PIVOT ARCHITECTURE

ADDENDUM # 4

Project: **Klamath Community College Childcare Learning Center (2331.00)**

Date: August 29, 2025

To: Interested Bidders

Prepared by: Karen Williams, AIA

This Addendum modifies the Project Manual, Specifications, and Drawings as follows:

1. General Information

1.1. Architect's Opinion of Cost

1.1.1. The project cost is currently estimated at $15,500,000. This estimate includes Owner Furnished Owner Installed and Owner Furnished Contractor Installed elements.

1.2. Insurance Requirements

1.2.1. Insurance Requirements will be published in Addendum 005 on September 04, 2025.

2. Changes to the Project Manual

2.1. Section 00 4113 Bid forms

2.1.1. – Revised to add alternates 1 and 2

2.2. Section 00 4323 Alternate Form

2.2.1. – Added section summarizing alternates 1 and 2

2.3. Section 01 1000 SUMMARY

2.3.1. - Revised Owner furnished list to clarify flooring and playground surface

2.4. Section 01 2300 Alternates

2.4.1. – Added section summarizing alternates 1 and 2

2.5. Section 06 1516 Wood Roof Decking

2.5.1. Added installation instructions for attaching decking, note 3 under Installation.

2.6. Section 06 4100 Architectural Wood Casework

2.6.1. Updated approved substrates

2.7. Section 07 4113 METAL ROOF PANELS

2.7.1. Added metal soffit information

2.7.2. Added snow and Ice retention system

2.8. Section 08 1416 - Flush Wood Doors
2.8.1. Revised door face material and finish.

2.9. Section 08 7110 DOOR HARDWARE
2.9.1. Added hardware for door #150
2.9.2. Added gate hardware information
2.9.3. Changed group 17 kickplate size
2.9.4. Added group 23

2.10. 08 8723 Decorative Glazing Films
2.10.1. Removed Section

2.11. 09 5426 Wood Ceilings
2.11.1. Revised WD-1 product type and spacing

2.12. Section 09 9000 Painting and Coating - K-12 Education Facility Guide Specification
2.12.1. Added section

2.13. Section 09 9600 High-Performance Coatings
2.13.1. Revised locations

2.14. 10 2239 - Folding Panel Partitions
2.14.1. Added basis of design product and panel finish information.

2.15. Section 12 3600 – Countertops
2.15.1. Added locations, added samples to submittals

2.16. Section 11 40 00 Food Service Equipment
2.16.1. – Item 16 Revised to be Hot Plate/Flat Top Cooktops with Stand
a. A1. Revised manufacturer, model, and accessories.

2.17. Section 32 1816.13 Playground Protective Surfacing

2.17.1. – Delete Section 32 1816.13 - Playground Protective Surfacing in its entirety. This item will be OFOI.

2.17.2. References to Playground Protective Surfacing in Landscape drawings is “For Reference” and an indication to contractor to coordinate with Owner’s playground equipment contractor.

3. Changes to the Drawings

CIVIL:

3.1. C000 CIVIL COVER SHEET

3.1.1. – Revised Inspections and Testing table

3.1.2. – Revised Sheet Index

a. Added C040

b. Removed C404

c. Switched C303 to C304 and vise versa

3.1.3. – Added abbreviations

3.2. C020 OVERALL SITE AND CODE PLAN

3.2.1. – Revised safe dispersal areas, added hatch to legend

3.2.2. – Revised code summary

3.3. C021 CLC SITE CODE PLAN

3.3.1. – Revised fire water system

3.3.2. – Revised hose pull lengths

3.4. C040 KCC CAMPUS EXISTING CONDITIONS

3.4.1. – ADDED sheet

3.5. C100 OVERALL DEMOLITION PLAN

3.5.1. – Revised limits of demolition along north fence line

3.6. C101 CLC DEMOLITION PLAN

3.6.1. – Revised limits of asphalt demolition for water trenching

3.6.2. – Added callouts for fence demolition

3.7. C200 SITE CONSTRUCTION AND DIMENSIONING SITE KEY

3.7.1. – Revised match lines

3.7.2. – Revised site construction notes

3.7.3. – Revised limits of asphalt and gravel repair for water line trenching

3.8. C201 SITE CONSTRUCTION PLAN

3.8.1. – Revised site construction notes

3.8.2. – Revised site striping, including crosswalks

3.8.3. – Revised accessible parking configuration

3.8.4. – Revised sheet view limits

3.8.5. – Revised ramp configurations, added detectable warnings

3.8.6. – Widened new sidewalk at existing parking lot

3.8.7. – Added directional arrow at bus drop-off lane

3.9. C202 CLC DIMENSIONING AND HORIZONTAL CONTROL PLAN

3.9.1. – Additional dimensioning added

3.9.2. – Revised sheet view limits

3.10. C203 ACCESS ROAD CONSTRUCTION AND DIMENSIONING PLAN – WEST

3.10.1. – Additional dimensioning added

3.10.2. – Revised site construction notes

3.10.3. – Revised sheet view limits

3.11. C204 ACCESS ROAD CONSTRUCTION AND DIMENSIONING PLAN – SOUTH

3.11.1. – Additional dimensioning added

3.11.2. – Revised site construction notes

3.11.3. – Revised sheet view limits

3.12. C300 GRADING AND DRAINAGE SITE KEY

3.12.1. – Revised site grading

a. Including but not limited to west access road and parking area, all conveyance ditches, sidewalk and existing parking lot, connection to existing sidewalk at south end of site.

b. The above listed changes apply on all C300 series sheets

3.12.2. – Revised storm drain system

a. Including but not limited to added catch basins in utility court area, added connection to internal roof storm drain system, removed catch basin in northeast accessible parking area, pipe slope and size revisions on runs adjacent to the new building, changes in pipe run alignments, changes in pipe material

b. The above listed changes apply on all C300 series sheets

3.12.3. – Revised grading and drainage notes

3.13. C301 NORTHWEST GRADING AND DRAINAGE PLAN

3.13.1. – Added grade shots and slope arrows (no substantive changes this sheet)

3.13.2. – Increased storm pipe from 6 to 8” immediately north of utility enclosure

3.13.3. – Added catch basin (north) in utility enclosure

3.13.4. – Added more detail to storm system grading

3.13.5. – Revised grading and drainage notes

3.14. C302 SOUTHWEST GRADING AND DRAINAGE PLAN

3.14.1. – Added grade shots and slope arrows (substantive changes noted below)

3.14.2. – Revised site grading in parking lot and sidewalk connections to east and west

3.14.3. – Added catch basin (south) in utility enclosure

3.14.4. – Added more detail to storm system grading

3.14.5. – Revised grading and drainage notes

3.15. C303 SOUTHEAST GRADING AND DRAINAGE PLAN

3.15.1. – Revised sheet title and viewport (previously C304)

3.15.2. – Added grade shots and slope arrows (no substantive changes this sheet)

3.15.3. – Added more detail to storm system grading

3.15.4. – Revised grading and drainage notes

3.16. C304 NORTHEAST GRADING AND DRAINAGE PLAN

3.16.1. – Revised sheet title and viewport (previously C303)

3.16.2. – Added grade shots and slope arrows (no substantive changes this sheet)

