surfacing:
1. Spray or roll 1 gallons of White-Star per 100 sq ft.
3. Wait 24 hours to cure and then spray or roll another 1 gallon per 100 sq ft of White-Star over surfacing material.
4. Do not run coating onto existing roof. Do not apply gravel outside of mechanical space.

3.08 CLEAN UP

A. Clean up work soiled in the performance of work under this Section. Restore or replace surfaces which have been damaged by work under this Section.

END OF SECTION
1.01 SUMMARY

A. Section Includes
1. Provision of fire rated and non-fire rated flush and paneled fiberglass reinforced polyester (FRP) flush doors, including requirements for glazing, and factory reinforcement for door hardware.

B. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

C. Related Sections
1. Section 08110 - Steel Doors and Frames: Provision of steel door frames.
3. Section 08710 - Door Hardware: Provision of door hardware.

1.02 REFERENCES

A. AAMA - American Architectural Manufacturers Association

B. ASTM - American Society for Testing and Materials
5. D638 - Tensile Strength of Plastics.

1.03 SYSTEM DESCRIPTION

A. Performance Requirements
1. General: Provide door assemblies that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturer’s corresponding standard systems.
3. Indoor air quality testing per ASTM D6670: GREENGUARD Environmental Institute Certified including GREENGUARD for Children and Schools Certification.

4. Thermal Transmission, Exterior Doors, U-Value, AAMA 1503.1: Maximum of 0.29 BTU/hr x sf x degrees F.

5. Compressive Strength, Foam Core, Nominal Value, ASTM D1621: 79.9 psi.


7. Tensile Adhesion, Foam Core, Nominal Value, ASTM D1623: 45.3 psi.

8. Thermal and Humid Aging, Nominal Value, 158 Degrees F and 100 Percent Humidity for 14 Days, ASTM D2126: Minus 5.14 percent volume change.

1.04 SUBMITTALS

A. Product Data: Submit manufacturer's product data, including description of materials, components, fabrication, finishes, and installation.

B. Shop Drawings: Submit manufacturer's shop drawings, including elevations, sections, and details, indicating dimensions, tolerances, materials, fabrication, doors, panels, framing, hardware schedule, and finish.

C. Samples:
   1. Door: Submit manufacturer's sample of door showing face sheets, core, framing, and finish.
   2. Color: Submit manufacturer's samples of standard colors of doors.

D. Test Reports: Submit certified test reports from qualified independent testing agency indicating doors comply with specified performance requirements.

E. Manufacturer's Project References: Submit list of successfully completed projects including project name and location, name of architect, and type and quantity of doors manufactured.

F. Maintenance Manual: Submit manufacturer's maintenance and cleaning instructions for doors, including maintenance and operating instructions for hardware.

G. Warranty: Submit manufacturer's standard warranty.

1.05 QUALITY ASSURANCE

A. Qualifications
   1. Manufacturer:
      a. Continuously engaged in manufacturing of doors of similar type to that specified, with a minimum of 25 years successful experience.
      b. Evidence of a compliant documented quality management system.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying opening door mark and manufacturer.

B. Storage: Store materials in clean, dry area indoors in accordance with manufacturer's instructions.

C. Handling: Protect materials and finish from damage during handling and installation.
1.07 WARRANTY

A. Warrant doors, frames and factory hardware against failure in materials and workmanship, including excessive deflection, faulty operation, defects in hardware installation, and deterioration of finish or construction in excess of normal weathering.

B. Warranty Period: 10 years starting on date of shipment. In addition, a limited lifetime (while the door is in its specified application in its original installation) warranty covering: failure of corner joinery, core deterioration, delamination or bubbling of door skin.

C. Warranty Period for FRP Painted Finish: 5 years starting on date of shipment.

PART 2 - PRODUCTS

2.01 MANUFACTURERS


   1. Provide product information substantiating performance equivalent to basis of design to the District Architect and SFUSD Buildings and Grounds.
   2. Contact
      b. SFUSD Buildings and Grounds, Carpentry Shop Supervisor: (415) 695-5529.

2.02 FRP FLUSH DOORS

A. Model: SL-20 Sandstone Texture Doors with fiberglass reinforced polyester (FRP) face sheets.

B. Door Opening Size: As indicated on the Drawings.

C. Construction
   2. Stiles and Rails: Aluminum extrusions made from prime-equivalent billet that is produced from 100 percent reprocessed 6063-T6 alloy recovered from industrial processes, minimum of 2-5/16 inches depth.
   4. Provide joinery of 3/8-inch diameter full width tie rods through extruded splines top and bottom integral to standard tubular shaped stiles and rails reinforced to accept hardware as specified.
   5. Securing Internal Door Extrusions: 3/16-inch angle blocks and locking hex nuts for joinery. Welds, glue, or other methods are not acceptable.
   6. Furnish extruded stiles and rails with integral reglets to accept face sheets. Lock face sheets into place to permit flush appearance.
   7. Rail caps or other face sheet capture methods are not acceptable.
   8. Extrude top and bottom rail legs for interlocking continuous weather bar.
   9. Meeting Stiles: Pile brush weatherseals. Extrude meeting stile to include integral pocket to accept pile brush weatherseals.
   10. Bottom of Door: Install bottom weather bar with nylon brush weatherstripping into extruded interlocking edge of bottom rail.
   11. Glue: Use of glue to bond sheet to core or extrusions is not acceptable

D. Face Sheet
   1. Material: Exterior grade UV resistant FRP, 0.120-inch thickness, finish color throughout.
2. Texture: Sandstone.
3. Color: As selected by the Architect.
4. Adhesion: The use of glue to bond face sheet to foam core is prohibited.

E. Core
2. Density: Minimum of 5 pounds per cubic foot.

F. Cutouts
1. Manufacture doors with cutouts for required vision lites, louvers, and panels.
2. Factory installed vision lites, louvers, and panels.

G. Hardware
1. Pre-machine doors in accordance with templates from specified hardware manufacturers and hardware schedule.
2. Factory installed hardware.

2.03 MATERIALS

A. Aluminum Members
1. Aluminum extrusions made from prime equivalent billet that is produced from 100 percent reprocessed 6063-T6 alloy recovered from industrial processes: ASTM B221.
2. Sheet and Plate: ASTM B209.
3. Alloy and Temper: As required by manufacturer for strength, corrosion resistance, application of required finish, and control of color.

B. Components: Door components from same manufacturer.

C. Fasteners
1. Material: Aluminum, 18-8 stainless steel, or other noncorrosive metal.
2. Compatibility: Compatible with items to be fastened.
3. Exposed Fasteners: Screws with finish matching items to be fastened.

2.04 FABRICATION

A. Sizes and Profiles: Required sizes for doors; and profile requirements shall be as indicated on the Drawings.

B. Coordination of Fabrication: Field measure before fabrication and show recorded measurements on shop drawings.

C. Assembly
1. Complete cutting, fitting, forming, drilling, and grinding of metal before assembly.
2. Remove burrs from cut edges.

D. Welding: Welding of manufacturer’s doors or frames is not acceptable.

E. Fit
1. Maintain continuity of line and accurate relation of planes and angles.
2. Secure attachments and support at mechanical joints with hairline fit at contacting members.
2.05 ALUMINUM DOOR FRAMING SYSTEMS

A. Tubular Framing
   1. Size and Type: As indicated on the Drawings.
   2. Materials: Aluminum extrusions made from prime equivalent billet that is produced from 100 percent reprocessed 6063-T6 alloy recovered from industrial processes, 1/8-inch minimum wall thickness.
   3. Applied Door Stops: 0.625-inch high, with screws and weatherstripping. Door stop shall incorporate pressure gasketing for weathering seal. Counterpunch fastener holes in door stop to preserve full metal thickness under fastener head.
   4. Frame Members: Box type with 4 enclosed sides. Open back framing is not acceptable.
   5. Caulking: Caulk joints before assembling frame members.
      a. Secure joints with fasteners.
      b. Provide hairline butt joint appearance.
   6. Joints
      a. Secure joints with fasteners.
      b. Provide hairline butt joint appearance.
   7. Field Fabrication: Field fabrication of framing using stick material is not acceptable.
   9. Hardware
      a. Pre-machine and reinforce frame members for hardware in accordance with manufacturer's standards and hardware schedule.
      b. Factory installed hardware.
   10. Anchors
      a. Anchors appropriate for wall conditions to anchor framing to wall materials.
      b. Door Jamb and Header Mounting Holes: Maximum of 24 inch centers.
      c. Secure head and sill members of transom, side lites, and similar conditions.
   11. Side Lites
      a. Factory preassemble side lites to greatest extent possible.
      b. Mark frame assemblies according to location.

B. Insert Framing System
   1. Model: SL-1030.
   2. Insert frame as indicated on the Drawings, using integral stop fitted with weatherstripping.
   3. Corner joints of miter design, secure with furnished aluminum clips, and screw into place.
   4. Hardware
      a. Premachine and reinforce insert frame members for hardware in accordance with manufacturer's standards and hardware schedule.
      b. Factory installed hardware.
   5. Anchors
      a. Anchors of suitable type to fasten insert framing to existing frame materials.
      b. Minimum of 5 anchors on jambs up to 7'-4" height, 3 anchors on headers, and 1 additional anchor for each additional foot of frame.

2.06 HARDWARE

A. Pre-machine doors in accordance with templates from specified hardware manufacturers and hardware schedule.

B. Factory install hardware.

C. Hardware Schedule: As specified in Section 08710.
2.07 VISION LITES

A. Factory Glazing: 1 inch thick glass insulating units. See Section 08800 for standards of glazing and glazing types.

B. Lites in Exterior Doors: Allow for thermal expansion.

2.08 ALUMINUM FINISHES

A. Anodized Finish: Class I finish, 0.7 mils thick.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine areas to receive doors. Notify the Architect of conditions that would adversely affect installation or subsequent use. Do not proceed with installation until unsatisfactory conditions are corrected.

3.02 PREPARATION

A. Ensure openings to receive frames are plumb, level, square, and in tolerance.

3.03 INSTALLATION

A. Install doors in accordance with manufacturer's instructions.

B. Install doors plumb, level, square, true to line, and without warp or rack.

C. Anchor frames securely in place.

D. Separate aluminum from other metal surfaces with bituminous coatings or other means approved by the Architect.

E. Set thresholds in bed of mastic and backseal.

F. Install exterior doors to be weathertight in closed position.

G. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by the Architect.

H. Remove and replace damaged components that cannot be successfully repaired as determined by the Architect.

3.04 FIELD QUALITY CONTROL

A. Manufacturer's Field Services: Manufacturer's representative shall provide technical assistance and guidance for installation of doors.

3.05 ADJUSTING

A. Adjust doors, hinges, and locksets for smooth operation without binding.
3.06 CLEANING

A. Clean doors promptly after installation in accordance with manufacturer's instructions.

B. Do not use harsh cleaning materials or methods that would damage finish.

3.07 PROTECTION

A. Protect installed doors to ensure that, except for normal weathering, doors will be without damage or deterioration at time of substantial completion.

END OF SECTION*A1
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1.05 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced installer who has completed installation of aluminum windows similar in design and extent to those required for the Project and whose work has resulted in construction with a record of successful in-service performance.

B. Standards: Requirements for aluminum windows, terminology and standards of performance, and fabrication workmanship are those specified and recommended in AAMA GS 001 and applicable general recommendations published by AAMA.

1.06 PROJECT CONDITIONS

A. Field Measurements: Check actual window openings by accurate field measurement before fabrication. Show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of work.

1. Where necessary, proceed with fabrication without field measurements, and coordinate fabrication tolerances to ensure proper fit of window units.

1.07 WARRANTY

A. Aluminum Window Warranty: Submit a written warranty, executed by the window manufacturer, agreeing to repair or replace window units that fail in materials or workmanship within the specified warranty period. Failures include but are not necessarily limited to:

1. Structural failures including excessive deflection, excessive leakage, or air infiltration.
2. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
3. Warranty includes window extrusions, panning and trim.

B. Warranty Period: 10 years after the date of Substantial Completion, Beneficial Occupancy or Notice of Completion, whichever is earlier.

C. Metal Finish

1. Anodized Finish: 10 years from date of Substantial Completion.

D. The warranty shall not deprive the District of other rights or remedies that the District may have under other provisions of the Contract Documents and is in addition to and runs concurrent with other warranties made by the Contractor under requirements of the Contract Documents.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

*A1 A. Acceptable Manufacturer: Basis of design, Oldcastle BuildingEnvelope, “ZS-2750”, Type A Framing; Winco Window Company, “3350 Zero Sightline Vent”, contact Gantt Miller, Winco West, LLC, (530) 957-1052, or approved equal.

1. Type A - Awning Window Framing

   a. Dimensions

      3) Height: As indicated on the Drawings.

   b. Location of Glass: Front load glass.
3.04 ADJUSTING, CLEANING AND DEMONSTRATING

A. Adjust and check each operating item of hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate freely and smoothly or as intended for the application made.

B. Clean adjacent surfaces soiled by hardware installation.

C. Instruct the District's personnel in the proper adjustment and maintenance of door hardware and hardware finishes.

3.05 HARDWARE SCHEDULE

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DOOR HARDWARE

*AA Addendum No. 1, 4/3/14
HARDWARE GROUP NO. 08

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DOOR HARDWARE

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**DOOR HARDWARE**

08710 - 12

*Addendum No. 1, 4/3/14
## Hardware Group No. 16

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## Hardware Group No. 19

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<td>626</td>
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Door Hardware

08710 - 13
VERIFY DOOR CONDITIONS PRIOR TO ORDERING FLUSH BOLT.

**HARDWARE GROUP NO. 21**

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DOOR HARDWARE 08710 - 15

**Addendum No. 1, 4/3/14**
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HARDWARE GROUP NO. 32

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HARDWARE GROUP NO. 33

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DOOR HARDWARE

08710 - 16

*AA1Addendum No. 1, 4/3/14
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END OF SECTION
SECTION 13705

INTRUSION DETECTION SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

A. Work Included: Provision of materials, installation and testing of:
   1. Intrusion Detection System

B. The intent of this specification is to provide overall intrusion capability for the buildings indicated on the drawings of this campus.