3.16.3. – Added more detail to storm system grading

3.16.4. – Revised grading and drainage notes

3.17. C305 ACCESS ROAD AND OUTER SITE GRADING AND DRAINAGE PLAN

3.17.1. – Added grade shots and slope arrows (no substantive changes this sheet)

3.17.2. – Added more detail to storm system grading

3.17.3. – Revised grading and drainage notes

3.18. C400 UTILITY SITE KEY

3.18.1. – Revised fire water system

a. Including but not limited to revised FDC, hydrant, and fire water vault locations, revised fire water pipe alignments, revised locations of existing main taps

b. The above listed changes apply to all C400 series sheets

3.18.2. – Revised sanitary sewer system

a. Including but not limited to revised grease interceptor location and associated sanitary sewer and grease line routing, revised pipe slopes

b. The above listed changes apply to all C400 series sheets

3.18.3. – Revised dry utility routing

a. Revised spacing of conduits at building utility court

b. The above listed changes apply to all C400 series sheets

3.18.4. – Revised match lines

3.19. C401 CLC WATER AND SEWER UTILITIES PLAN

3.19.1. – Revised fire water system

a. Moved Domestic water service north (adjacent to fire service vault), enters fire riser room

b. Moved Irrigation point of connection north (adjacent to fire service vault)

c. Removed public water main extension in south access road

d. Moved fire service line to southwest fire hydrant, hydrant now privately owned

e. Added 6” DCDA for private fire hydrant

3.19.2. – Revised sanitary sewer system

a. Moved grease interceptor

b. Revised alignment of sewer routing

3.20. C402 CLC FRANCHISE UTILITIES PLAN

3.20.1. – Revised dry utility routing into building

3.21. C403 UTILITY CONNECTIONS PLAN

3.21.1. – Additional utility connections information

3.21.2. – Revised sanitary sewer system

3.22. C404 CKF WATER MAIN PLAN AND PROFILE

3.22.1. – REMOVED sheet

3.23. C500 CIVIL DETAILS

3.23.1. – Revised pavement and accessible parking details (no substantive change)

3.23.2. – Revised asphalt pavement binder

3.24. C501 CIVIL DETAILS

3.24.1. – Revised detail 10 (added notes)

3.24.2. – Revised detail 15 to reflect 24” size

3.24.3. – Added detail 16 for 12” catch basin

3.24.4. – Switched detail number for pipe outfall (now 17, was 16)

3.24.5. – Removed downspout connection (now 22/C502) Added catch basin detail

3.25. C502 CIVIL DETAILS

3.25.1. – Added 22/C501 downspout detail (previously 17/C501)

3.25.2. – Revised fire and water service assembly, updated number (now 23, was 22)

3.26. C700

3.26.1. See revisions on sheet.

3.27. C701

3.27.1. See revisions on sheet.

3.28. C702

3.28.1. See revisions on sheet.

3.29. C703

3.29.1. See revisions on sheet.

3.30. C704 ESCP – CLEARING, GRUBBING, AND EXCAVATION PHASE

3.30.1. – Revised to show future CLC building location

3.31. C705 ESCP – SITE STABILIZATION PHASE

3.31.1. – Revised to show future CLC building location

3.31.2. – Revised site grading

3.32. C706 ESCP – UTILITY INSTALLATION PHASE

3.32.1. – Revised locations of storm drain inlet protection

3.32.2. – Revised to show future CLC building location

3.33. C707 ESCP – VERTICAL CONSTRUCTION PHASE

3.33.1. – Revised locations of storm drain inlet protection

3.33.2. – Revised to show CLC building location

3.34. C708 ESCP – PAVING AND FLATWORK PHASE

3.34.1. – Revised locations of storm drain inlet protection

3.34.2. – Revised to show CLC building location

3.35. C709 ESCP – PERMANENT LANDSCAPING AND STABILIZATION PHASE

3.35.1. – Revised locations of storm drain inlet protection

3.35.2. – Revised to show CLC building location

LANDSCAPE:

3.36. L201 OVERALL IRRIGATION PLAN & SHEET KEY

3.36.1. – Revised calculated GPM in valve schedule for zones 1-7.

3.36.2. – Added shadowbox for base bid and additive alternate #1 items.

3.36.3. – Revised location for irrigation point of connection, sleeves and main line.

3.37. L220 IRRIGATION PLAN – AREA 2

3.37.1. – Revised pipe size, calculated GPM and sleeve locations.

3.38. L230 IRRIGATION PLAN – AREA 3

3.38.1. – Revised location of drip irrigation for zone 7 and RWS irrigation for zone 6.

3.38.2. – Added RWS to planter island tree in zone 6.

3.38.3. – Added lateral sleeve to planter island for zone 6 lateral piping.

3.38.4. – Revised calculated GPM for zone 4 and 5.

3.39. L240 IRRIGATION PLAN – AREA 4

3.39.1. – Revised location of RWS irrigation for zone 1 and drip irrigation for zone 2.

3.39.2. – Removed RWS for (2) planter island trees and sleeve.

3.39.3. – Revised location of valves 1 and 2, drain valve and irrigation main line.

3.39.4. – Reduced area of planter island irrigation.

3.40. L250 IRRIGATION PLAN – AREA 5

3.40.1. – Revised location of irrigation point of connection, drip irrigation for zone 3, main line and sleeve.

3.40.2. – Reduced area of planter irrigation for zone 3.

3.41. L300 SEEDING PLAN

3.41.1. – Added shadowbox for additive alternate #2 items.

3.41.2. – Added additional seeding area.

3.42. L301 OVERALL PLANTING PLAN & SHEET KEY

3.42.1. – Added shadowbox for base bid and additive alternate #2 items.

3.42.2. – Removed Alnus tenufolia, Cornus sericea ‘Flaviramea’, Cornus sericea ‘Kelseyi’, Symphyotrichum subspicatum from plant list.

3.42.3. – Added Liriodendron tulipifera (LITU) to plant list.

3.42.4. – Revised planting island areas, plant quantities and locations.

3.43. L310 PLANTING PLAN – AREA 1

3.43.1. – Revised planting legend to include additional information on decorative boulders.

3.44. L320 PLANTING PLAN – AREA 2

3.44.1. – Revised planting legend to include additional information on decorative boulders.

3.44.2. – Revised tree species in courtyard to LITU.

3.44.3. – Revised planting island area.

3.45. L330 PLANTING PLAN – AREA 3

3.45.1. – Revised planting legend to include additional information on decorative boulders.

3.45.2. – Revised planting island areas.

3.45.3. – Added QUBA to planting island.

3.46. L340 PLANTING PLAN – AREA 4

3.46.1. – Revised planting legend to include additional information on decorative boulders.

3.46.2. – Revised planting island area, plant species, locations and quantities.

3.46.3. – Removed (2) QUBA from planter islands.

3.47. L350 PLANTING PLAN – AREA 5

3.47.1. – Revised planting legend to include additional information on decorative boulders.

3.47.2. – Revised planting island area, locations and quantities of plants.

3.48. L400 LANDSCAPE DETAILS

3.48.1. – Revised irrigation critical analysis.

3.49. L410 LANDSCAPE DETAILS

3.49.1. – Removed note from Detail #900.

3.49.2. – Changed length of raised planter beds from 10’ to 8’ in Detail #900.