C. Primary features include:
   1. Passive infra-red detectors for interior motion detection.
   2. Accurate information, reliable signals, and timely communication with the monitoring station for effective response to an alarm.
   3. Easy programming of the alarm keypad modules for arming, disarming, and troubleshooting.
   4. Signal loss detection to alert maintenance personnel of a malfunction.
   5. A user-friendly method of identifying the periods of alarm activity, schedules, and retrieval alarm history.
   6. An audit trail for changes to the system.
   7. The intended location of each device is shown on Drawings provided by the District.

D. Confirm fields of coverage with the System Administrator prior to sign-off of the system.

1.2 SYSTEM DESCRIPTION

A. The following specification has been developed to address the installation of the intrusion detection equipment for an alarm system with remote monitoring at SFUSD dispatch. This document is not a stand-alone specification. The installing contractor shall provide all equipment, labor, materials, and services required to install and program the system. The installation is to be accomplished in accordance with this specification, sketches, and the referenced plans.

B. The information provided is based on a Honeywell, Ademco programmable IDS; no alternates accepted.

C. The Contractor shall provide, install, program, label, and document the equipment locations and programming parameters for all alarm contacts, passive infrared detectors, alarm keypads with digital status and programming display, and other alarm detection devices, input and output boards, panels, and interface modules to create a completely functional IDS.
D. The IDS shall have the capability to be armed or disarmed directly via the keypad, at the location(s) shown on the Plan drawings.

E. The IDS can be armed and disarmed via a preset schedule.

F. Each building or department or perimeter, or interior detectors, as determined by the District Security System Administrator, shall be separately zoned within the IDS system.

G. The naming convention for the IDS points shall identify the school, building, floor, and space or door.

H. Only a District approved alarm programming contractor may be used to provide all programming services on the SIS system and set up new accounts. District approved contractor may also assist District Security Systems Administrator with the programming and assignment of Personal Identification Number Codes (PIN) for all personnel who are authorized to arm and disarm the IDS.

I. Back-up batteries are to be supplied at each panel location to provide 4 hours of back-up power for the alarm panel and associated devices.

J. Provide phone number with dial tone at each alarm panel for remote monitoring.

1.3 RELATED SECTIONS

A. Division 13, Special Construction

B. Division 01, General Requirements

C. Contractor/Supplier to review all general specification provisions and drawings for related electrical work required as work under Division 16.

D. In addition to this written specification, the following drawings and documents are to be referenced and included in the scope of this specification:
   1. Architectural / Structural / Electrical drawings
   2. Detail Drawings & Diagrams
   3. Any addendum after release of specifications

1.4 REFERENCES AND STANDARDS

A. References and Standards as required by:
   1. Division 13, Special Construction
   2. Division 01, General Requirements

B. Manufacture, test, and install the system per manufacturer’s requirements and in accordance with NFPA-70 (National Electrical Code), state codes, local codes, requirements of authorities having jurisdiction, and particularly the latest editions and addendums of the following standards:
1. Cabling Systems:
   a. ANSI/TIA/EIA-588-C.0 General Cabling Standards.
   b. ANSI/TIA/EIA-568-C.1 Commercial Building Cabling Standard.
   d. ANSI/NECA/BICSI 568 Standard for Installing Commercial Building Telecommunications Cabling.

2. Pathways and Spaces:
   a. ANSI/TIA/EIA-569 Commercial Building Standard for Telecommunications Pathways and Spaces.
   b. ISO/IEC 18010 Pathways and Spaces for Customer Premises Cabling.

3. Cabling Administration:
   b. TIA/EIA-942 Telecommunications Infrastructure Standard for Data Centers.

4. Grounding and Bonding:
   a. ANSI/TIA/EIA-607 Commercial Bonding Requirements for Telecommunications.
   c. TIA/EIA-942
   d. NFPA 780 Standard for the Installation of Lightning Protection.

5. Outside Plant:
   a. ANSI/TIA/EIA-758 Customer-Owned Outside Plant.
   b. ANSI/TIA-968 Telecommunications Telephone Terminal Equipment Technical Requirements for Connection of Terminal Equipment to the Telephone Network.


C. Install cabling in accordance with the most recent edition of BICSI publications:
1. BICSI Telecommunications Distribution Methods Manual (TDMM).

D. Federal, state, and local codes, rules, regulations, and ordinances governing the work, are as fully part of the specifications as if repeated or attached. If contractor observes items in the drawings or the specifications, construction of which would be code violations, promptly call them to the attention of the owner’s representative in writing. Where requirements of other sections of the specifications are more stringent than applicable codes, rules, regulations, and ordinances, the specifications will apply.
E. When the words “should”, “may”, “desirable”, or “will” appear in specifications, standards, codes, and publications listed above replace with the word “shall” to ensure a best practice installation. All suggestions listed in a specification, standard, code, or publications listed above can be enforceable and demanded by owner at no extra cost since these best practices are to be included in the quotation/bid/proposal/estimate.

F. When there is a conflict between codes, standards, specifications, drawings, addendums, manufacturer recommendations, and publications listed above, the stricter requirement will be applied and included in the base quote, bid, proposal, estimate and scope of work unless a written exception is issued. Codes will never have a written exception. If there is not a stricter requirement when addressing a conflict (Example: different colors for jacks on drawings than in specs) then what is in writing (specs, RFI, etc.), standard industry/owner practice, and approved submittals and who approved them will be used to determine which guideline will be enforced; the policy with the most in favor wins. Specifications and other written instructions usually take precedence over drawings and details even if drawings and details are issued at a later date, unless otherwise noted (UON).

1.5 SUBMITTALS

A. Submittals as required by:
1. Division 13, Special Construction.
2. Division 01, General Requirements.

B. Prepare as-built documentation showing:
1. Manufacturer, Model, and serial number of each type of device, as applicable, at each designated location.
2. Manufacturer, Model, and serial number of each alarm panel at each designated location, programming parameters, and all associated connection points. One set of 8-1/2-inch by 11-inch as-builts with sensor locations and wiring diagram will remain in each panel.
3. Provide two copies of as-builts to the District. Retain one copy on site; submit the other copy as part of the Closeout documentation.

1.6 QUALITY ASSURANCE

A. Quality assurance as required by:
1. Division 13, Special Construction
2. Division 01, General Requirements

1.7 WARRANTY AND SERVICE

A. All products in this Section, including installation and workmanship, will carry a two-year warranty per general conditions.

B. Make available fully qualified, factory trained, repair and maintenance personnel for all warranty, normal, and emergency service.
C. Provide normal service to District during regular business hours, which are between 8:00 a.m. and 5:00 p.m., Monday through Friday, except holidays. Provide a list of normal service rates at end of installation.

1.8 FIELD VERIFICATION

A. Field verify existing conditions, in particular the availability of power, wires, and space for all devices.

B. Confirm condition of locations for intrusion detection devices.

C. Confirm wall space for wall mounted alarm panels in the same rooms where racks will be located. Confirm a clear wire pathway between intrusion devices and alarm panel.

D. Confirm format of facility alarm panel configuration and naming conventions, Maintain consistent nomenclature for end-user interface and remote monitoring communication.

E. Should field conditions conflict with the contract documents, submit a request for clarification prior to the start of work.

PART 2 - PRODUCTS

2.1 PRODUCTS

A. Provide product quantity(ies) as indicated on the drawings.

B. Review the District provided drawing(s) and all attachments to this specification to identify any additional components required to provide a complete and operable system.

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2.2 CABLE REQUIREMENTS

A. Provide every motion detector with a single "home run" sensor cable pulled to the alarm panel in the new building or “daisy chained” by “zone” as shown in applicable locations on electrical plans – Security Riser Diagrams. Provide four conductor cables per below. If cable is to be run under sand for any distance, it must be rated for direct burial. Provide four-conductor cable if the motion detector is powered from the panel. Provide two-conductor cable if powered from remote device.

B. Cable Connecting Keypads: Provide a single 18 gauge, 2 conductor non-shielded "home run" cable to the alarm panel.

C. Provide unshielded motion sensor cable:
   1. 22 gauge up to 650-feet
   2. 20 gauge up to 950-feet
   3. 18 gauge up to 1500-feet
   4. 16 gauge up to 2400-feet

D. Provide unshielded keypad cable:
   1. 22 gauge up to 450-feet
   2. 20 gauge up to 700-feet
   3. 18 gauge up to 1100-feet
   4. 16 gauge up to 1750-feet

E. Power cable between transformer and panel: 18 gauge, 2 conductor.

F. Power between siren and alarm panel: 18 gauge, 2 conductor, non-shielded.

G. Pull a single telephone cable with dial tone to the alarm panel from the telephone closet.

2.3 MATERIALS

A. Furnish and install the following Intrusion System components in the locations shown on the District provided Drawing:
   1. The above equipment list.
   2. Cables and connectors for connecting the sensors, sirens and keypads to the alarm panels.

B. Provide all software, licenses, and maintenance agreements per general conditions.

C. Provide velcro-style tie wraps for cable management.
PART 3 - EXECUTION

3.1 PRE-INSTALLATION CONFERENCE

A. Schedule a pre-electrical installation conference with the manufacturer to specifically review this section’s needs.

B. Schedule the conference a minimum of five calendar days prior to beginning Work to clarify questions related to work to be performed, scheduling, coordination, etc.

C. Attendance: Contractor, District’s representatives and other parties affected by Work of this Section.

3.2 GENERAL INSTALLATION

A. This contract may involve currently functioning systems. Coordination with District is critical. Do not interrupt any functioning system without coordinating with the District.

B. Aesthetics are an important consideration in this installation. Install all components to provide aesthetically pleasing results. Coordinate the actual locations of all visible components in advance with District and to prevent interruptions in coverage.

C. Prior to delivery to the site for actual installation, shop-assemble and test all devices as applicable.

D. Install necessary wiring and connectors for all intrusion detection system devices.

E. Locate all detectors according to floor plans. Coordinate with District for determining specific mounting locations.

F. Install all devices securely and positioned appropriately for the purpose intended. Confirm each field device’s detection zone with District Representative.

G. Program the intrusion detection system and demonstrate functional operability. None of the preparation and demonstrations associated with this task is part of training. Provide the training after the system is shown to be operable.

H. Verify and document the program parameters for alarm points, scheduling opening and closings, and notification protocols are documented.

I. Verify designated alarms and names of alarm conditions are clear for identifying the problem and the correct location. Print copy of alarm list as a part of as-builts.

J. Per the pre-installation conference, contractor to confirm the number of zones and partitions to be programmed, tested and connected to dispatch.

K. Remote power supply locations as needed so as not to exceed 750 mA total draw from each panel.
L. All motion sensors are to be individually addressable.

M. Panels that are split or partitioned are to be tested in the presence of a District representative for each partition.

N. Minimum conduit size: 3/4-inch.

O. Leave a pull string in each conduit, labeled to indicated destination of conduit

P. Support all horizontal cable. Do not allow cable to lay freely resting on structural supports. Do not attach wires to ceiling grid or light support wires.

Q. Mount 50-foot sensors between 7-feet, 6-inches and 8-foot AFF. Coordinate with ceiling heights.

R. Zone cable length is limited to 1500-feet on 18 AWG cable and total panel cable length is limited to 12,000-feet. Install a power supply shall at every 1000-feet of cable.

S. Cable run underground must have appropriate ratings.

3.3 IDENTIFICATION AND TAGGING OF CABLES

A. See Drawings for panel, keypad, and detection device locations. Install each cable with a permanent wrap-around or slip-on wire tag placed at both ends of each cable, indicating the point and zone number and the panel location room number. Record this information on the as-built documentation.

B. Wire each panel according to Manufacturer’s specification for partitions, zones and access codes.

C. Power each keypad from the panel.

D. Connect each panel to the back-up batteries.

E. Create a machine printed label with the alarm point and room/panel information and affix it to both ends of the cable between the panel and the alarm point device. Place the label in a position that it can be easily read near each panel. Note these labels on the as-built documentation.

F. Leave a 3-foot coil of all cables on the sensor end and a 10-foot coil of all cables at the panel end prior to installation of the sensors and panel equipment. This is to ensure exact location of devices.

3.4 PROGRAMMING

A. Program the IDS system to make fully functional: schedules, holidays, authorized users, zones, type of devices, alarm priority, and monitoring communication at a minimum.
B. Only a District approved alarm programming contractor can be used to provide all programming services on the SIS system and set up new accounts. Provide a recap of all programming parameters as part of the as-built documentation.

C. Provide the system passwords to the Campus Security System Administrator and/or Principal.

3.5 SYSTEM TESTING

A. After the system is completely installed, conduct a full systems test including walk test. Provide a copy of the record of results to District. These tests are part of the overall Final System Acceptance Testing Requirements. Final adjustments of devices may be necessary as a result of the walk test.

B. In the test procedure for the IDS, each field device, all associated signal transmission devices, and point definitions must be tested for confirmation that triggering a detection point will result in the correct type and description of the alarm.

C. As part of the As-built documentation, provide a listing of all detection devices, the name associated with the alarm, priority of the alarm, and identify its panel and zone.

D. Final signoff must include site visit by SFUSD Security Department

   a. Email: greenw@sfusd.edu.
   b. Phone: 415-695-5535.

3.6 SYSTEM TRAINING

A. Furnish personnel to execute a training plan.

B. Training to include a lesson plan for each primary feature:
   1. Programming the parameters into the system for the System Administrator.
   2. Demonstrating the process for arming and disarming the zones to the end users, as well as the System Administrator.
   3. Troubleshooting alarm point and zone status for System Administrator and Technical Support personnel.

C. Provide a minimum of 1 hour total end-user training and 4 hours Administrator and Technical Support personnel training time if providing the alarm equipment. One-half of the hours of the Administrator and Technical Support training time may be telephonic support over a period of 1 year. Provide training literature and outlines at the beginning of each session. Training to include system operation and configuration management. Establish a specific schedule to meet the convenience of District.

3.7 CLEANING

A. At the end of each work day, clean-up work area and dispose of waste. Store excess materials in a limited access area.
B. After punch list is complete, clean and dust racks, cabinets, faceplates and cameras. Remove all excess tape and/or non-essential tags.

END OF SECTION
PART 1 - GENERAL

1.1 SUMMARY

A. Work included: Provision of materials, installation and testing of the following:
   1. Security Management System (SMS)
   2. Access Control System Main Control Panel
   3. Access Control System Door Control Panel
   4. Card Reader
   5. Power Supply
   6. Cable and Wire
   7. Door Entry Video Intercom System

1.2 RELATED SECTIONS

A. Division 13, Special Construction
B. Division 01, General Requirements

1.3 REFERENCES AND STANDARDS

A. As required by:
   1. Division 13, Special Construction
   2. Division 01, General Requirements

1.4 SUBMITTALS

A. As required by:
   1. Division 13, Special Construction
   2. Division 01, General Requirements
   B. Submit an as-built wiring diagram at time of completion.

1.5 QUALITY ASSURANCE

A. As required by:
   1. Division 13, Special Construction
   2. Division 01, General Requirements
1.6 Warranty

A. Warranty of materials and workmanship as required by:
   1. Division 13, Special Construction
   2. Division 01, General Requirements

B. All products including installation and workmanship in this section will carry a warranty for a period of two years.

Part 2 - Products

2.1 Manufacturers

A. As specified in Articles below.

2.2 General

A. This specification is to be used in conjunction with the Drawings. There may be circumstances where a device listed here is not present or required on the project Drawings.

B. Contractor to coordinate conduit installation with the electrical contractor.

2.3 Security Management System (SMS)

A. Provide the following:
   1. An SMS that is capable of controlling and monitoring the access control system and the intrusion alarm system, and that has an interconnection with the video surveillance system. See Section 16905, Video Surveillance if the Video Management System is going to fulfill these functions.
   2. An SMS that is designed to control and/or interface with industry standard OEM equipment.

2.4 Access Control System Main Control Panel

A. Provide and install the following:
   1. A main access control system control panel that has the overall system intelligence, any required additional input/output boards, and the communications controllers required for remote monitoring and control.
   2. An access control system main panel that is modular and can have optional systems and functionality added per project requirements.
   3. Manufacturer: KERI System
2.5 ACCESS CONTROL SYSTEM DOOR CONTROL PANEL

A. Access control system will integrate with the elevator call function only.

B. Door Controller: Match the brand manufacturer of the main access control panel and operate in conjunction with that system.

2.6 CARD READER

A. Provide and install card reader(s) at locations indicated on the Drawings. Mount card reader(s) per Architect's direction on elevations, or per Owner direction. Mounting height to be 48-inches unless noted otherwise on the Drawings.

B. Provide single gang size, wall mount proximity card reader(s).

C. Provide card reader(s) suitable for indoor or outdoor use.

D. Provide ADA compliant reader(s).

2.7 POWER SUPPLY

A. Provide and install a power supply for the access control panels, intrusion panels and other system devices that have an integral battery for backup.

B. Size power supply(s) with 20 percent spare capacity for future devices.

C. Install in a UL listed enclosure.

2.8 CABLE AND WIRE

A. Copper:
   1. Power: 18 AWG, 2 pair, unshielded twisted pair.
   2. RS-232: 18 AWG, 4 conductor, shielded.
   3. Category 6 cabling to match that installed by the telecom contractor in Division 16, Electrical Communications.
   4. Indicate all other wire required by manufacturer installation instructions on submittal Drawings and diagrams.
   5. All cabling to be plenum rated where required.

B. Connectors:
   1. Modular connector.
   2. 24 V Power: Screw-down on spade lug.
2.9 DOOR ENTRY VIDEO INTERCOM SYSTEM

A. Provide a complete system which integrates with the SMS, with all components sourced from a single manufacturer. Basis of Design: Aiphone Corp.

B. Video Door Entry Station:
   1. Vandal-resistant, flush-mount, stainless steel faceplate.
   2. Integral intercom call-button, microphone, and speaker.
   3. Integral color video camera with protective lens cover.
   4. Power and communication signal over single Cat6 cable connection to Central Exchange Unit.
   5. Manufacturer: Aiphone AX-DVF or approved equivalent.

C. Master Station:
   1. Door station selector buttons with LED indicator for up to eight doors.
   2. Selective door release, scan monitor, line transfer and intercom call buttons with LED indicators.
   3. Intercom microphone, speaker and volume controls.
   4. Manufacturer: Aiphone AX-084C or approved equivalent.

PART 3 - EXECUTION

3.1 PRE-INSTALLATION CONFERENCE

A. Schedule a pre-electrical installation conference with the manufacturer to specifically review this section’s requirements.

B. Schedule a conference a minimum of five calendar days prior to beginning work of this section to clarify questions related to work to be performed, scheduling, coordination, etc.

C. Attendance: Security contractor, District’s representatives and other parties affected by work of this section must attend this pre-installation conference.

3.2 PREPARATION

A. Order required parts and equipment upon notification of award of the Work.

B. Bench test equipment prior to delivery to the job site.

C. Verify the availability of power where required. If a new source of power is required, the services of a licensed electrician must be used to install it.

D. Arrange to obtain programming information including access times, free access times, door groups, operator levels, etc.
3.3 INSTALLATION

A. Follow instructions in the manufacturer's Installation Manual to ensure steps have been taken to provide a reliable, easy to operate system.

B. Perform work as indicated in the Drawings and Specifications.

C. Install the appropriate cable from the CPU to card readers, door contacts, request-to-exit devices, and electric locks at each door.

D. Install 3/4-inch conduit to designated card readers, door contacts, request-to-exit devices, and electric lock at each door.

E. Ensure minimum separation requirements are met between communications cables and power circuits.

F. Install the power supply(s) for electric locks in central locations where they will not interfere with other operations.

G. Execute adequate testing of the system to ensure proper operation.

H. Provide adequate training of the system users to ensure thorough understanding of system operation.

3.4 SYSTEM SPECIFIC INSTRUCTIONS

A. If remote power supplies are used, contractor is responsible to construct a plywood backboard in electrical closets where power supplies are located.

B. All cables must be labeled indicating destination and device it connects.

C. Program access control panel according to the District specifications.

3.5 INSTALLATION PROCEDURES

A. Conduit and Cable:
   1. Minimum conduit size for is 3/4-inch. No exposed cable allowed.
   2. A pull string must be left in all conduits and labeled to indicate destination of conduit.
   3. All horizontal cable must have support. Cable must not freely rest on structural supports. Do not use ceiling grid or lighting support wires.
   4. Pathways should ensure that a maximum pulling tension of 25 lb-f is not exceeded and pathways should not deform the cable jacket.
   5. Acceptable Pathways: Cable trays, j-hooks, conduit and surface mounted raceway.
   6. Do not attach cables to ceiling grid or lighting support wires.
   7. When cable trays are used, follow manufacturer's installation guidelines, and use a product that is designed specifically for communications cabling.
8. When using J-hooks, locate them staggered between 4-feet to 5-feet to adequately support and distribute the cable’s weight.

9. When pulling through conduit, continuously apply cable pulling lubricants to all cables. Lubricant used must be specifically approved by the cable manufacturer.

10. Do not perform demotion of any kind to existing cables for CCTV or otherwise. An inventory of functioning equipment will be taken at the beginning of the project and all these devices must be functioning properly upon completion. If they are not it is the contractor’s responsibility to remedy.

3.6 TRAINING REQUIREMENTS

A. Provide 6\textsuperscript{A1} hours of training of operational instruction and 2 hours of maintenance instruction. Seminars are to be hands on instruction held at Owner’s facility.

B. Provide Owner with manufacturer’s operating instructions.

C. Provide factory trained representatives to instruct Owner personnel in the operation of system equipment.

D. Provide Owner’s Representative with training plan and training checklist two weeks before scheduled training.

E. Provide comprehensive training for designated Owner Representative for operation, maintenance, and troubleshooting of system.\textsuperscript{A1}

F. Security contractor will fully explain and demonstrate operation, function and override of system including, but not limited to: software operation, remote access, programming, priority levels, and monitoring station.

3.7 WORKMANSHIP

A. Comply with highest industry standards, except when specified requirements indicate more rigid standards or more precise workmanship.

B. Perform work with persons experienced and qualified to produce workmanship specified.

C. Maintain quality control over suppliers and Subcontractors.

3.8 EQUIPMENT PRETEST

A. Bench test prior to delivery to job site and prior to installation, per manufacturer’s installation instructions.

3.9 WIRE AND CABLE

A. Design, layout, size, and plan new wire and cable runs as required.
B. Wire and cable from the processors to devices at each door “home run” unless otherwise specified.

C. Install wire and cable in conduit or surface metal raceway. The one exception is wire or cable in lengths of less than 10-feet, that is “fished” within walls, ceilings, and door frames.

D. Sleeve wire and cable passing through metalwork with an approved grommet or bushing.

E. Avoid splicing conductors. Make splices in junction boxes (except at equipment). Make splices with an approved crimp connection. Do not use wire nuts on any low-voltage wiring.

F. Identify wire and cable at terminations and at every junction box. Make identification with an approved permanent label, Brady or equal.

3.10 WIRE AND CABLE TERMINATIONS

A. Identify inputs and outputs on terminal strips with permanent marking labels.

B. Neatly dress and tie all wiring. The length of conductors within enclosures to be sufficient to neatly train the conductor to the terminal point with no excess. Run wire and cable parallel or normal to walls, floors and ground.

C. Install connectors as required by equipment manufacturers.

D. Make terminations so there is no bare conductor at the terminal. The conductor insulation is to bear against the terminal or connector shoulder.

E. Do not obstruct equipment controls or indicators with wire or cable. Route wire and cable away from heat producing components such as resistors and regulators.

3.11 FIRE RATED DOORS AND FRAMES

A. Do nothing to modify a UL rated door or frame that would void the UL label or fire rating.

3.12 GROUNDING

A. Provide earth-grounding of equipment as required by equipment manufacturer. Connect earth ground to ground rod or approved cold water pipe. Do not use electrical or telephone ground connections as earth grounds. Do not use connections to mounting posts or building structural steel as earth grounds.
3.13 POWER TO SECURITY EQUIPMENT

A. Power equipment from 120 VAC circuit dedicated for security use, except as noted. Mark panel circuit breakers with labels worded "Security Equipment - Do Not Operate," or equivalent.

3.14 CUTTING AND PATCHING

A. Responsible for cutting, fitting or patching that may be required to complete the work.

3.15 TESTING

A. Upon completion of the installation of the system, conduct a satisfactory test of the entire system in the presence of a representative of the District.

B. Test includes activation of alarm and verification of reception at SIS.

C. A walk test of each sensor is to be performed for accuracy and verified at SIS.

END OF SECTION
SECTION 13720

VIDEO SURVEILLANCE

PART 1 - GENERAL

1.1 SUMMARY

A. Work Included: Provision of materials, installation and testing of:
   1. Digital Video and Surveillance System.

1.2 SYSTEM DESCRIPTION

A. All components installed in this section are designed for a fully functional video surveillance system including video server, cameras, cabling, connections and terminations, mounting and focusing of cameras, installation of head-end and peripheral equipment and warranty. Contractor is responsible for a fully functioning system in the event of omission in this section.

B. Integrate system software with the District’s Video Surveillance Standard.

C. All installation to comply with software manufacturer’s specifications.

D. Only specified equipment or specified alternates are permitted.

E. District will provide location for all head-end equipment. All head end equipment is existing. Relocate per drawings and District’s direction.

F. Submit all questions in writing to the District 5 days prior to bid date.

G. At the completion of this section the installation of this integrated video surveillance system to be fully functional.

H. All cameras at this campus are existing, to be reused/relocated except one which is new. Provide all new conduit, hangers and cable.

I. Remove and reinstall existing two monitors and one joystick controller, where shown in the drawings.

J. All equipment to be tested at the beginning of the project by the contractor for the district, removed by the contractor, and stored, re-installed and then re-tested by the contractor for and with the District.

K. District Security Contact: Willie Green.
   1. Phone: 415-695-5535
   2. Email: greenw@sfusd.edu
1.3 RELATED SECTIONS

A. Division 13, Special Construction.

B. Division 01, General Requirements.

1.4 REFERENCES AND STANDARDS

A. References and Standards as required by:
   1. Division 13, Special Construction.
   2. Division 01, General Requirements.

1.5 SUBMITTALS

A. Submittals as required by:
   1. Division 13, Special Construction.
   2. Division 01, General Requirements.

B. Product submittals and closeout documents are per general conditions.

1.6 QUALITY ASSURANCE

A. Quality assurance as required by:
   1. Division 13, Special Construction
   2. Division 01, General Requirements

1.7 WARRANTY AND TRAINING

A. Warranty of materials and workmanship as required by:
   1. Division 13, Special Construction
   2. Division 01, General Requirements

B. All products including installation and workmanship in this section to carry a warranty for a period of two years. Warranty Product Code: SI-2RM32SE.

C. Warranty to Include: Daily diagnostics from the manufacturer, software patches and software upgrades if available, unlimited 800 technical support, defective components and labor to replace them.

D. Provide up to 20 hour in-service training for school personnel.

E. All programming and integration into the District’s existing Enterprise Video Surveillance Solution must be completed and tested including custom HTML mapping and database configuration.
1.8 COORDINATION

A. If network or electrical service is to be disconnected for any reason, make the owner's technology department aware. Do not commence Work until site personnel have been notified and given permission to contractor.

B. Coordinate and cooperate with the District's technology and security departments for the completion of this system.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. The specified software solution for the digital video surveillance system is manufactured by Security Integration, Inc.
   1. Contact: James Gracey
      a. Email: jgracey@securityintegration.net.
      b. Phone: 415-810-6919.

B. Program and configure all server/software and HTML components upon arrival.

2.2 COMPONENTS

A. Components and Quantities:

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<th>Quantity</th>
<th>Component</th>
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<td>Camera Signal Converter Hub</td>
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<td>Single-Port UTP Transmitter</td>
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<td>Exterior Mount Hi-Res IR Cameras</td>
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* = ALTERNATE EQUIPMENT BELOW

B. Acceptable Alternates:

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<tr>
<td>PTZ Power Supply</td>
<td>PELCO WCS1-4</td>
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<td>Video Monitor, 19-Inch, LCD</td>
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<td>Video Monitor, 23-Inch, Wall Mount</td>
<td>PELCO PMCL523A</td>
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<td>Security Monitor Mount</td>
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PART 3 - EXECUTION

3.1 PRE-INSTALLATION CONFERENCE

A. Schedule a pre-electrical installation conference with the manufacturer to specifically review this section’s needs.

B. Schedule a conference a minimum of five calendar days prior to beginning Work to clarify questions related to work to be performed, scheduling, coordination, etc.