ARCHITECTURE:

3.50. G011 CODE REVIEW INFORMATION
- 3.50.1. - REVISED bike parking space count.
- 3.50.2. - REVISED occupant load.
- 3.50.3. – REVISED gate direction

3.51. G012 LIFE SAFETY PLAN
- 3.51.1. - REVISED nook occupant load and exit door occupant counts.
- 3.51.2. - ADDED fire extinguisher locations.

3.52. A001 SITE PLAN
- 3.52.1. – REVISED the location of the bike hoops to match landscape drawings.
- 3.52.2. – REVISED the opening direction of gates for egress.
- 3.52.3. – REMOVED monument sign.

3.53. A002 ENLARGED SITE PLAN – NORTH
- 3.53.1. – REVISED the opening direction of gates for egress.
- 3.53.2. - ADDED keynotes indicating fencing type.
- 3.53.3. - REMOVED general notes.
- 3.53.4. - REMOVED unused items in site plan legend.

3.54. A003 ENLARGED SITE PLAN - SOUTH
- 3.54.1. – REVISED the location of the bike hoops to match landscape drawings.
- 3.54.2. – REVISED the opening direction of gates for egress.
- 3.54.3. – REMOVED monument sign.
- 3.54.4. - ADDED keynotes indicating fencing type.
- 3.54.5. - REMOVED general notes.
- 3.54.6. - REMOVED unused items in site plan legend.

3.55. A031 SITE - DETAILS
- 3.55.1. - ADDED sheet.

3.56. A100 OVERALL SLAB PLAN
- 3.56.1. – ADDED sheet

3.57. A110 OVERALL FLOOR PLAN
- 3.57.1. – REVISED the thickness of the end walls to 2x8 per structural. Changes to dimensions.
- 3.57.2. – REVISED the opening direction of gates for egress.

3.58. A111 FLOOR PLAN SECTOR A
- 3.58.1. – REVISED the thickness of the end walls to 2x8 per structural. Changes to wall tags
- 3.58.2. – REVISED the location of the bike hoops to match landscape drawings.
- 3.58.3. – REVISED the opening direction of elect. room door for egress.

3.58.4. -- REVISED storefront designations

3.59. A112 FLOOR PLAN SECTOR B
3.59.1. – REVISED the thickness of the end walls to 2x8 per structural. Changes to wall tags
3.59.2. – REVISED the opening direction of gates for egress.
3.59.3. – REVISED entry storefront, new type X12.
3.59.4. Corner cabinet added to conference room
3.59.5. Cabinet added to Commons
3.59.6. CLOUD NEW CASEWORK ELEVATIONS IN PLAN
3.59.7. UPDATE N NE SE S NW W ETC ON ELEVATION TITLES SECTOR B
3.59.8. -- REVISED storefront designations

3.60. A113 DIMENSION PLAN SECTOR A
3.60.1. – REVISED the thickness of the end walls to 2x8 per structural. Changes to dimensions.

3.61. A114 DIMENSION PLAN SECTOR B
3.61.1. – REVISED the thickness of the end walls to 2x8 per structural. Changes to dimensions.

3.62. A115 CLERESTORY PLAN SECTOR A
3.62.1. – REVISED to show mechanical mezzanine

3.63. A116 CLERESTORY PLAN SECTOR B
3.63.1. – REVISED to show mechanical mezzanine

3.64. A120 OVERALL REFLECTED CEILING PLAN
3.64.1. – REVISED to hide site lighting
3.64.2. Added roller shade schedule

3.65. A121 REFLECTED CEILING PLAN SECTOR A
3.65.1. – REVISED to hide occupancy sensors by filter in view template
3.65.2. ADDED IN ACCESS HATCHES TO RESTROOMS
3.65.3. Added lighting fixtures to ceiling symbols

3.66. A122 REFLECTED CEILING PLAN – SECTOR B
3.66.1. PROJECTOR ENLARGED RCP ADDED

3.67. A123 REFLECTED CEILING PLAN – COMMONS ACOUSTIC CLOUDS
3.67.1. –REMOVED the specific “Kiere” specification in the acoustic material legend.
3.67.2. ADDED CLOUD UNDER PROJECTOR

3.68. A131 ROOF PLAN – SECTOR A
3.68.1. – ADDED keynotes for downspouts and gutters.

3.69. A132 ROOF PLAN – SECTOR B
3.69.1. – ADDED keynotes for downspouts and gutters.

3.70. A200 EXTERIOR MATERIAL AND FINISH LEGEND
3.70.1. – ADDED HPC colors

3.71. A201 OVERALL EXTERIOR ELEVATIONS
3.71.1. – REVISED entry storefront, new type X12.

3.72. A230 ENLARGED EXTERIOR ELEVATIONS – SECTOR B_SOUTHEAST
3.72.1. – REVISED entry storefront, new type X12.
3.72.2. – ADDED keynotes for downspouts and gutters.
3.72.3. – ADDED HPC to material legend and finish tag legend at side of sheet
3.72.4. – ADDED detail callouts and finish tags to drawing
3.72.5. – REVISED detail callouts and finish materials in drawing

3.73. A231 ENLARGED EXTERIOR ELEVATIONS – SECTOR B_NORTHEAST-A
3.73.1. – ADDED keynotes for downspouts and gutters.
3.73.2. – ADDED HPC to material legend and finish tag legend at side of sheet
3.73.3. – ADDED detail callouts and finish tags to drawing
3.73.4. – REVISED detail callouts and finish materials in drawing

3.74. A232 ENLARGED EXTERIOR ELEVATIONS – SECTOR B_NORTHEAST-B
3.74.1. – ADDED hose bib symbol and keynote.
3.74.2. – ADDED keynotes for downspouts and gutters.
3.74.3. – ADDED HPC to material legend and finish tag legend at side of sheet
3.74.4. – ADDED detail callouts and finish tags to drawing
3.74.5. – REVISED detail callouts and finish materials in drawing

3.75. A233 ENLARGED EXTERIOR ELEVATIONS – SECTOR B_NORTHWEST
3.75.1. – ADDED keynotes for downspouts and gutters.
3.75.2. – ADDED HPC to material legend and finish tag legend at side of sheet
3.75.3. – ADDED detail callouts and finish tags to drawing
3.75.4. – REVISED detail callouts and finish materials in drawing

3.76. A234 ENLARGED EXTERIOR ELEVATIONS – SECTOR B_SOUTHWEST
3.76.1. – ADDED hose bib symbol and keynote.
3.76.2. – ADDED keynotes for downspouts and gutters.
3.76.3. – ADDED HPC to material legend and finish tag legend at side of sheet
3.76.4. – ADDED detail callouts and finish tags to drawing
3.76.5. – REVISED detail callouts and finish materials in drawing

3.77. A235 ENLARGED EXTERIOR ELEVATIONS – SECTOR B_COMMONS
3.77.1. – ADDED keynotes for downspouts and gutters.
3.77.2. – ADDED HPC to material legend and finish tag legend at side of sheet
3.77.3. – ADDED detail callouts and finish tags to drawing
3.77.4. – REVISED detail callouts and finish materials in drawing

3.78. A236 ENLARGED EXTERIOR ELEVATIONS – SECTOR A_WEST-A
3.78.1. – ADDED duct penetrations from MAU.
3.78.2. – ADDED hose bib symbol and keynote.
3.78.3. – ADDED keynotes for downspouts and gutters.
3.78.4. – ADDED HPC to material legend and finish tag legend at side of sheet