3.2 SYSTEM SPECIFIC INSTRUCTIONS

A. Test, remove and safely store all existing cameras and equipment.

B. Mount, cable, terminate, aim and focus all cameras. Locate and mark all cameras prior to rough-in by contractor. See plans for camera and server location.

C. Do not run power for cameras over Cat 6 cable. Only run power for cameras on the contractor supplied 18/2 for fixed lens cameras and contractor supplied 12/2 for PTZ cameras.

D. Power supply locations will be indicated on drawings.

E. Make a plywood backboard in the equipment room to mount 66 Block and power supplies.
F. Wall mount cameras unless otherwise specified. Make terminations in the baseplates of the cameras.

G. Assemble all equipment in the equipment rack, including the rack itself, in accordance with manufacturer’s specifications. Coordinate assembly with the Security Integration representative.

H. In no event should the video servers be made operational while construction work is ongoing in the MDF.

I. All devices to be located per Drawings.

3.3 INSTALLATION PROCEDURES - CABLE REQUIREMENTS

A. Any trunk cable run between server location and IDF’s is to be unshielded twisted pair Cat 5 or better. This trunk cable is to be punched on both ends with 66 block and labeled. IDF locations may be used for remote power supply locations per District. IDF locations are to be used to keep video cable runs under 90-meters.

B. All video cable pulled directly from the termination location (66 block) to camera and/or head-end location to camera is to be Cat 5e or better. A single 18/2 power cable will also be pulled to each fixed camera from either the server location to camera or punch block location (IDF) to camera.

C. Provide a single Cat 5 cable and a single RG-59 95% copper braid pulled from the server location to the principal/dean’s office for monitor and joystick use. Provide a single RG-59 95% copper braid pulled from server location to main office for public view monitor.

D. The RG-59 coax monitor cables and the Cat 5 joystick cable require an outlet, jack and cover plate. Provide power outlet for each monitor concealed behind the monitor location.

E. Provide Cat 6 patch cables from 66 Blocks in MDF to the UTP receiving units in the rack.

F. Cable ties to be Velcro with a loop strap. If nylon cable ties are used, they are to be black and strapped with a loose tie so as not to pinch the cable sheath, and with enough slack to get snips and fingers between tie and cable. Cut off ends of ties after strapping.

G. PTZ cameras require the local power supply (SI-PTZ-PWR1) to be mounted within 200-feet of the camera, and a single 12/2 power cable (stranded) pulled from power supply to PTZ camera. PTZ power supplies are contractor supplied cord and plug.

H. Labels for patch panels, faceplates and cables are mandatory.

I. Furnish and install a Cat 6 Ethernet cable from each server to specified Cisco switch in the MDF for Internet connection.
3.4 INSTALLATION REQUIREMENTS

A. Minimum Conduit Size: 3/4-inch.

B. Leave an 8-foot coil of all cables on the camera end and a 20-foot coil of all cables in the head end equipment room prior to installation of the cameras and head end equipment.

C. Leave a pull string in all conduits, labeled to indicate destination of conduit.

D. Support all horizontal cable. Do not allow cable to lie freely, resting on structural supports. Additionally, do not use ceiling grid or lighting support wires.

E. Pathways to ensure a maximum pulling tension of 25 lb-f is not exceeded. Pathways are not to deform the cable jacket.

F. Acceptable Pathways: Cable trays, j-hooks, conduit and surface mounted raceway.

G. Do not attach cables to ceiling grid or lighting support wires.

H. If cable tray is used, follow manufacturer guidelines for installation. Only use products which are specifically designed for communications cabling.

I. When using J-hooks, locate them staggered between 4-feet to 5-feet to adequately support and distribute the cable’s weight.

J. When pulling through conduit, continuously apply cable pulling lubricants to all cables. Lubricant used must be specifically approved by the cable manufacturer.

K. Wall-mount interior fixed lens cameras at center height of 8-feet, 6-inches AFF (ceiling height permitting). Mount exterior fixed lens cameras at 10-feet above grade. Mount PTZ cameras no less than 16-feet above grade. Heights are measured to the center of the camera.

L. There will be no demolition of any kind for existing cables for CCTV, motion detection or otherwise. An inventory of functioning equipment will be taken at the beginning of the project. All devices must be functioning properly upon completion of Work. If any devices are non-functioning upon completion of Work, contractor must remedy these devices at contractor’s expense.

M. Place window signage at every entrance to the school. Additionally, place a 12-inch x 18-inch metal sign and front and rear main school entrances.

N. Dimension of largest component of server rack is 20-inches W x 28-inches D. Additionally, supply adequate space for an installation/service technician to work at the front and rear of the server rack. This space is to be no less than 24-inches each.
3.5 TESTING

A. Prior to start of Work, test all components in the presence of District's Representative. Record any malfunctions or non-operational equipment or devices.

B. Upon completion of the installation of the system, conduct a satisfactory test of the entire system in the presence of a representative of the District. Provide all the adjustments of the camera angles and lenses as required for optimum performance and have the District sign off on the camera angle. Provide separate printed copies of the test results from each of the cameras.

C. Final signoff must include site visit by SFUSD Security Department.
   1. Contact: Willie Green:
      a. Email: greenw@sfusd.edu
      b. Phone: 415-695-5535

3.6 CLEANING

A. At the end of each work day, clean-up work area and dispose of waste. Store excess materials in a limited access area.

B. After punch list is complete, clean and dust racks, cabinets and faceplates. Remove all excess tape and/or non-essential tags.

END OF SECTION
**KEYNOTES**

- GATE TO REMAIN
- NEW POLE-MOUNTED SECURITY CAMERA, SEE TELECOM DRAWINGS AND DETAIL 12A.02
- REMOVE ALL IVY, SHRUBS, BUSHES, TREES TO REMAIN

**REFERENCE: A1.01 SITE PLAN**

**SCALE: 1/8" = 1'-0'**

**JOSÉ ORTEGA ES MODERNIZATION**

**PROJECT NUMBER**

13004

01-11368

38-1

DISK: F:

Sheet NUMBER CA-02

04/03/2014

SODA App. No.
**LEGEND**

- **(E) Fire Hydrant**
- **(E) Utility Pole to Remain**
- **Temporary Utility Pole**
- **(E) Light Pole to Remain**
- **CLF Fence & Gate**
- **Accessible Path of Travel**
- **Assumed Property Line**
- **Temporary Feed to Portables for Low Voltage & Power, Temporary Feed to Existing DFS for Low Voltage**
- **MDP / OF / Electrical Room Location**
- **Temporary A.C. LANDING for Accessible Transition to Grade. Provide A.C. CURB at all LANDING more than 4" above Adjacent Grade**

**NOTE:** Door Landings at all Interim Housing Buildings is 3/4" Marine-Grade Plywood with Non-Skid Surfacing Per Manufacturer’s P.C. Documents, except that the Door Landings at Buildings H & 12 GA. Plate Steel with Non-Skid Surfacing Per Manufacturer’s P.C. Documents

**NOTE:** Remove all temporary CABLING and UTILITIES for Interim Housing, Repair A.C.
KEYNOTES (NOT ALL KEYNOTES ARE USED ON ALL SHEETS)

21. REMOVE SEMI-RECESSED SLIDING CHALKBOARD ASSEMBLY & CASEWORK SURROUND.

22. REMOVE WALL CONSTRUCTION & PORTION OF FLOOR SLAB AND FOOTING TO PREPARE FOR NEW STRUCTURAL WORK. SEE STRUCTURAL DRAWINGS. COORDINATE SHORING OF ADJACENT STRUCTURES PER STRUCTURAL REQUIREMENTS.

23. REMOVE (E) TERRAZZO STAIRS, RAILINGS, & ADJACENT CONCRETE FLOOR IN PREPARATION FOR NEW RAMP. PROVIDE SHORING AND BRACING AS NEEDED. SEE STRUCTURAL DRAWINGS.
GENERAL NOTES

4. WHERE DOWNSPOUTS ARE SHOWN TO BE REPLACED, REPLACE EXISTING ALUMINUM PORTION WITH NEW 0.050 ALUMINUM ORoppers. REFER TO GUTTER AND STORM DRAIN STUB-UPS & PAINT ALL COMPONENTS INCLUDING STORM DRAIN STUB-UPS. DO NOT REPLACE CAST IRON RAINWATER LEADERS AT WEST WING. PAINT ALL COMPONENTS.

KEYNOTES

1. ROOF CURRENTLY UNDER WARRANTY (GARLAND COMPANY)
2. NEW BUILT-UP ROOFING WITH WASHED GRAVEL BALLAST

REFERENCE: A2.05
 SCALE: 1/16" = 1'-0"
<table>
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<tr>
<th>NO.</th>
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<th>MATERIAL</th>
<th>FINISH SYSTEM</th>
<th>COLOR</th>
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<tr>
<td>W-1</td>
<td>THROUGHOUT UNLESS OTHERWISE NOTED</td>
<td>PAINTED GYPSUM BOARD WALL SURFACE OR CONCRETE / CMU</td>
<td>ONE COAT PRIMER SEALER AND TWO COATS 100% ACRYLIC LATEX ENAMEL COLOR AND SHEEN TBD</td>
<td>C-1</td>
<td>SEE PLANS</td>
</tr>
<tr>
<td>W-2</td>
<td>SEE PLANS &amp; INTERIOR ELEVATIONS</td>
<td>TACKABLE WALL CORK OVER FIBERBOARD SUBSTRATE WITH APPLIED POLYESTER SURFACING TBD</td>
<td>C-2</td>
<td>SEE PLANS</td>
<td>ACOUSTICAL PANEL SYSTEM FACTORY</td>
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<tr>
<td>W-3</td>
<td>SEE PLANS &amp; INTERIOR ELEVATIONS</td>
<td>PAINTED GYPSUM BOARD WALL SURFACE OR CONCRETE / CMU</td>
<td>CLEAN, PRIME, &amp; PAINT: ONE COAT PRIMER/SEALER &amp; TWO COATS EPOXY PAINT COLOR AND TEXTURE TBD</td>
<td>C-3</td>
<td>SEE PLANS</td>
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<tr>
<td>W-4</td>
<td></td>
<td>TOILET ROOMS CERAMIC TILE ON FULL MORTAR BED</td>
<td>SEE SHEET A2.12 FOR PATTERN</td>
<td>B-1</td>
<td>THROUGHOUT UNLESS OTHERWISE NOTED</td>
</tr>
<tr>
<td>W-5</td>
<td></td>
<td>KITCHEN FIBER-REINFORCED PANELS ADHERED WITH MFR. TRIM PROFILES</td>
<td></td>
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<td>W-6</td>
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<td>UTILITY AND STORAGE ROOMS (E) UNFINISHED CONCRETE/CMU. LEAVE AS IS</td>
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<td></td>
<td>JANITOR'S CLOSETS CONCRETE FLOORS WITH OR WITHOUT (E) COATING EPOXY PAINT WITH PERLITE OR GRANULAR ADDITIVE TO ACHIEVE GREATER THAN .06 C.O.F.</td>
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<td>CUSTODIAL CLOSETS CONCRETE FLOORS WITH OR WITHOUT (E) COATING EPOXY PAINT WITH PERLITE OR GRANULAR ADDITIVE TO ACHIEVE GREATER THAN .06 C.O.F.</td>
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<td>TOILET ROOMS MOSAIC COMPOSITION (EPOXY) FLOORING WITH INTEGRAL BASE APPLIED CLEAR SEALER AS SHOWN.</td>
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<td>F-4</td>
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<td>CUSTODIAL CLOSETS CONCRETE FLOORS WITH OR WITHOUT (E) COATING EPOXY PAINT WITH PERLITE OR GRANULAR ADDITIVE TO ACHIEVE GREATER THAN .06 C.O.F.</td>
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<td></td>
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<td>UTILITY &amp; STORAGE ROOMS NEW CONCRETE EXPOSED AND SEALED</td>
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<td></td>
</tr>
<tr>
<td>F-6</td>
<td></td>
<td>UTILITY &amp; STORAGE ROOMS NEW CONCRETE EXPOSED AND SEALED</td>
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**Scale:** 1/16" = 1'-0"
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<th>FINISH SYSTEM</th>
<th>COLOR</th>
<th>REMARKS</th>
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<td>PAINTED GYPSUM BOARD</td>
<td>WALL SURFACE OR CONCRETE / CMU</td>
<td>ONE COAT PRIMER SEALER AND TWO COATS 100% ACRYLIC LATEX ENAMEL COLOR AND SHEEN TBD</td>
<td>ASSUME 4 COLOR SELECTION WHERE SOME DESIGNATED WALLS TO RECEIVE ACCENT COLOR.</td>
</tr>
<tr>
<td>C-1</td>
<td>SEE PLANS</td>
<td>SUSPENDED CEILING SYSTEM</td>
<td>LAY-IN 2X4 TILES WITH EXPOSED GRID</td>
<td>FACTORY</td>
<td></td>
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<tr>
<td>W-2</td>
<td>SEE PLANS &amp; INTERIOR ELEVATIONS</td>
<td>TACKABLE WALL CORK OVER FIBERBOARD SUBSTRATE WITH APPLIED POLYESTER SURFACING TBD</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>C-2</td>
<td>SEE PLANS</td>
<td>PAINT OVER GYPSUM WALL BOARD</td>
<td>ONE COAT PRIMER/SEALER &amp; TWO COATS 100% ACRYLIC LATEX ENAMEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W-3</td>
<td>SEE PLANS &amp; INTERIOR ELEVATIONS</td>
<td>PAINTED GYPSUM BOARD WALL SURFACE OR CONCRETE / CMU</td>
<td>CLEAN, PRIME, &amp; PAINT: ONE COAT PRIMER/SEALER &amp; TWO COATS EPOXY PAINT</td>
<td>COLOR AND TEXTURE TBD</td>
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<td>W-4</td>
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<td>CERAMIC TILE O/FULL MORTAR BED</td>
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<td>CONCRETE STRUCTURAL CONCRETE FLOOR SLAB. POLISH STAINED CONCRETE WITH TERRAZZO FLOOR POLISHER. APPLY STAIN/CLEAR CONCRETE FLOOR SEALER.</td>
<td>COLOR AND SHEEN TBD</td>
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<td>CONCRETE</td>
<td>SHEET LINOLEUM FACTORY FINISH FIELD SEALER CLEAR</td>
<td>ALLOW FOR 3 COLORS, AS SHOWN.</td>
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<td>MOSAIC COMPOSITION (EPOXY) FLOORING WITH INTEGRAL BASE</td>
<td>TEACHER RESTROOM</td>
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<td></td>
<td>CONCRETE FLOORS WITH OR WITHOUT EPOXY PAINT WITH PERLITE OR GRANULAR ADDITIVE TO ACHIEVE GREATER THAN .06 C.O.F.</td>
<td>CUSTOM CLOSETS</td>
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<td>TOILET ROOMS</td>
<td></td>
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<tr>
<td>F-5</td>
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<td>TOILET ROOMS</td>
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<td>F-6</td>
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<td>CONCRETE TO REMAIN</td>
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</tbody>
</table>
ELEVATION GENERAL NOTES

1. For all casework anchorage see 17/A0.02
2. All metal panels at radiator alcoves (West Wing) shall be removed, painted with heat resistant paint and reinstalled.
3. All exposed surfaces which are not factory finished shall be prepared and painted.
REFERENCE: A2.06A
SCALE: 1/8" = 1'-0"

JOSE ORTEGA ES MODERNIZATION

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455 Lambert Avenue • Palo Alto, CA 94306
650.328.1818 • Fax 328.1888
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REFERENCE: A2.06B
SCALE: 1/8" = 1'-0"

C O D Y  A N D E R S O N  W A S N E Y  A R C H I T E C T S
C o d y  A n d e r s o n  W a s n e y  A r c h i t e c t s,  I n c.
455 L a m b e r t  A v e n u e •  P a l o  A l t o,  C A  9 4 3 0 6
6 5 0 . 3 2 8 . 1 8 1 8 •  F a x  3 2 8 . 1 8 8 8
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JOSE ORTEGA ES MODERNIZATION
13004
C A - 1 0

04/03/2014
Date

D EAST

(N) ROLLER SHADES AT (E) WINDOW

1D
ELEVATION GENERAL NOTES

1. FOR ALL CASework ANCHORAGE SEE 17/AS.02
2. ALL METAL PANELS AT RADIATOR ALCOVES (WEST WING) SHALL BE REMOVED & REPLACED WITH NEW.
3. ALL EXPOSED SURFACES WHICH ARE NOT FACTORY FINISHED SHALL BE PREPARED AND PAINTED.
4. PROVIDE ALL NEW FINISHES AT ALL WALLS IN ALL TOILET ROOMS.

MANUAL ROLLER SHADES
12 WALL BASE

 Cod y A n d e r s o n  W a s n e y  A r c h i t e c t s,   I n c.
4 5 5  L a m b e r t  A v e n u e  •   P a l o  A l t o, CA  9 4 3 0 6
6  5 0 .   3  2 8 .   1  8 1  8  •    F a x    3  2 8 .   1  8 8  8
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Project Name: 13004
Project No.: 38-1
01-113688

REFERENCE: A4.05
SCALE: 1/4" = 1'-0"
ELEVATION GENERAL NOTES

1. FOR ALL CASework, ANCHORAGE SEE 17/A8.02
2. ALL METAL PANELS AT RADIATOR ALCOVES (WEST WING) SHALL BE REMOVED & REPLACED WITH NEW.
3. ALL EXPOSED SURFACES WHICH ARE NOT FACTORY FINISHED SHALL BE PREPARED AND PAINTED.
4. PROVIDE ALL NEW FINISHES AT ALL WALLS IN ALL TOILET ROOMS.

MANUAL ROLLER SHADES
12 WALL BASE

FOR ALL CASEWORK ANCHORAGE SEE 17/A9.02

ALL METAL PANELS AT RADIATOR ALCOVES (WEST WING) SHALL BE REMOVED & REPLACED WITH NEW.

ALL EXPOSED SURFACES WHICH ARE NOT FACTORY FINISHED SHALL BE PREPARED AND PAINTED.

PROVIDE ALL NEW FINISHES AT ALL WALLS IN ALL TOILET ROOMS.

REFERENCE: A4.06

SCALE: 1/4" = 1'-0"
ELEVATION GENERAL NOTES

1. FOR ALL CASEWORK ANCHORAGE SEE 37/AS.02
2. ALL METAL PANELS AT RADIATOR ACOVES (WEST WING) SHALL BE REMOVED & REPLACED WITH NEW.
3. ALL EXPOSED SURFACES WHICH ARE NOT FACTORY FINISHED SHALL BE PREPARED AND PAINTED.
4. PROVIDE ALL NEW FINISHES AT ALL WALLS IN ALL TOILET ROOMS.
WINDOW GENERAL NOTES

1. See elevations for typical window keys.
2. See door schedule for doors with glazing.
3. All windows shall be cleaned, adjusted, and installed so that they open or close.
4. All exterior windows shall receive roller shades.
5. Replacement of all clerestory windows shall be included in bid and protective screen at exterior.
6. All windows throughout all permanent buildings shall be replaced.
7. Provide 4" limiting device where operable windows protrude into other locations.
8. All window glass shall be Type 6 unless noted otherwise.

SCHEDULE ABBREVIATIONS

- **E** TYPE 6 GLASS (BID ALT SHOWN)
- **K** TYPE 6 GLASS (BID ALT SHOWN)
- **R** TYPE 6 GLASS (BID ALT SHOWN)
- **S** TYPE 6 GLASS (BID ALT SHOWN)
- **T** TYPE 6 GLASS (BID ALT SHOWN)
- **F** FIRE RATED GLASS (TYPE 7 GLASS)
- **MP** INSULATED METAL PANEL

See Spec 08420 for rated framing system.
DEMOLITION GENERAL NOTES

32. SEE MECHANICAL DRAWINGS FOR MECHANICAL DEMOLITION.

33. SEE PLUMBING DRAWINGS FOR PLUMBING DEMOLITION.

34. PROVIDE SOLID BACKING AT ALL ATTACHMENTS TO WALLS, INCLUDING BUT NOT LIMITED TO HANDRaLS, TOILET ACCESSORIES AND PARTITIONS, CAsEWaRK, COUNTERTOPS AND MISCELLAneOUS EQUIPMENT. BACKING NOT REQUIRED FOR SIGNAGE.

35. IN KITCHEN ROOM 208 AND SUPPLY STORAGE ROOM 213, DEMO CEILINGS, WALL FINISHES (WHERE SHOWN), WALLS (WHERE SHOWN) & PREP FLOORING FOR NEW TREATMENT.
NEW GYPSUM BOARD CEILING OR SOFFIT: PAINT

NEW SUSPENDED 2X4 ACT SYSTEM, SHOWN WITH LAY-IN LIGHT FIXTURE, SEE 17/A9.01

NEW SUSPENDED LIGHT FIXTURE

PENDANT-MTD LIGHT FIXTURE

SURFACE MOUNTED FIXTURE

RECESSED LIGHT FIXTURE

(E) SECURITY CAMERA

(R) EXISTING SECURITY CAMERA: REMOVE DURING WORK & INSTALL IN SHOWN LOCATION

NEW SECURITY CAMERA

X-X

CEILING HEIGHT ABOVE FINISH FLOOR

REFERENCE: A6.01, A6.02, A6.03

SCALE: NTS
A. TYPICAL TILES ARE 24" X 24", NON-TOXIC RECYCLED RUBBER, SURFACE APPLIED OVER AC. PAVING

B. CRITICAL FALL HEIGHT: 48'

NOTE: PROVIDE MAX. CROSS SLOPE OF 2% IN ALL DIRECTIONS ACROSS ENTIRE SURFACE

RUBBER TILE SURFACE W/ SLOPED TRANSITION MAX SLOPE 1:12 SEE DETAIL 18

PLAY STRUCTURE LAYOUT
SCALE: 1/4" = 1'-0'

RUBBER TILES: TYPICAL SLOPED SECTIONS
SCALE: 1" = 1'-0'
REFERENCE: A7.04

SCALE: NTS

NOTE: SEE DETAILS 1, 2, 3 ON SHEET S1.07 FOR FOOTINGS AND REINFORCING, TYPICAL FOR ALL NEW SITE WALLS.

PLANE OF INFLUENCE PER STRUCTURAL

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### DOOR SCHEDULE - SECOND FLOOR & NORTH WING

<table>
<thead>
<tr>
<th>Room No.</th>
<th>Door Type</th>
<th>Material</th>
<th>Rating</th>
<th>Entry Location</th>
<th>Exit Location</th>
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<tr>
<td>219</td>
<td>COPY ROOM 219 TO RECEPT</td>
<td>1 3/4&quot; HM</td>
<td>PAINT</td>
<td>12/A9.03</td>
<td>12/A9.03</td>
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<tr>
<td>220A</td>
<td>RECEPTION ROOM 220 TO CC</td>
<td>1 3/4&quot; HM</td>
<td>STEEL FACTORY</td>
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<tr>
<td>220B</td>
<td>RECEPTION ROOM 220 TO EX</td>
<td>1 3/4&quot; HM</td>
<td>PAINT</td>
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<td>12/A9.03</td>
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<tr>
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<td>RECEPTION ROOM 220 TO CC</td>
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<td>12/A9.03</td>
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<tr>
<td>221A</td>
<td>CONFERENCE ROOM 221 TO I</td>
<td>1 3/4&quot; HM</td>
<td>PAINT</td>
<td>12/A9.03</td>
<td>12/A9.03</td>
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<tr>
<td>221B</td>
<td>CONFERENCE ROOM 221 TO I</td>
<td>1 3/4&quot; HM</td>
<td>PAINT</td>
<td>12/A9.03</td>
<td>12/A9.03</td>
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<tr>
<td>222</td>
<td>PRINCIPAL'S OFFICE 222 TO F</td>
<td>1 3/4&quot; ALUM</td>
<td>FACTORY</td>
<td>15/A9.05</td>
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<td>223</td>
<td>RSP ROOM 223 TO RECEPT</td>
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<td>12/A9.03</td>
<td>12/A9.03</td>
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<tr>
<td>224</td>
<td>SPEECH ROOM 224 TO RECEP</td>
<td>1 3/4&quot; HM</td>
<td>PAINT</td>
<td>12/A9.03</td>
<td>12/A9.03</td>
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</table>

### DOOR SCHEDULE GENERAL NOTES

7. All double doors shall receive removable intermediate mullions. Provide bolted removal in lieu of keyed.

8. All door lites shall be laminated. Lites in rated doors shall be fire-rated lites (Type B).

9. See demo plan for items to be salvaged for owner.

### REFERENCE: A2.09

Scale: NTS

---

CODY ANDERSON WASNEY ARCHITECTS

JOSE ORTEGA ES MODERNIZATION

Project Name: 13004
Project Number: 38-1
DSA File No.: 01-113688
DSA App. No.: CA-24

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IMPROVEMENTS OR FEATURES OF WHATEVER NATURE WHICH ARE DAMAGED DUE TO THE CONTRACTOR’S WORK.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL PREPARE A TRAFFIC CONTROL PLAN AND OBTAIN APPROVAL FROM THE AGENCY HAVING JURISDICTION BEFORE COMMENCING WORK. THE CONTRACTOR SHALL ALSO PROVIDE FLAG MEN, CONES OR BARRICADES, AS NECESSARY, TO CONTROL TRAFFIC AND PREVENT HAZARDOUS CONDITIONS PER THE WORK AREA TRAFFIC CONTROL HANDBOOK, PUBLISHED BY BUILDING NEWS INC., (213) 870-9871. THE CONTRACTOR SHALL LEAVE A 24-HOUR EMERGENCY TELEPHONE NUMBER WITH POLICE, FIRE AND PUBLIC WORKS DEPARTMENTS, AND KEEP THEM INFORMED DAILY OF DETOURS.

9. EXISTING PUBLIC PEDESTRIAN WALKWAYS, BIKEPATHS & HANDICAP ACCESS PATHWAYS SHALL BE MAINTAINED DURING CONSTRUCTION TO THE SATISFACTION OF THE OWNER AND AGENCY HAVING JURISDICTION.

10. TRENCHES SHALL NOT BE LEFT OPEN OVERNIGHT. CONTRACTOR SHALL BACKFILL TRENCHES, OR PLACE STEEL PLATING OR HOT-MIX ASPHALT AS REQUIRED TO OPEN TRENCHES AT THE END OF EVERY WORK DAY.

11. PRIOR TO FINAL PREPARATION OF THE SUBGRADE AND PLACEMENT OF BASE MATERIALS FOR PAVED AREAS, UNDERGROUND UTILITY MAINS SHALL BE TESTED. AFTER TESTING, UNDERGROUND UTILITY MAINS SHALL BE INSTALLED AND SERVICE CONNECTIONS STUDDED OUT. Stub-outs shall be installed in a manner which will not disturb the pavement, curb and gutter and walks when service connections are made.

12. EXCAVATIONS SHALL BE ADEQUATELY SHORED, BRACED AND SHEATHED SO THAT THE EARTH WILL NOT SLIDE OR SETTLE AND SO THAT EXISTING IMPROVEMENTS WILL BE FULLY PROTECTED FROM DAMAGE. DAMAGE RESULTING FROM A LACK OF ADEQUATE SHORING, BRACING AND SHEATHING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND HE SHALL COMPLETE NECESSARY REPAIRS OR RECONSTRUCTION AT HIS OWN EXPENSE. THE CONTRACTOR SHALL REFER TO OSHA REGULATIONS FOR SOIL TYPES ENCOUNTERED OR ANTICIPATED ON SITE BASED ON THE GEOTECHNICAL REPORT AND SUBSEQUENT SUPPORTING DOCUMENTS.

13. THE CONTRACTOR SHALL PROVIDE DUST CONTROL FOR THE ENTIRE PROJECT SITE. THE SITE SHALL BE SPRINKLED AS NECESSARY TO PREVENT DUST NUISANCE.

COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES WHICH MAY BE ENCOUNTERED, BUT WHICH ARE NOT SHOWN ON THIS SURVEY. CONTRACTOR SHALL CONDUCT FIELD INVESTIGATIONS AS REQUIRED TO VERIFY THE LOCATION AND ELEVATION OF EXISTING SUBSURFACE IMPROVEMENTS AND UTILITIES (WHETHER SHOWN ON THESE PLANS OR NOT) PRIOR TO THE COMMENCEMENT OF WORK. CONTRACTOR SHALL NOTIFY THE CIVIL DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD AND INFORMATION SHOWN ON THESE PLANS.

3. ELEVATIONS AND LOCATIONS OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO START OF CONSTRUCTION AFFECTING SAID LINES.

IV. GRADING

1. GRADING WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN "GEOTECHNICAL INVESTIGATION AND GEOLOGIC HAZARDS EVALUATION, JOSE ORTEGA ELEMENTARY SCHOOL IMPROVEMENTS, 400 SARGENT STREET, SAN FRANCISCO, CALIFORNIA", PERFORMED BY OCHSNER/ONEIL EARTH GROUP, DATED MARCH 15, 2010, AND SUBSEQUENT SUPPORTING LETTERS/DOCUMENTS.

2. CONTRACTOR SHALL EXERCISE EXTREME CARE TO CONFORM TO THE LINES, GRADES, SECTIONS, AND DIMENSIONS AS SET FORTH ON THESE PLANS. GRADED AREAS SHALL CONFORM TO THE VERTICAL ELEVATIONS SHOWN WITHIN TOLERANCE OF ONE-TENTH OF A FOOT IN LANDSCAPE AREAS AND TWO HUNDREDTHS OF A FOOT IN HARDCORE AREAS. WHERE GRADED AREAS DO NOT CONFORM TO THESE TOLERANCES, THE CONTRACTOR SHALL BE REQUIRED TO DO CORRECTIVE GRADING, AT NO EXTRA COST TO THE OWNER.

3. THE GEOTECHNICAL ENGINEER SHALL BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCEMENT OF GRADING OPERATIONS.

4. THE GEOTECHNICAL ENGINEER WILL BE PRESENT AT THE SITE DURING FOOTING EXCAVATION AND OTHER GRADING OPERATIONS, AND SHALL PERFORM TESTING DEEMED NECESSARY. THE GEOTECHNICAL ENGINEER SHALL OBSERVE GRADING OPERATIONS AND IDENTIFY THOSE CONDITIONS WITH RECOMMENDED CORRECTIVE MEASURES TO THE CONTRACTOR AND THE CONSTRUCTION MANAGER.

5. UPON COMPLETION OF FOOTING EXCAVATION AND OTHER GRADING.
**FENCE SCHEDULE**

<table>
<thead>
<tr>
<th>NO.</th>
<th>DESCRIPTION</th>
<th>HEIGHT</th>
<th>MESH OPENING SIZE</th>
<th>MATERIAL</th>
<th>FINISH</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pre-K</td>
<td>6'</td>
<td>2&quot;</td>
<td>PNT STL</td>
<td>SEE SPECS</td>
<td>NEW POSTS PER DETAIL 2 ON SHEET C5.0.</td>
</tr>
<tr>
<td>2</td>
<td>North Boundary</td>
<td>6'</td>
<td>2&quot;</td>
<td>PNT STL</td>
<td>SEE SPECS</td>
<td>INSTALL POSTS AND FOOTINGS BEHIND (E) WALL.</td>
</tr>
<tr>
<td>3</td>
<td>East Ramp</td>
<td>6'</td>
<td>2&quot;</td>
<td>PNT STL</td>
<td>SEE SPECS</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>NE Of South Wng</td>
<td>6'</td>
<td>2&quot;</td>
<td>PNT STL</td>
<td>SEE SPECS</td>
<td>INSTALL POSTS IN (E) WALL PER DETAIL 2 ON SHEET C5.0.</td>
</tr>
<tr>
<td>5</td>
<td>East Of 8-10</td>
<td>6'</td>
<td>2&quot;</td>
<td>PNT STL</td>
<td>SEE SPECS</td>
<td>ONE PANEL</td>
</tr>
<tr>
<td>6</td>
<td>Southwest Of North Wng</td>
<td>6'</td>
<td>2&quot;</td>
<td>PNT STL</td>
<td>SEE SPECS</td>
<td>NEW POSTS PER DETAIL 3 ON SHEET C5.0.</td>
</tr>
</tbody>
</table>

**GATE SCHEDULE**

<table>
<thead>
<tr>
<th>NO.</th>
<th>DESCRIPTION</th>
<th>HEIGHT</th>
<th>WIDTH</th>
<th>MESH OPENING SIZE</th>
<th>MATERIAL</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Double Gate East Of South Wng</td>
<td>6'</td>
<td>14'</td>
<td>2&quot;</td>
<td>GS</td>
<td>NEW POSTS. BOTTOM RAIL TO FOLLOW SLOPE.</td>
</tr>
<tr>
<td>2</td>
<td>Southeast Kindergarten</td>
<td>6'</td>
<td>3'</td>
<td>2&quot;</td>
<td>GS</td>
<td>PROVIDE PANIC HARDWARE AND 10&quot; MIN BOTTOM RAIL.</td>
</tr>
<tr>
<td>3</td>
<td>Ped Gate At Loading Dock</td>
<td>8'</td>
<td>2'</td>
<td>2&quot;</td>
<td>GS</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>Double Gate At 8-10</td>
<td>6'</td>
<td>16'</td>
<td>2&quot;</td>
<td>GS</td>
<td>BOTTOM RAIL TO FOLLOW SLOPE.</td>
</tr>
<tr>
<td>5</td>
<td>Double Gate At Garden</td>
<td>6'</td>
<td>12'</td>
<td>2&quot;</td>
<td>GS</td>
<td>NEW POSTS</td>
</tr>
<tr>
<td>6</td>
<td>Ped At Northeast</td>
<td>6'</td>
<td>3'</td>
<td>2&quot;</td>
<td>GS</td>
<td>NEW POSTS</td>
</tr>
<tr>
<td>7</td>
<td>West Vehicular Ramp</td>
<td>12'</td>
<td>12'</td>
<td>2&quot;</td>
<td>GS</td>
<td>NEW POSTS</td>
</tr>
<tr>
<td>8</td>
<td>East Vehicular Ramp</td>
<td>6'</td>
<td>12'</td>
<td>2&quot;</td>
<td>GS</td>
<td>NEW POSTS</td>
</tr>
<tr>
<td>9</td>
<td>Ped At East Ramp</td>
<td>6'</td>
<td>3'</td>
<td>2&quot;</td>
<td>GS</td>
<td>NEW POSTS</td>
</tr>
<tr>
<td>10</td>
<td>West Kindergarten</td>
<td>6'</td>
<td>4'</td>
<td>2&quot;</td>
<td>GS</td>
<td>NEW POSTS. THIS GATE MUST MEET ACCESSIBILITY REQUIREMENTS. PROVIDE PANIC HARDWARE AND 10&quot; MIN BOTTOM RAIL.</td>
</tr>
<tr>
<td>11</td>
<td>Southwest Of North Wng</td>
<td>6'</td>
<td>3'</td>
<td>2&quot;</td>
<td>GS</td>
<td>PROVIDE PANIC HARDWARE AND 10&quot; MIN BOTTOM RAIL.</td>
</tr>
</tbody>
</table>

**ABBREVIATIONS**

- GS: GALVANIZED STEEL
- PNT STL: PAINTED STEEL

**NOTES**

1. FURNISH GATES WITH LOCKING HARDWARE
NOTES:
1. CONC SHALL BE TYPE B, CLASS 2 PER CALTRANS STANDARD SPECIFICATION SECTION 90.
2. CLASS 2 AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION.
3. FILL MATERIAL SHALL MEET STANDARDS PER GEOTECHNICAL REPORT.
4. EXPANSION JOINTS TO BE PLACED 20' O.C. MAX SPACING AND AT CURB RETURNS. CONTROL JOINTS SHALL BE PROVIDED BETWEEN EXPANSION JOINTS AT 10' MAX SPACING.
5. SEE GEOTECHNICAL REPORT AND SUPPLEMENTAL LETTERS FOR OVER-EXCAVATION OF UNDOCUMENTED FILL REQUIREMENTS.

CONCRETE RETAINING CURB

N.T.S.

REFERENCE DRAWING C5.0
SCALE: AS NOTED
# MATERIAL DATA

<table>
<thead>
<tr>
<th>CONCRETE ELEMENT</th>
<th>MIN 28 DAY COMPR. STRENGTH</th>
<th>MAX SIZE AGGREGATE (INCHES)</th>
<th>MAX SLUMP (INCHES)</th>
<th>TOTAL AIR CONTENT (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOOTINGS</td>
<td>3000</td>
<td>1-1/2</td>
<td>3</td>
<td>--</td>
</tr>
<tr>
<td>SLABS ON GRAGE</td>
<td>3500</td>
<td>1</td>
<td>4</td>
<td>4% ± 1.5%</td>
</tr>
<tr>
<td>WALLS, BEAMS, SUSPENDED SLABS, PILASTERS &amp; COLUMNS</td>
<td>4000</td>
<td>3/4</td>
<td>4</td>
<td>--</td>
</tr>
<tr>
<td>LW CONCRETE TOPPING SLAB (115 PCF DRY WT)</td>
<td>3000</td>
<td>3/8</td>
<td>4</td>
<td>--</td>
</tr>
<tr>
<td>UNDERPINNING</td>
<td>2000</td>
<td>1-1/2</td>
<td>4</td>
<td>--</td>
</tr>
</tbody>
</table>

Slump will be measured at the truck discharge. Slumps noted above are for concrete without admixtures to be consolidated using vibration. Formwork constraints, congestion of rebar, and pumping of concrete may require increased slump beyond the slump listed above. The contractor shall adjust the slump up to 8 inches max using admixtures as necessary to provide workability and consistency to permit concrete to be worked readily into forms and around reinforcement under conditions of placement to be employed without segregation or excessive bleeding. All admixtures shall be noted in the submitted mix design and are subject to the engineer's review. The special inspector shall be provided with a batch ticket and weight tag upon delivery of each load of concrete.
1. THE STABILITY AND INTEGRITY OF THE EXISTING STRUCTURE DURING CONSTRUCTION SHALL BE MAINTAINED AT LEVELS GENERALLY ACCEPTABLE WITHIN THE CONSTRUCTION INDUSTRY BY THE USE OF BRACING AND SHORING UNTIL THE PROPOSED STRUCTURE MODIFICATIONS ARE COMPLETED. IN NO CASE SHALL THE EXISTING STRUCTURE BE ALLOWED TO BECOME UNSAFE DURING CONSTRUCTION.

2. THE BRACING AND SHORING SYSTEMS REQUIRED TO PROVIDE TEMPORARY SUPPORT OF THE EXISTING STRUCTURE DURING CONSTRUCTION SHALL BE DESIGNED TO SUPPORT THE DEAD, LIVE, SOIL, EARTHQUAKE AND WIND LOADS THAT MAY BE IMPOSED ON THE STRUCTURE DURING CONSTRUCTION IN ACCORDANCE WITH INDUSTRY STANDARDS AND GENERALLY ACCEPTED ENGINEERING PRINCIPLES.

3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND REMOVAL OF TEMPORARY BRACING AND CONSTRUCTION SUPPORTS REQUIRED TO COMPLETE THE PROJECT. EXISTING AND NEW BUILDING SUSPENDED FLOOR SLABS HAVE NOT BEEN ENGINEERED OR ANALYZED BY THE DESIGN TEAM OR THE DISTRICT FOR USE OF HYDRAULIC OR ELECTRIC MOTORIZED MAN-LIFTS. CONTRACTOR MAY USE SUCH LIFTS IF AND ONLY IF CONTRACTOR PROVIDES ENGINEERING SERVICES TO ANALYZE THE STRUCTURE, BASED ON RECORD DRAWINGS TO BE PROVIDED BY THE DISTRICT, AND FINDS THAT THE SLABS ARE SUFFICIENTLY CONSTRUCTED TO SUPPORT SUCH LIFTS IN THE QUANTITIES / LOCATIONS DESIRED FOR USE BY CONTRACTOR. SUCH ANALYSIS / CALCULATIONS SHALL BE FURNISHED TO THE STRUCTURAL ENGINEER OF RECORD FOR CONCURRENCE ONLY. RESPONSIBILITY IS UPON THE CONTRACTOR TO INCLUDE THIS SERVICE IN THEIR BIDS IF LIFTS ARE TO BE USED ON THE JOB BY ANY TRADE.

4. EXCAVATIONS:
   THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PERFORMING BRACING, SHORING, AND TEMPORARY EXCAVATION SLOPES IN SOIL AND/OR ROCK AND SHALL COMPLY WITH APPLICABLE OSHA REQUIREMENTS FOR SUCH WORK. IT IS NOTED THAT SOME OF THE MATERIALS ENCOUNTERED IN THE GEOTECHNICAL INVESTIGATION ARE CLASSIFIED AS OSHA TYPE 'C' SOILS AND ARE 'SANDS'. THE CONTRACTOR SHALL PERFORM THE APPROPRIATE MEANS AND METHODS OF EXCAVATION SUPPORT IN THESE MATERIALS.
PROJECT DATA

1. PLANS AND CALCULATIONS FOR THE STRUCTURAL DESIGN WERE BASED UPON:
   - GOVERNING CODE: 2010 CALIFORNIA BUILDING CODE W/ CHAPTER A AMENDMENTS
   - SUPPLEMENTAL LETTER BY CORNERSTONE EARTH GROUP, PROJECT 608–1–2, DATED MARCH 6, 2014.

2. VERTICAL LOADS:
   - FLOOR LIVE LOADS = 50 PSF [MAY BE REDUCED PER CODE]
   - CORRIDOR LIVE LOADS = 100 PSF [MAY BE REDUCED PER CODE]
   - ROOF LIVE LOADS = 20 PSF [MAY BE REDUCED PER CODE]

3. EARTHQUAKE DESIGN DATA:
   - ASCE 07–05 LINEAR DYNAMIC PROCEDURE
     - $S_s = 1.960$; $S_t = 1.035$
     - $S_{os} = 1.307$; $S_{ot} = 0.897$
     - $I = 1.25$; OCCUPANCY CAT III
     - SITE CLASS = C; SEISMIC DESIGN CAT E

WEST WING & LOBBY:
   - $R = 2.00$ [ORDINARY REINFORCED MASONRY SHEAR WALL]
   - $V = 0.817$ W [LRFD]
   - $\Omega_o = 2.50$

NORTH AND SOUTH WING:
   - $R = 4.00$ [ORDINARY REINFORCED CONCRETE SHEAR WALL]
   - $V = 0.408$ W [LRFD]
   - $\Omega_o = 2.50$

CORRIDOR:
   - $R = 3.50$ [ORDINARY STEEL MOMENT FRAME]
   - $V = 0.467$ W [LRFD]
   - $\Omega_o = 3.00$
FOUNDATION PLAN NOTES:

16. SEE CIVIL DRAWINGS FOR BUILDING PAD PREPARATION, INCLUDING OVER EXCAVATION AND FILL REQUIREMENTS PER THE SOILS REPORT.