3.78.5. – ADDED detail callouts and finish tags to drawing
3.78.6. – REVISED detail callouts and finish materials in drawing

3.79. A237 ENLARGED EXTERIOR ELEVATIONS – SECTOR A_WEST-B
3.79.1. – ADDED keynotes for downspouts and gutters.
3.79.2. – ADDED HPC to material legend and finish tag legend at side of sheet
3.79.3. – ADDED detail callouts and finish tags to drawing
3.79.4. – REVISED detail callouts and finish materials in drawing

3.80. A238 ENLARGED EXTERIOR ELEVATIONS – SECTOR A_WEST-C
3.80.1. – ADDED keynotes for downspouts and gutters.
3.80.2. – ADDED HPC to material legend and finish tag legend at side of sheet
3.80.3. – ADDED detail callouts and finish tags to drawing
3.80.4. – REVISED detail callouts and finish materials in drawing

3.81. A239 ENLARGED EXTERIOR ELEVATIONS – SECTOR A_SOUTH
3.81.1. – ADDED keynotes for downspouts and gutters.
3.81.2. – ADDED HPC to material legend and finish tag legend at side of sheet
3.81.3. – ADDED detail callouts and finish tags to drawing
3.81.4. – REVISED detail callouts and finish materials in drawing

3.82. A240 ENLARGED EXTERIOR ELEVATIONS – SECTOR A_EAST-A
3.82.1. – ADDED keynotes for downspouts and gutters.
3.82.2. – ADDED HPC to material legend and finish tag legend at side of sheet
3.82.3. – ADDED detail callouts and finish tags to drawing
3.82.4. – REVISED detail callouts and finish materials in drawing

3.83. A241 ENLARGED EXTERIOR ELEVATIONS – SECTOR A_EAST-B
3.83.1. – ADDED keynotes for downspouts and gutters.
3.83.2. – ADDED HPC to material legend and finish tag legend at side of sheet
3.83.3. – ADDED detail callouts and finish tags to drawing
3.83.4. – REVISED detail callouts and finish materials in drawing

3.84. A242 ENLARGED EXTERIOR ELEVATIONS – ENTRY
3.84.1. – ADDED hose bib symbol and keynote.
3.84.2. – ADDED keynotes for downspouts and gutters.
3.84.3. – ADDED HPC to material legend and finish tag legend at side of sheet
3.84.4. – ADDED detail callouts and finish tags to drawing
3.84.5. – REVISED detail callouts and finish materials in drawing

3.85. A301 BUILDING SECTIONS
3.85.1. – ADDED room tags.

3.86. A310 WALL SECTIONS
3.86.1. ADDED keynotes for structural fill, vapor barrier, gutters, flashing, and metal soffits.
3.86.2. ADDED sidewalk typical.
3.86.3. REVISED representation of foundation system in sections for clarity.
3.86.4. REVISED wall section titles for clarity.

3.87. A311 WALL SECTIONS

3.87.1. ADDED keynotes for structural fill, vapor barrier, gutters, flashing, aluminum storefront door, and metal soffits.
3.87.2. ADDED sidewalk typical.
3.87.3. REVISED representation of foundation system in sections for clarity.

3.88. A312 WALL SECTIONS
3.88.1. ADDED keynotes for structural fill, vapor barrier, gutters, flashing, and metal soffits.
3.88.2. ADDED sidewalk typical.
3.88.3. REVISED representation of foundation system in sections for clarity.

3.89. A330 TYPICAL ROOF DETAILS
3.89.1. –REMOVED Alpolic panel, changed to MTL panel. Updated callouts.

3.90. A331 ROOF DETAILS
3.90.1. –REMOVED Alpolic panel, changed to MTL panel.

3.91. A332 ROOF DETAILS
3.91.1. –REVISED the metal panel and blocking around downspout.

3.92. A335 CANOPY DETAILS
3.92.1. –ADDED Sheet

3.93. A500 – ROOM FINISH AND MATERIALS
BATHROOM TILE CHANGED TO 2” X 2”

3.94. A539 OPERABLE PARTITION DETAILS
3.94.1. SHEET ADDED
3.94.2. SECTION @ FOLDING PANEL / PARTITION ADDED AND REVISED
3.94.3. SECTION @ FUTURE FOLDING PANEL / PARTITION ADDED
3.94.4. PLAN @ FOLDING PANEL / PARTITION ADDED
3.94.5. PLAN @ FUTURE FOLDING PANEL / PARTITION ADDED
3.94.6. PARTITION OPENING WIDTH AND LENGTH CONFIRMED
a. 15.5” ON BOTH SIDES MIN – 23"

3.95. A540- MOUNTING HEIGHT SCHEDULE
3.95.1. See updated elevations on sheet

3.96. A541- INTERIOR ELEVATIONS
3.96.1. ROBEHOOK TYP ADDED
3.96.2. ADDED CABINET ANNOTATION
3.96.3. PARTITION HIDDEN ON 161 SW ELEVATION AND WP EXTENDED ACCROSS ENTIRE WALL
3.96.4. ROBE HOOKS ADDED TO DOORS
3.96.5. CHAIR RAIL UPDATED IN KCC CLASSROOM
3.96.6. – REVISED Dutch door to single bottom panel.
3.96.7. Revised typical casework elevation and annotation. Chair rail updated in KCC classroom N

3.97. A542 INTERIOR ELEVATION – ENTRY & COMMONS

3.97.1. MOVED COMMONS ELEVATIONS OUT TO SHOW MORE COMPLETE SPACE

3.98. A546 INTERIOR ELEVATION – HALLWAY 106 AND RECEPTION
- 3.98.1. SHEET RENAMED
- 3.98.2. REMOVED WORK ROOM WORKTABLE AND REPLACED WITH EQ BASE CABINETS.
- 3.98.3. Extended view to capture door 166 – tagged material in elevation
- 3.98.4. WORK AREA UPDATED

3.99. A547 INTERIOR ELEVATION – KITCHEN
- 3.99.1. – REVISED Dutch door to single bottom panel.
- 3.99.2. HID KITCHEN LINK IN ELEVATIONS, ADDED DIMENSIONS
- 3.99.3. TAGGED CASEWORK IN CLASSROOM 157 ELEVATION AND KEYNOTED MISSING ITEMS
- 3.99.4. RENAMED – INTERIOR ELEVATIONS - KITCHEN AND CLASSROOM 157

3.100. A549 INTERIOR ELEVATION – ROOMS 172 AND 209
- 3.100.1. CHAIR RAIL UPDATED IN CONFERENCE ROOM
- 3.100.2. REVISED entry storefront, new type X12.
- 3.100.3. REVISED break room elevations and tagged casework

3.101. A550 ENLARGED PLANS & INTERIOR RESTROOM ELEVATIONS
- 3.101.1. REVISED Dutch door to single bottom panel.
- 3.101.2. LOWERED sink height
- 3.101.3. FIXED KEYNOTE, LABELED CASEWORK
- 3.101.4. Added and keynoted robe hooks

3.102. A562 – ENLARGED PLANS & INTERIOR ELEVATIONS SECTOR A NOOKS 1 & 2
- 3.102.1. Sheet removed

3.103. A562 – ENLARGED PLANS & INTERIOR ELEVATIONS SECTOR A NOOKS 3 & 4
- 3.103.1. SHEET REMOVED

3.104. A563- ENLARGED PLANS & INTERIOR ELEVATIONS SECTOR B
- 3.104.1. SHEET REMOVED

3.105. A571 INTERIOR DETAILS- CASEWORK
- 3.105.1. Updated TYP classroom nook

3.106. A572- INTERIOR DETAILS – CASEWORK TYPES
- 3.106.1. SHEET ADDED
- 3.106.2. Typical casework axons and legend.

3.107. A573 INTERIOR SPECIAL CONSTRUCTION – ENTRY BENCH
- 3.107.1. SHEET ADDED
- 3.107.2. RECEPTION DESK ADDED

3.107.3. ADDED ENLARGED FLOOR PLAN, ENTRY BENCH AXON, AND ELEVATIONS DETAILING ENTRY BENCH

3.108. A574 INTERIOR SPECIAL CONSTRUCTION – RECEPTION DESK
- 3.108.1. SHEET ADDED
- 3.108.2. RENUMBERED A574
- 3.108.3. ENTRY BENCH DETAIL REVISED

3.109. A575 INTERIOR DETAILS
- 3.109.1. RE-NUMBERED (USED TO BE A573)
- 3.109.2. ADDED VINYL TO LVT DETAIL
- 3.109.3. FLOOR DETAILS AND ENTRY BENCH DETAIL

3.110. A591 CEILING DETAILS
- 3.110.1. COMMONS SOFFIT DETAIL - ADDED
- 3.110.2. COMMONS PROJECTOR DETAIL – ADDED
- 3.110.3. PROJECTOR REFLECTED CEILING PLAN – ADDED

3.111. A598 ENLARGED PLAN & DETAILS – COMMONS SEATING
- 3.111.1. ADDED NEW COMMONS SEATING PLAN – METAL STUDS
- 3.111.2. TWO NEW DETAILS ADDED

3.112. A600 DOOR AND GATE PLAN
- 3.112.1. – REVISED the opening direction of gates for egress.
- 3.112.2. – REVISED the opening direction of elect. room door for egress.

3.113. A601 DOOR AND GATE SCHEDULE
- 3.113.1. Added frame type and frame finish

3.114. A620 DOOR AND LOUVER INFORMATION
- 3.114.1. – REVISED Dutch door to single bottom panel.
- 3.114.2. - ADDED frame type HM-04.

3.115. A621 WINDOW INFORMATION
- 3.115.1. – REVISED entry storefront, new type X12.
- 3.115.2. – REVISED dimensions, type W2

3.116. A633 WINDOW DETAILS
- 3.116.1. –REMOVED Alpolic panel, changed to MTL panel.

STRUCTURE:

3.117. Sheet S006
- 3.117.1. Revised area of snow loading for truss MFG.

3.118. Sheet S007
- 3.118.1. Revised foundation schedule
  - a. Revised sizes and added additional footings sizes
- 3.118.2. Revised Holdown schedule with larger Anchor rod for HD #3

3.118.3. Revised Shear Wall type – E nailing and Anchor spacing

3.119. Sheet S111

3.119.1. Revised keynote 4 for top and bottom plate to be LVL in lieu of 2x

3.119.2. Revised GL A, & A.1 rake stud wall to be LVL stud framed.

3.119.3. Revised all rake shear walls to be FTAO and holdowns sizes/location updated to avoid ducting conflict (GL, A, A.1, B, C, D, E, H) key note, 10, 11, 13

a. Additional strapping and framing requirements around openings, keynote 12 (see detail 6/S503)

3.119.4. Revised GL – 2 holdowns

3.119.5. Revised posts along GL-H from 6x6 to Glulam Columns

3.119.6. Added additional column at GL-H and GL-2

3.119.7. Added references to Arch plans for sloping slab on grade in restrooms

3.119.8. Revised strip footing size at GL – B, C, D, E, H

3.119.9. Revised locations of utility pad and detail callout

3.119.10. Revised sunken slab depth in Kitchen

3.119.11. Clarified footing depth at exterior footings

3.119.12. Revised exterior pedestal to remove taper and increased vert rebar quantity.

3.119.13. Added HSS columns at exterior storefront at end of hallway, keynote 8

3.119.14. Clarified CMU plan note to reference plans for reinforcement requirements

3.119.15. Revised stud wall framing at GL-H to be LVL studs per keynote 13.

3.119.16. Revised stud wall framing at mechanical mezzanines to be ballooned framed LVL framed. Keynote 14.

3.119.17. Revised depth of exterior wall footings to be min 24” deep to top of footing

3.119.18. Added details callouts throughout.

3.120. Sheet S112

3.120.1. Revised keynote 4 for top and bottom plate to be LVL in lieu of 2x.

3.120.2. Revised exterior rake stud walls to be LVL stud framing (GL 5, 5.1, 6.9, 7) and framing requirements around openings

3.120.3. Added reference to Arch plans for sloping slab on grade in restrooms

3.120.4. Revised all rake shear walls to be FTAO and holdowns sizes/location (GL – 5, 5.1, 5.9, 6, 6.5) key note, 10, 11, 13

a. Additional strapping and framing requirements around openings, keynote 12 (see detail 6/S503)

3.120.5. Added GLCs at ends of GL-5.9 shear wall

3.120.6. Added HSS columns at exterior and interior storefront in hallway, keynote 8

3.120.7. Clarified CMU plan note to reference plans for reinforcement requirements

3.120.8. Revised GL-K shear wall and HDs type

3.120.9. Revised HSS size at GL 6.9 & K.1

3.120.10. Added to length of shear wall at GL-0.9

3.120.11. Revised shear wall type GL 0.9, 5.5

3.120.12. Revised stud wall framing at mechanical mezzanines to be ballooned framed LVL. Keynote 14.

3.120.13. Revised depth of exterior wall footings to be min 24” deep to top of footing

3.120.14. Added 6x6 post at GL-K & 5.9

3.120.15. Added detail callouts throughout

3.121. Sheet S113

3.121.1. Removed note for design loading of roof framing for solar panels.

3.121.2. Revised CMU wall footing and reinforcements. Qty of rebar reduced, increased size of rebar.

a. Added CMU reinforcement requirements to plan, keynote 5 & 6

3.121.3. Removed stud wall and added HSS columns at storage structure

a. Removed strapping and blk

3.121.4. Added slab and turn down slab footings at storage structure

3.121.5. Revised footing size and pipe column size in utility court.

3.121.6. Added housekeeping pad to match Arch plans

3.121.7. Revised rafter type at storage structure

3.121.8. Revised beam to HSS beam from GLB at storage structure

3.121.9. Revised out of plane tie length and spacing, keynote 8

3.121.10. Revised CMU plan note to reference plans for reinforcement requirements

3.121.11. Revised keynote 7 to double rafters at gable end.

3.121.12. Revised detail 1 / S402 to be 12 / S401 along storage structure CMU wall.

a. Increased footing size for CMU wall at back of storage structure.

3.121.13. Revised keynote 4 to add blocking to sheathing panel edges.

3.121.14. Added top of footings depth to footings

3.121.15. Added detail callouts throughout

3.122. Sheet S211

3.122.1. Clarified name of sheet keynote to be ‘Roof Framing Keynotes”

3.122.2. Revised all rake shear walls to be FTAO type (GL, A, A.1, B, C, D, E, H) keynote

3.122.3. Revised hangers for keynote 5 I-joists

a. Deleted keynote 5A

b. Revised I-joist to be Red Built instead of Boise Cascade for keynote 5B & 5C.