17. CONTRACTOR SHALL REVIEW GEOTECHNICAL INVESTIGATION AND GEOLOGIC HAZARDS EVALUATION FOR LOCATIONS OF DIFFICULT DIGGING CONDITIONS INTO BEDROCK.

SOUTH WING FOUNDATION PLAN

No Scale
FOUNDATION PLAN NOTES:

20. SEE CIVIL DRAWINGS FOR BUILDING PAD PREPARATION, INCLUDING OVER EXCAVATION AND FILL REQUIREMENTS PER THE SOILS REPORT.

21. CONTRACTOR SHALL REVIEW GEOTECHNICAL INVESTIGATION AND GEOLOGIC HAZARDS EVALUATION FOR LOCATIONS OF DIFFICULT DIGGING CONDITIONS INTO BEDROCK.

NORTH WING FOUNDATION PLAN & SOUTH WING ROOF FRAMING PLAN

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JOSE ORTEGA ELEMENTARY SCHOOL
Project Name 2012055
Project Number

38-1 01-113688
DSA File No. DSA App. No.

4/3/2014 Date

CS-07 Sheet Number
GENERAL MECHANICAL NOTES

A. PROVIDE X-RAY SURVEY PRIOR TO CORE DRILLING THROUGH CONCRETE WALLS AND ROOF. DO NOT CUT REBAR.

B. PROVIDE ENERGY CODE MINIMUM INSULATION FOR ALL NEW AND EXISTING HYDRONIC PIPING. EXISTING PIPING THAT IS FULLY CONCEALED WITH NO ACCESS DOES NOT REQUIRE INSULATION.

C. WHERE POSSIBLE, UTILIZE EXISTING WALL PENETRATIONS BEFORE CORE DRILLING THROUGH CONCRETE WALLS AND SLABS.

D. PNEUMATIC LINES TO BE CAPPED IN ACCORDANCE WITH PHASING PLAN.

E. (E) NON-PNEUMATIC CONTROLS TO BE RETAINED FOR DISTRICT USE.

1 M0.01 SYMBOLS AND LEGEND - MECHANICAL

NO SCALE
**SHEET KEYNOTES**

1. DEMOLISH EXHAUST DUCT IN SHAFT.
2. HWS/R RISERS TO REMAIN. MAKE CONNECTION OUTSIDE OF RISER SHAFT.
3. (E) BOILER TO REMAIN.
4. DEMOLISH HHW PUMP.
5. DEMOLISH EXPANSION TANK.
6. DEMOLISH HWS/R PIPING AND ACCESSORIES.
7. DEMOLISH (E) POT FEEDER.
8. RELOCATE (E) JACE CONTROLLER TO NEW MUP ROOM. SEE M2.01 FOR LOCATION. PROVIDE REQUIRED WIRING FOR RELOCATION OF CONTROLLER TO REMAIN IN OPERATION. (E) JACE CONTROLLER TO REMAIN OPERATIONAL UNTIL FULL CONVERSION OF CONTROLS TO (N) JACE. DISTRICT TO RETAIN UNIT AFTER PROJECT COMPLETION.
9. (X) AIR COMPRESSOR IS TO BE DEMOLISHED ONCE ALL PNEUMATIC CONTROLS HAVE BEEN REPLACED WITH DDC CONTROLS.
10. (E) BOILER FLUE INTO SHAFT TO REMAIN.
11. DEMOLISH HOT WATER HEATER FLUE TO SHAFT PENETRATION. FLUE IN SHAFT TO REMAIN.
12. (E) TEMPERATURE CONTROL PANEL TO REMAIN DURING DEMOULITION AND CONSTRUCTION. AT CONSTRUCTION COMPLETION REMOVE AND RETAIN FOR DISTRICT.

**2 ENLARGED BOILER ROOM - M1.01**
GENERAL SHEET NOTES

A. ALL PNEUMATIC CONTROLS AND DEVICES ARE TO BE REMOVED. COORDINATE WITH PHASING PLAN. WHEN PNEUMATIC CONTROLLED EQUIPMENT (THERMOSTAT, VALVE, ETC.) ARE DEMOLISHED, PNEUMATIC LINES TO BE CRIMPED AND SEALED TO ALLOW PNEUMATIC SYSTEM TO REMAIN OPERATIONAL UNTIL FINAL PHASE OF CONSTRUCTION.

1 SECOND FLOOR DEMO PLAN - M1.02

0  4’  8’  16’

SCALE: 1/8"=1’-0”
A. All pneumatic controls and devices are to be removed. Coordinate with phasing plan. When pneumatic controlled equipment (thermostat, valve, etc.) are demolished, pneumatic lines to be crimped and sealed to allow pneumatic system to remain operational until final phase of construction.
GENERAL SHEET NOTES

A. ALL PNEUMATIC CONTROLS AND DEVICES ARE TO BE REMOVED. COORDINATE WITH PHASING PLAN. WHEN PNEUMATIC CONTROLLED EQUIPMENT (THERMOSTAT, VALVE, ETC.) ARE DEMOLISHED, PNEUMATIC LINES TO BE CRIMPED AND SEALED TO ALLOW PNEUMATIC SYSTEM TO REMAIN OPERATIONAL UNTIL FINAL PHASE OF CONSTRUCTION.

1 FIRST FLOOR DEMOLITION - M1.04

SCALE: 1/8" = 1'-0"
1. COMBUSTION AIR LOUVERS.
2. (E) B-1 BOILER RATED CAPACITY OF 1,344 MBH. SEE 2/M3.01.
3. PROVIDE 1/2" METAL MESH AT TERMINATION OF EXHAUST DUCT IN SPACE.
   PROVIDE TEMPERATURE SENSOR IN ELEVATOR MACHINE ROOM FOR CONTROL OF
   EXHAUST FAN.
4. (E) 30x96 EXTERIOR LOUVER WITH MOTORIZED DAMPER. MAKE REPAIRS AS
   NEEDED TO LOUVER. BALANCE TO A MAXIMUM OUTSIDE AIR OF 6000 CFM AND
   4500 CFM RETURN AIR.
5. (E) HOT WATER HEATER FLUE UP THRU ROOF.
6. (E) BOILER CONTROL PANEL.
7. (N) TEMPERATURE CONTROL PANEL.
8. 6x10 EXHAUST AND 6x10 OUTSIDE AIR DUCTS LOCATED IN (E) SHAFT.
9. LOCATION OF TEMPERATURE SENSOR FOR EF-1.
10. LOCATE NEW JACE CONTROLLER IN NEW MDF ROOM. NEW EQUIPMENT TO BE
    TIED INTO CONTROLLER DURING CONSTRUCTION PHASE.
11. LOCATE EXISTING JACE CONTROLLER IN NEW MDF ROOM. EXISTING EQUIPMENT
    TO BE TIED INTO CONTROLLER DURING CONSTRUCTION PHASE.

1 FIRST FLOOR PLAN - WEST WING - M2.01

SCALE: 1/8" = 1' = 0"
1 FIRST FLOOR PLAN - SOUTH WING - M2.03

SCALE: 1/8" = 1'-0"
1 FIRST FLOOR PLAN - SOUTH WING - M2.04

SCALE: 1/8"=1'-0"

SHEET KEYNOTES

3 (E) TEMPERATURE CONTROL PANEL. ICP-2
7 (N) TEMPERATURE CONTROL PANEL.

JOSE ORTEGA ELEMENTARY SCHOOL

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CM-08
SEQUENCE OF OPERATION:

FOR HEATING ELEMENTS IN THE WEST WING, TEMPERATURE CONTROL TO BE
ACHIEVED THROUGH MODULATION OF TEMPERATURE CONTROL VALVE (V-1). V-1
TO BE ADJUSTED VIA THERMOSTAT. SEE PLANS FOR THERMOSTAT LOCATION
AND DETAILS.

THE FAN AND CONTROL VALVE FOR FAN COIL, HV-3, TO BE CONTROLLED VIA
PROGRAMMABLE THERMOSTAT. A BMS OVERRIDE TO BE PROVIDED TO ALLOW
ALL HV-3'S TO BE DEACTIVATED.

5 SPACE HEATING CONTROL DIAGRAM

GENERAL SHEET NOTES

A. CONTROLS CONTRACTOR TO COORDINATE WITH ARCHITECTURAL PHASING P
ALLOW EXISTING CONTROLS TO OPERATE AS NEW CONTROLS ARE INSTALL

B. SEE CONTROLS SPECIFICATION FOR CONTROLS WIRING REQUIREMENTS.
PROVIDE TEMP UTILITIES FROM NORTH WING TO SOUTH WING. SEE P1.03 & P1.04.

PROVIDE TEMPORARY UTILITIES FOR GAS & WATER SYSTEMS. DETERMINE EXACT ROUTING AND POINTS OF CONNECTION IN FIELD WITH DISTRICT REPRESENTATIVE.
UNDERSLAB DEMOLITION PLAN - WEST WING - PLUMBING

SCALE: 1/8"=1'-0"
**WARNING**

REMOVE HOSES AND VALVES FROM (E) HOSE REEL CABINETS.
SHEET KEYNOTES

1. (E) PLUMBING FIXTURE(S) TO REMAIN.
2. REMOVE EXISTING WATER CLOSET AND CAP OR PLUG ALL EXISTING UTILITIES BEHIND FINISHED WALL AND FLOOR.
3. REMOVE EXISTING WALL HUNG LAVATORY AND CAP ALL EXISTING UTILITIES BEHIND FINISHED WALL.
4. CAP VENT AT CEILING.

FIRST FLOOR NORTH WING - DEMOLITION PLAN
Scale: 1/8" = 1'-0"
1. Storm drain to be rerouted through bldg footing. Coordinate with civil plans.
GENERAL SHEET NOTES

A. PROVIDE X-RAY SURVEY PRIOR TO CORE DRILLING THROUGH CONCRETE WALLS AND ROOF. DO NOT CUT REBAR.

C. CONTRACTOR TO RECONNECT ANY FIXTURE TO THE DOMESTIC COLD WATER LINE WHICH ARE CURRENTLY CONNECTED TO THE FIRE WATER LINE.
GENERAL SHEET NOTES

A. PROVIDE X-RAY SURVEY PRIOR TO CORE DRILLING THROUGH CONCRETE WALLS AND ROOF. DO NOT CUT REBAR.

B. PIPES SERVING THE SOUTH WING SHALL REMAIN OPERATIONAL DURING NORTH WING RENOVATION.
7 PROVIDE TP-1 WITH ACCESS PANEL AND ROUTE 1/2" TP TO FLOOR DRAIN.
7 PROVIDE TP-1 WITH ACCESS PANEL AND ROUTE 1/2" TP TO FLOOR DRAIN.
SECOND FLOOR ROOF PLAN - WEST WING - PLUMBING

SCALE: 1/8" = 1'-0"
ELECTRICAL SYMBOL LIST

Abbreviations

(E) EXISTING
(R) RELOCATE
(RL) RELOCATED

Miscellaneous

CIRCUIT BREAKER WITH SHUNT TRIP

Switches and Receptacles

MULTIPLE CHANNEL SURFACE METAL RECEPTACLE RACEWAY WITH LOW VOLTAGE DIVIDERS. PROVIDE RECEPTACLES AT 3' OC PER SPECIFICATION SECTION 1635 2.B. (TYPICAL ALL WIREMOLDS)
10 PROVIDE POWER FOR CAMERA.

SITE PLAN - ELECTRICAL
SCALE: 1/16" = 1'-0"

JOSE ORTEGA ELEMENTARY SCHOOL
Project Name:
11515
Project Number:
38-1
DSA File No.
01-113688
DSA App. No.
4/03/2014
Date
CE-02
Sheet Number
**SHEET KEYNOTES**

1. **REMOVE** **EXISTING** **WIRING** **BACK** **TO** **SOURCE** **PANEL** 'KP'. **EXISTING** **CONDUIT** **CAN** **BE** **REUSED** **TO** **FEED** **NEW** **EQUIPMENT** **WHERE** **APPROPRIATE.**

   ![Warning Icon]

2. **DISCONNECT** **AND** **REMOVE** **POWER** **FOR** **EXISTING** **BMS** **THAT** **WILL** **BE** **RELOCATED** **TO** **NEW** **MDF** **ROOM.** **REFER** **TO** **MECHANICAL** **DRAWINGS.**

---

**FIRST FLOOR DEMOLITION PLAN - WEST WING - ELECTRICAL**

Scale: 1/8" = 1'-0"
FIRST FLOOR PLAN - WEST WING - POWER

SCALE: 1/8" = 1'-0"

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Sheets 1 of 1

Project Name: JOSE ORTEGA ELEMENTARY SCHOOL

Date: 4/03/2014

Sheet No.: CE-04

DSA File No.: 01-113688

DSA App. No.: 38-1

1. PANEL CP-1 TO BE REPLACED AT BEGINNING PHASE OF PROJECT.

2. REUSE (E) CONDUIT FROM CP WHERE POSSIBLE. CIRCUIT NUMBER, BREAKER AND WIRE SIZE PER MECHANICAL & PLUMBING EQUIPMENT CONNECTION SCHEDULE.

3. INTERCEPT AND EXTEND 120V CIRCUIT FOR EXISTING TEMPERATURE CONTROL PANEL (TCP) TO LOCATION OF NEW TCP-1'. DISCONNECT AND REMOVE POWER TO EXISTING TCP AT COMPLETION OF PROJECT.