3.122.4. Clarified keynote 6 to clarify strap and blk in wall cavity is full length of wall.

3.122.5. Deleted keynote 7

3.122.6. Clarified keynote 12 & 13 adding strap install requirements and clarified strap to be full length of wall for keynote 12.

a. Added keynote 12 & 13 along GL H

3.122.7. Keynote 8: Clarified nailing requirements for strap

3.122.8. Revised keynote 18 & 19

a. Added HSS spandrel at top of storefront, Deleted wood HDR

b. Revised HSS size, increased spandrel size

3.122.9. Clarified keynote 20 to align truss with shear wall or GLB

3.122.10. Revised keynote 21, 22, 23 framing at end of hallway overhang to match arch soffit depth

3.122.11. Revised keynote numbers 30 to be 25

3.122.12. Revised keynote 24 to be custom hanger at end of hallway STR fascia in lieu of Simpson hanger

a. Revised keynote number on plans at end of hallway framing to be 24 instead of 23

3.122.13. Revised GLB sizes at entry canopies to be 5 ½” wide, same depth.

3.122.14. Revised GLB sizes along GL-H, increased depth.

3.122.15. Clarified keynote 29 to add detail reference.

3.122.16. Delete keynote 6 for strap along GL-2 (moved to hallway framing plan, sheet S213)

3.122.17. Revised keynote 28 to be girder truss

3.122.18. Clarified keynote 29 to add detail reference.

3.122.19. Revised keynote 30 to be GLB.

a. Added keynote 30 at GL-5.9

3.122.20. Added keynote 31 to keynote list for strap over break in ledger at North canopy

a. Note Added at North Canopy.

3.122.21. Added keynote 32 for GLB header

3.122.22. Added detail callouts throughout

3.123. Sheet S212

3.123.1. Removed note referring to roof framing design loading

3.123.2. Clarified name of sheet keynote to be ‘Roof Framing Keynotes”

3.123.3. Revised hangers for keynote 5 I-joists

a. Removed keynote 5A at North Canopy and replaced with keynote 5B 16” deep I-Joists

b. Revised I-joist to be Red Built instead of Boise Cascade for keynote 5B & 5C.

3.123.4. Clarified keynote 6 to clarify strap and blk in wall cavity is full length of wall.

3.123.5. Added keynote 6 blk and strapping along GL-6.5 shear wall

3.123.6. Deleted keynote 7

a. Revised keynote 7 to be 8 along GL-J

b. Added keynote 8 strapping and blk at GL-J & K

3.123.7. Clarified keynote 8 with nailing requirements for strap

3.123.8. Clarified keynote 12 & 13 adding strap install requirements and strap to be full length of wall for keynote 12

a. Revised keynote along GL-5.9 to be keynote 12, not 6.

3.123.9. Revised keynote 18 & 19

a. Added HSS spandrel at top of storefront, Deleted wood HDR

b. Revised HSS size, increased spandrel size

3.123.10. Revised keynote 21, 22, 23 framing at end of hallway overhangs to match Arch soffit depth.

3.123.11. Revised keynote 24 to be custom hanger at end of hallway STR fascia in lieu of Simpson hanger

a. Revised keynote number to be 24 instead of 23 on plans

3.123.12. Revised keynote numbers 30 to be 25

a. Added keynote 25 to two GLC along -2

3.123.13. Revised keynote 30 to be GLB

a. Added keynote 30 at GL-5.9. deleted keynote 20

3.123.14. Revised shear wall type GL 0.9, 5.5

a. Added length to Shear wall along GL-0.9

3.123.15. Revised keynote 27 to be 28 at entry canopy for LVL framing size

3.123.16. Deleted I-joist framing and Added MFG truss framing at hallway south of GL-6.5

3.123.17. Delete keynote 15 straps along GL-J.5 and GL-2

3.123.18. Revised keynote 28 to be girder truss

a. Added keynote 28 to plans to adjacent trusses along GL-5.9

3.123.19. Clarified keynote 29 to add detail reference.

3.123.20. Revised keynote 30 to be GLB.

a. Added keynote 30 to plans at GL-5.9

3.123.21. Added keynote 31 to keynote list for strap over break in ledger at North canopy

a. Added to plans at North Canopy

3.123.22. Added keynote 32 for header

a. Added keynote 32 to plans along GL-5.9

3.123.23. Revise GLB size for STR fascia at North hallway overhang

3.123.24. Revised GLB size at storefront at North hallway overhang.

3.123.25. Added Detail callouts throughout.

3.124. Sheet S213 & S214

3.124.1. Revised all keynote numbers to only reference to scope shown on Mezzanine framing sheets.

3.124.2. Revised I-joist hanger model

3.124.3. Revised Mezzanine I-Joist to be Redbuilt equivalent of Boise Cascade

3.124.4. Revised double I-joist hanger model

3.124.5. Added keynote 4 for strap to plan keynotes

a. Added keynote 4 to S213 along GL-2.

3.124.6. Added detail callouts throughout.

3.125. Sheet S301

3.125.1. Clarified note refereeing to window sill per plan

3.125.2. Revised strap blocking note to use full depth blk.

3.125.3. Revised note for foundation depth to be 24” to top of footing.

3.125.4. Added length to elevation view for additional shear wall length

3.125.5. Added GLC to be shown in elevation

3.125.6. Added Detail callouts

3.126. Sheet S302

3.126.1. Revised note for foundation depth both elevations to be minimum 24” to top of footing.

3.126.2. Revised strap blocking note to use full depth blk.

3.126.3. Revised framing requirements under windows for elevation 2

3.126.4. Added GLC to elevation

3.126.5. Added Detail callouts

3.127. Sheet S401

3.127.1. Detail 4: Added slab reinforcement requirements for house keeping pad.

3.127.2. Detail 5, 9, 10: Revised stem wall reinforcement and footing frost depth minimum to be 24” to top of footing

3.127.3. Detail 6: Revised bolt diameter to match shear wall schedule

3.127.4. Detail 7: Revised Hilit pin to (2) from (1) at same spacing

3.127.5. Detail 9: Revised minimum frost depth to 24” to top of footing

a. Revised stem wall reinforcement requirements.

3.127.6. Detail 10: Revised minimum frost depth to 24” to top of footing

a. Revised stem wall reinforcement requirements.

3.127.7. Detail 11: Revised anchor diameter and base plate sizes

a. Clarified base plate dimensions

b. Revised base plate thickness

3.127.8. Detail 12: Revised footing depth minimum 24” to top of footing and reinforcement lap requirements.

a. Clarified note to refer to plans for reinforcement requirements

3.128. Sheet S402

3.128.1. Detail 1: Replaced with new detail

3.128.2. Added details 3 through 10

3.129. Sheet S403

3.129.1. Added Sheet

3.130. Sheet S501

3.130.1. Detail 1: Moved blk and added strap splice requirement.

a. Added blk and A35 clip

b. Added RBC clip

3.130.2. Detail 2: Revised to be full height rake wall in lieu of diagonally braced stud wall with gable truss

3.130.3. Detail 3: Revised to ledger and hanger connection.

a. Added studs to be installed at beam location

b. Added loading criteria for truss MFG.

3.130.4. Detail 4: Revised GLB to be supported by studs when pocketed in wall.

a. Added loading criteria for truss MFG.

b. Added note to provide double stud when GLB does not align with truss in truss heel wall cavity.

3.130.5. Detail 5: Added blk

a. Clarified strap installation requirements

b. Added truss loading criteria for truss MFG.

3.130.6. Detail 6 & 7. Revised ledger size

3.130.7. Detail 8: Deleted old detail 8, provided new detail 8

3.130.8. Detail 9: Revised bucket dimensions and plate steel thickness.

3.130.9. Detail 10: Revised studs to be cut slope to match roof pitch

3.130.10. Detail 11: Revised custom bucket dims and steel thickness.

a. Revised bolt qty.

3.130.11. Detail 12: Added new detail

3.131. Sheet S502

3.131.1. Added Sheet

3.132. Sheet S503

3.132.1. Added Sheet

3.133. Sheet S504

3.133.1. Added Sheet

3.134. Sheet S505

3.134.1. Added Sheet

MECHANICAL:

3.135. M001 – LEGEND NOTES AND DETAILS

3.135.1. Added new Sheets to sheet list

3.136. M002 & M003 – SCHEDULES

3.136.1. Updated Schedules

3.137. M201

3.137.1. See revisions on sheet

3.138. M202 – MEZZANINE

3.138.1. Added Sheet

3.139. M211 – MECHANICAL FLOOR PLAN – SECTOR A

3.139.1. Adjusted Floor plans and equipment over Kitchen

3.139.2. Added Access Panels for DOAS Access

3.140. M212 – MECHANICAL FLOOR PLAN – SECTOR B

3.140.1. Added Access Panels for DOAS Access

3.141. M213 & M214 – MEZZANINE SECTOR A & B

3.141.1. Sheets added to set

3.142. M301 – HYDRONIC

3.142.1. Piping Layout Updated

3.142.2. DOAS units revised

3.143. M302

3.143.1. See revisions on sheet

3.144. M311 & M312 HYDRONIC SECTOR A & B

3.144.1. Piping and equipment layout updated

3.145. M320 – ENLARGED PLAN

3.145.1. Boiler room layout adjusted and refined

3.146. M401 – First Floor – GAS

3.146.1. Updated Gas connection schedule

3.147. M501, 502, 601,703

3.147.1. See revisions on sheet

PLUMBING:

3.148. P001 LEGENDS

3.148.1. Revised sheet – removed Commissioning Requirements

3.149. P002 SCHEDULES

3.149.1. Revised Grease Interceptor Schedule

3.149.2. Revised Pump Schedule

3.149.3. Added PRZA-1 to Plumbing Fixture Connections schedule

3.150. P003 - CALCULATIONS

3.150.1. Added Storm Calculation schedule

3.151. P211 FLOOR PLAN SECTOR ‘A’ WASTE PLUMBING

3.151.1. Revised Grease Interceptor location and piping connections

3.151.2. Added condensate drain piping

3.152. P212 FLOOR PLAN SECTOR ‘B’ WASTE PLUMBING

3.152.1. Adjusted roof drain locations and related piping

3.153. P213 FLOOR PLAN SECTOR ‘A’ WATER PLUMBING

3.153.1. Revised quantity and location of hose bibs per client feedback

3.153.2. Revised routing of CW supply main per coordination with civil plans

3.154. P214 FLOOR PLAN SECTOR 'B' WATER PLUMBING

3.154.1. Revised quantity and location of hose bibs per client feedback

3.154.2. Revised routing of CW supply main per coordination with civil plans

3.155. P231 ROOF – PLUMBING

3.155.1. Adjusted roof drain locations

3.156. P501 PLUMBING SCHEMATIC DIAGRAMS

3.156.1. Revised details 1,2, & 3

3.157. P601 DETAILS

3.157.1. Added details 6,7, & 8

ELECTRICAL:

3.158. E002 LUMINAIRE SCHEDULE AND LIGHTING MATRIX

3.158.1. – Updated luminaire schedule and lighting control matrix for clarity

a. Changed the colors of decorative pendants P1 to match description.

b. Edited room types to match project names.

3.159. E100 SITE PLAN

3.159.1. Added the CT cabinet to the site

3.160. E211 FIRST FLOOR – SECTOR A – LIGHTING

3.160.1. – Moved the XWS pendant off glass to the side wall.

3.161. E212 FIRST FLOOR – SECTOR B – LIGHTING

3.161.1. – Moved light fixtures off windows.

a. Moved the pendants on the hallway 200 off the glass to the side wall.

b. Moved the northern fixture on the commons 102 off the glass.

3.162. E311 FIRST FLOOR – SECTOR A – POWER AND DATA

3.162.1. – Added tags along with more receptacles/security equipment to match plans.

a. Tagged receptacles in classroom 135, classroom 142, and hallway 103.

b. Added security camera to work area 120 and door lock in hallway 103.

c. Added receptacle to custodial closet 145.

3.162.2. Made changes to laundry room

a. Moved washers and dryers to South wall.

b. Added the above counter washers and dryers to the project.

3.163. E312 FIRST FLOOR – SECTOR B – POWER AND DATA

3.163.1. – Added power and data equipment to reflect the low voltage plans

a. Added projector notes and mounting to the commons 102 room along with power and data to the room.

b. Added receptacles to vestibule 100.

c. Added wireless access point to hallway 200.

d. Updated TV information in large conference 209.

e. Moved HP-2 to the proper location.

3.163.2. Updated notes, power and data to floor boxes.

a. Denoted wiring to floor boxes in classroom 205 and classroom 206.

b. Added coordination sheet note to project.

3.164. E331 ROOF LEVEL – POWER AND DATA

3.164.1. – Moved the HP-2 tag from the roof to the section B Plan NE location.

3.165. E401 ENLARGED PLANS

3.165.1. – Updated kitchen photometrics to match plans

3.165.2. – Added UPS connection to IT room

3.165.3. – Updated plans in Kitchen 147 to match new updates

a. Added hot plate and griddle to the plans.

b. Moved panel to avoid door swing.

c. Added power and data to the desk.

3.166. E501 ONE-LINE DIAGRAM

3.166.1. – Added CT to single line diagram along with utility meter

3.166.2. – Updated meters to read customer meter for clarity.

3.167. E602 PANELBOARD SCHEDULES

3.167.1. – Updated panel schedules to match plans

a. Added dryer and washer breaker to panel ‘LR1B’

b. Updated spare breaker to the Restroom 202 receptacle in panel ‘LR1A’

3.168. E603 PANELBOARD SCHEDULES

3.168.1. – Updated panel schedules to match plans

a. Updated hot plate and griddle breakers and wiring in Kitchen 147 on panel ‘LK’

b. Updated UPS connector breaker and wiring in MDF room 20C on panel ‘IT’

FIRE PROTECTION

3.169. F001 LEGEND, NOTES AND DETAILS

3.169.1. Added note on corrosion mitigation.

3.170. F211 FIRE PROTECTION - SECTOR A

3.170.1. Cleaned up text overlap per architect comments

3.171. F213 FIRE PROTECTION – ATTIC

3.171.1. Added note at commons area.

FOOD SERVICE:

3.172. SHEET FS101 – FOOD SERVICE EQUIPMENT PLAN

3.172.1. Floor Plan: Revised Item 16.

3.172.2. Equipment Schedule: Item 16 Changed to Hot Plate/Flat Top Cooktops with Stand.

3.173. SHEET FS102 – FOOD SERVICE PLUMBING PLAN

3.173.1. – Floor Plan: P9 floor sink relocated; P8 deleted.