4. PROVIDE POWER GAS WATER HEATER CIRCULATING PUMP CP-1.

5. PROVIDE POWER FOR GAS WATER HEATER.

6. PROVIDE GROUND BUS PER DETAIL 2/T5.01 AND 1/T3.01.

7. PROVIDE POWER FOR NEW BUILDING MANAGEMENT SYSTEM (BMS) AND RELOCATED BMS. DISCONNECT AND REMOVE POWER TO RELOCATED BMS AT THE COMPLETION OF THE PROJECT.
FIRE ALARM CONTROL PANEL

(E) PANEL '1B'

(E) MAIN SWITCHBOARD 'MSB'

SWITCH BOARD ROOM

400A ENCLOSED CIRCUIT BREAKER

PANEL 'CP1'

'1CP' - 400A ENC.

CP1-20.

FIRST FLOOR PLAN - WEST WING - POWER

SCALE: 1/8" = 1'-0"

JOSE ORTEGA ELEMENTARY SCHOOL

C O D Y  A N D E R S O N  W A S N E Y  A R C H I T E C T S

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**Project Name:** JOSE ORTEGA ELEMENTARY SCHOOL  
**DSA File No.:** 01-113688

**Sheet Keynotes:**

1. Junction box for 120V power to motorized shades as part of bid alternative 2A. Provide all necessary components for fully operational system.

2. Provide power gas water heater circulating pump CP-2.

3. Provide power for gas water heater.

4. Intercept and extend 120V circuit for existing temperature control panel (TCP) to location of new 'TCP-2'. Disconnect and remove power to existing TCP at completion of project.

**Floor Plans North Wing and 2nd Floor Lobby - Power**  
Scale: 1/8" = 1'-0"
ADD ALTERNATE

A. THIS WORK PERTAINS TO NORTH AND SOUTH WINGS ONLY.

B. PROVIDE FINELITE INTEGRATED CLASSROOM LIGHTING SYSTEM (ICLS) INCLUDING:

1. FINELITE SERIES 16 PENDANT DIRECT/INDIRECT LUMINAIRES WITH THREE LAMP CROSS SECTION IN LIEU OF BASE BID FIXTURE TYPE ‘F7.’

2. IN ADDITION TO ITEM 1 ABOVE, FINELITE SERIES X2 WHITEBOARD LUMINAIRE WITH ONE LAMP CROSS SECTION. SEE ARCHITECTURAL ELEVATIONS FOR LOCATION OF WHITEBOARD FIXTURE.

3. ONE INTEGRAL DAYLIGHT SENSOR PER ROW OF LUMINAIRE.

4. CEILING MOUNTED OCCUPANCY SENSOR.

5. TEACHER CONTROL STATION (TCS) WITH "GENERAL/AV MODE" SWITCH, "QUIET TIME" SWITCH, AND "WHITE BOARD" SWITCH.

6. MASTER SWITCH BANK (MSB), LOCATED AT MAIN CLASSROOM ENTRANCE AND CONSISTING OF TWO SWITCHES. EACH SWITCH TO CONTROL ONE ROW OF FIXTURES IN THE CENTER OF THE CLASSROOM.

7. REFER TO DETAIL 6 ON SHEET E5.01.

ADD ALTERNATE

A. THIS WORK PERTAINS TO NORTH AND SOUTH WINGS ONLY.

B. PROVIDE FINE LITE INTEGRATED CLASSROOM LIGHTING SYSTEM (ICLS) INCLUDING:

1. FINE LITE SERIES 16 PENDANT DIRECT/INDIRECT LUMINAIRES WITH THREE LAMP CROSS SECTION IN LIEU OF BASE BID FIXTURE TYPE ‘F7’.

2. IN ADDITION TO ITEM 1 ABOVE, FINE LITE SERIES X2 WHITEBOARD 8 LUMINAIRE WITH ONE LAMP CROSS SECTION. SEE ARCHITECTURAL ELEVATIONS FOR LOCATION OF WHITEBOARD FIXTURE.

3. ONE INTEGRAL DAYLIGHT SENSOR PER ROW OF LUMINAIRE.

4. CEILING MOUNTED OCCUPANCY SENSOR.

5. TEACHER CONTROL STATION (TCS) WITH "GENERAL/AV MODE" SWITCH, "QUIET TIME" SWITCH, AND "WHITE BOARD" SWITCH.

6. MASTER SWITCH BANK (MSB), LOCATED AT MAIN CLASSROOM ENTRANCE AND CONSISTING OF TWO SWITCHES. EACH SWITCH TO CONTROL ONE ROW OF FIXTURES IN THE CENTER OF THE CLASSROOM.

7. REFER TO DETAIL 6 ON SHEET E5.01.

8. THE TYPE ‘F3’ LUMINAIRES WILL REMAIN AS SPECIFIED IN THE BASE BID LUMINAIRE SCHEDULE AND WILL BE CONTROLLED INDEPENDENT OF THE ICLS SYSTEM BY SWITCH ‘c.’ PROVIDE A SEPARATE CEILING MOUNTED OCCUPANCY SENSOR FOR AUTOMATIC CONTROL OF THE TYPE ‘F3’ LUMINAIRES.
SINGLE LINE DIAGRAM

SCALE: NTS

FEEDER SCHEDULE

1753
3 #2/0 CU, 1 #6 CU GND., IN 2" C.

JOSE ORTEGA ELEMENTARY SCHOOL

Project Name: JOSE ORTEGA ELEMENTARY SCHOOL
Project Number: 11515
DSA File No.: 38-1
DSA App. No.: 01-113688
Date: 4/03/2014
Sheet Number: CE-10
### Panel 'CP1'

**Project Name:** JOSE ORTEGA ELEMENTARY SCHOOL  
**DSA File No.:** 38-1  
**Sheet Number:** CE-11  

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<th>Description / Location</th>
<th>Load (VA) Type</th>
<th>C.B. A/Pole</th>
<th>Note Ph.</th>
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**Total Connected Load:**  
Ph. A: 6,490 VA 54 Amps  
Ph. B: 6,728 VA 56 Amps  
Ph. C: 4,908 VA 41 Amps  

**Panel Connected Load:** 18.1 KVA 50.4 Amps  
**Total Demand Load:** 19.8 KVA 55.1 Amps

**Notes:**  
1.  
2.  
3.  
4.  
5.  

**Accessories:**  
Provide Surge Protective Device
# Panel 'CP2'

**120/208V, 3 Ph., 4 W.; 100A Bus with 100A Main Circuit Breaker Surface Mounted Panelboard**

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<th>Description / Location</th>
<th>Load (VA)</th>
<th>Type</th>
<th>A/Pole</th>
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**Total Connected Load:** 4,686 VA 39 Amps

**Panel Connected Load:** 11.6 KVA 32.3 Amps

**Sub-Fed Connected Load:** 0.0 KVA 0.0 Amps

**Total Demand Load:** 11.9 KVA 32.9 Amps

**Notes:**

1. 
2. 
3. 
4. 
5. 

**Accessories:**

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**JOSE ORTEGA ELEMENTARY SCHOOL**

**Project Name:** JOSE ORTEGA ELEMENTARY SCHOOL

**Project Number:** 38-1

**DSA File No.:** 01-113688

**Date:** 4/03/2014

**Sheet Number:** CE-12
## Panel 'CP4'

**Panel 'CP4'**

120/208V, 3 Ph., 4 W.; 100A Bus with 100A Main Circuit Breaker Flush Mounted Panelboard

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**Total Connected Load:**

- Ph. A: 5,884 VA, 49 Amps
- Ph. B: 7,255 VA, 60 Amps
- Ph. C: 7,934 VA, 66 Amps

**Panel Connected Load:** 21.1 KVA, 58.5 Amps

**Sub-Fed Connected Load:** 0.0 KVA, 0.0 Amps

**Total Demand Load:** 17.2 KVA, 47.8 Amps

**Notes:**

1. Provide Surge Protective Device

---

**JOSE ORTEGA ELEMENTARY SCHOOL**

Project Name: JOSE ORTEGA ELEMENTARY SCHOOL

Project Number: CE-13

Date: 4/03/2014

Sheet Number: 11515

DSA File No.: 38-1

DSA App. No.: 01-113688
# Panel 'A'

**120/208V, 3 Ph., 4 W.: 400A Bus with 400A Main Circuit Breaker Surface Mounted Panelboard. Match (E) Panel "A" manufacturer and AIC rating**

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<th>Description / Location</th>
<th>Load (VA)</th>
<th>Type</th>
<th>A/Pole</th>
<th>Note</th>
<th>Ph. C.B.</th>
<th>Load (VA)</th>
<th>Type</th>
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</table>

**Total Connected Load: Ph. A** 6,126 VA 51 Amps

**Panel Connected Load:** 27.4 KVA 76.2 Amps

**Total Connected Load: Ph. B** 9,494 VA 79 Amps

**Sub-Fed Connected Load:** 0.0 KVA 0.0 Amps

**Total Demand Load:** 27.8 KVA 77.2 Amps

**Notes:**

1. Provide Surge Protective Device

---

**Jose Ortega Elementary School**

**Project Name**

**Project Number**

**DSA File No.**

**DSA App. No.**

**Date**

**Sheet Number**

---

Cody Anderson Wasney Architects, Inc.
455 Lambert Avenue • Palo Alto, CA 94306
650.328.1818 • Fax 328.1888

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NOTE FOR ELEVATOR DETAIL

1. Mount weatherproof toggle switch for pit lighting circuit by top of pit ladder.
2. Provide NEMA 4 surface mounted fluorescent gasketed luminaire. Four foot white polycarbonate housing with polycarbonate diffuser. Two 32 watt T8 lamps, Bechelli Illuminna Series, Metalux, Daybrite, Hubbell, Lightolier or approved. Typical of three; Mount one luminaire on the front elevator pit wall, the second on the rear elevator pit wall, the third on top of elevator hoisting. Avoid locating luminaires directly behind beams or structure that would block light. Wiring shall be identified for wet locations.
4. Mount smoke detector in elevator lobby on ceiling to within 21 feet of elevator door.

ELEVATOR SHAFT

ELEVATOR LOBBY

ELEVATOR CAR

ELEVATOR MACHINE ROOM

BATTERY LOWERING DEVICE

ELEVATOR CONTROLLER/DRIVE

WIRING SCHEMATIC

NOTES FOR ELEVATOR DETAIL

1. Mount weatherproof toggle switch for pit lighting circuit by top of pit ladder.
2. Provide NEMA 4 surface mounted fluorescent gasketed luminaire. Four foot white polycarbonate housing with polycarbonate diffuser. Two 32 watt T8 lamps, Bechelli Illuminna Series, Metalux, Daybrite, Hubbell, Lightolier or approved. Typical of three; Mount one luminaire on the front elevator pit wall, the second on the rear elevator pit wall, the third on top of elevator hoisting. Avoid locating luminaires directly behind beams or structure that would block light. Wiring shall be identified for wet locations.
4. Mount smoke detector in elevator lobby on ceiling to within 21 feet of elevator door.

NOT USED.

7. Provide dedicated circuit, route incoming circuit to luminaires upstream of GFCI receptacle in both machine room, top of elevator, and elevator pit, per N.E.C. Articles 620.23 and 620.24.
8. Not used.
9. Provide addressable F.A. control relay and wiring to elevator controller/drive for elevator primary recall, see wiring schematic.
10. Not used.
11. Room lighting; see floor plan for type and quantity.
12. Provide separate dedicated circuits and lockable disconnect switch for each elevator car lights and HVAC. Locate switches in elevator machine room near entry door. Indicate car number and type of load next to each switch.
13. Not used.
15. Coordinate wall mounting space for electrical equipment with elevator supplier/installer prior to rough-in.
16. Provide dedicated phone line in 3/4" C. to telephone terminal board.
17. Provide addressable F.A. control relay and wiring to elevator controller to activate fireman hat light in elevator cab upon initiation of smoke detection in elevator shaft or machine room.
18. Not used.
19. Provide addressable F.A. control relay and wiring to elevator controller for elevator alternate recall, see wiring schematic.

HYDRAULIC TYPE ELEVATOR DETAIL

SCALE: NTS

ELEVATION SHAFT

ELEVATOR LOBBY

ELEVATOR CONTROL/DRIVE

BATTERY LOWERING DEVICE

WIRING SCHEMATIC
1. To accommodate construction phasing, provide the following cables between the new FACP and the existing FACP junction box to support the existing devices:

- (3) Twisted shielded pair #18 cables
- (4) Pairs THHN #14
- (12) Pairs THHN #12

First Floor Plans - West Wing - Fire Alarm

Scale: 1/8" = 1'-0"
SECOND FLOOR PLAN - WEST WING - FIRE ALARM

SCALE: 1/8"=1'-0"

JOSE ORTEGA ELEMENTARY SCHOOL

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Project Name
11515
Project Number
38-1
DSA File No.
01-113688
DSA App. No.
CF-03
Date
4/03/2014
Sheet Number
ATTACH BRACKET WITH STAINLESS STEEL BANDS
FACTORY-DRILLED HOLE FOR ACCESS TO CAMERA HOUSING AND TERMINATION OF THE 1" FLEX CONDUIT.

HANDHOLE.

CONNECT GROUND WIRE TO GROUNDING LUG OF POLE AT HAND HOLE

BASECOVER

CONNECT 1" LIQUID TIGHT FLEX CONDUIT TO PVC AND TERMINATE AT DRILLED HOLE FOR CAMERA.

POWER CONDUIT.

CCTV 1" CONDUIT.

FINISHED GRADE

CCTV CAMERA SEE MOUNTING DETAILS.

GENERAL NOTE: THIS DETAIL SUPPLY FACTORY-INSTALLED ACCESS HOLES ON POLE FOR CCTV CAMERA CABLEING TO ENSURE UL LISTED, POLE TO MEET REQUIRED WIND WITHSTAND RATINGS WITH COMBINED LOCATIONS, WEIGHTS AND SURFACE AREA OF CCTV CAMERA EQUIPMENT AND ACCESSORIES AS NOTED IN CONSTRUCTION DOCUMENTS.

10 POLE MOUNTED CCTV CAMERA
NO SCALE
**SHEET KEYNOTES**

9 INSTALL CAMERA ON NEW POLE REFER TO DETAIL 10/T501 FOR MOUNTING REQUIREMENTS.

---

**1 PERMANENT SITE PLAN - TECHNOLOGY**

SCALE: 1/16"=1'-0"