3.173.2. – Plumbing Schedule: P1 add half grate; P8 Changed to Not Used.

3.174. Sheet FS104 – Food Service Electrical/Refrigeration Plan

3.174.1. – Floor Plan: E1 relocated; Added E19 and E20.

3.174.2. – Electrical Schedule: E1 Location and height changed; added E19 and E20.

3.175. SHEET FS303 – FOOD SERVICE ELEVATION & FABRICATION DETAILS

3.175.1. – Elevation 2 - Item 2 water filter location moved.

3.176. SHEET FS304 – FOOD SERVICE ELEVATION & FABRICATION DETAILS

3.176.1. – Elevation 5 - Item 16 revised.

4. Substitution Approvals

4.1. Section 07 2700 Siplast Wall Control WRB – NOT APPROVED
4.2. Section 07 5419 Duro Last Duro Tuff PVC Membrane – APPROVED
4.3. Section 09 5426 Armstrong LVT – Product is OFCI, not in contract
4.4. Section 09 6500 PolyFlor Architex – NOT APPROVED.
4.5. Section 09 6500 PolyFlor Apex – NOT APPROVED.
4.6. Section 09 6813 Matter Surfaces – Product is OFCI, not in contract.
4.7. Section 23 5216 Condensing Boilers – Lochivar FTX600– APPROVED
4.8. Section 23 0913 Controls – Johnson Controls Metasys – NOT APPROVED
4.9. Grease Interceptor – Schier - APPROVED

5. Attachments

5.1. – Addenda4_Coversheet and Project Manual.pdf

5.2. – Addenda4_Civil and Landscape.pdf

5.3. – Addenda4_Architecture.pdf

5.4. – Addenda4_Structure.pdf

5.5. – Addenda4_MEPFP.pdf

5.6. – Addenda4_FoodService.pdf

6. Bidder Questions

6.1. **Question:** Do you want Oak or Maple door faces?

6.1.1. **Response:** Maple. See revised section 08 1416 Flush Wood Doors

6.2. **Question:** Certifications - Hardware section 08 7100 – denotes -
Hardware Supplier Qualifications: Company specializing in supplying the type of products specified in this section with at least three years documented experience, and with certified Architectural Hardware Consultant (AHC) and Electrified Hardware
Consultant (EHC) to assist in work of this section
We do not have certified AHC or EHC, will this be an issue?

6.2.1. **Response:** The AHC and EHC certification is not required.

6.3. **Question:** Can the comp channel can be removed at the storefront jambs? Reference details 1 & 2/A637. This detail I shard to waterproof and interferes with the subsill.

6.3.1. **Response:** Storefront is delegated design removal of comp channels would be a part of that work.

6.4. **Question:** Please give the location of storefront type X4/A621. A112, has it located on the Northeast exterior elevation between grid lines L & M, however that is not correct as that should be labeled as a type X1. None of the storefront frames are labeled correctly on sheets A111 & A112.

6.4.1. **Response:** See revised sheets.

6.5. **Question:** Please let me know if storefront frame X4/A621 is not used in the project.

6.5.1. **Response:** See added elevations at low roof. Window is above the soffit at the end of Sector A hallway.

6.6. **Question:** Please confirm storefront frames X1, X2, & X3/A621 are separated by a steel beam that is part of the structure.

6.6.1. **Response:** Correct. The structural support for the storefront is concealed behind spandrel glazing.

6.7. **Question:** Please confirm that vinyl windows are the design intent on the Northwest elevation between grid lines J & K. All other windows in that area are storefront.

6.7.1. **Response:** Correct

6.8. **Question:** Please revise your storefront mark numbers on sheets A111 & A112. See below for what I believe to be correct.

6.8.1. **Response:** See revised sheets.

6.9. **Question:** Please confirm that walls that are shown to extend to “line of structure” per sheet A530 are to be framed and sheathed to the underside of the trusses at the roof structure. This would be consistent with the way the full-height walls are depicted on the building sections on sheet A300 – A302. If the full height walls are to extend to the underside of the roof sheathing/top of the trusses, please provide a detail showing how the drywall is to finish around the trusses in both the parallel and perpendicular condition.
6.9.1. **Response:** The exterior perimeter, A6 and shear walls extend to deck.

6.10. **Question:** The metal roof spec 074113-2.01-A: AEP Span is listed as an approved manufacturer, but in the metal wall panel spec 074213- 2.01-A: “*Manufacturer of metal roof panels must be the same as the manufacturer of the metal wall panels*”. AEP Span is not listed as an approved metal wall panel manufacturer? Please confirm if AEP Span is an approved manufacturer for the roof and wall panels?
6.10.1. **Response:** Confirmed AEP Span is an approved manufacturer.

6.11. **Question:** Specification 074113-1.01 C, states section includes snow and ice retention system but we cannot find these specifications within this spec section. Please provide specifications for the snow guards.
6.11.1. **Response:** Refer to revised specification section included in addendum 4.

6.12. **Question:** The metal panel MP-5 listed on sheet A200 Finish Legend is noted to be Double V-Groove (Lifetime Soffit) which is a sheet metal panel profile from Taylor Metals. But, the associated details for MP-5 show an Alpolic Flat Panel. (4/A331, 4/A633, 5/A6.33). I do not see any product specified for Alpolic Flat Panel? Also the hatching on the elevations for MP-5 does not show the orientation for how the panel joints should align. Please Clarify
6.12.1. **Response:** All references to Apolic are removed. See revised drawings included in addendum 4. Panels are vertical refer to details.

6.13. **Question:** For the metal roofing assembly, please provide specifications for the self-adhered waterproof membrane, rigid insulation & vapor barrier
6.13.1. **Response:** See Addendum 005

6.14. **Question:** Specification 00 0102 – 1.04h lists substantial completion as August 31, 2025. Please confirm this should read August 31, 2026
6.14.1. **Response:** Correct Substantial Completion should read as August 31, 2026.

6.15. **Question:** Please confirm the Owner will provide builder’s risk insurance.
6.15.1. **Response:** See Addendum 005

6.16. **Question:** Per the ACT spec, 09 51 00, ACT-1 has a panel edge listed as square but then calls out the following product: “Ultima High NRC Tegular by Armstrong World Industries”. Please clarify if ACT-1 is to be square or tegular.
6.16.1. **Response:** Act -1 Tegular

6.17. **Question:** The “B6” walls are shown to stop 6” min. above the ceiling per sheet A530. However, on the building sections, all the “B6” walls are shown graphically stopping at the underside of structure at 14’ AFF. Please clarify the intended height of “B6” walls.
6.17.1. **Response:** B6 walls stop 6” above ceiling as tagged in floor plans on A111 and A112.

6.18. **Question:** Please clarify if the gypsum board ceilings are intended to be wood framed, metal stud framed or suspended.

6.18.1. **Response:** See drawings. Some are direct applied and some suspended.

----------End of Addenda----------

DOCUMENT 00 41 13
BID FORM

BID FOR: Klamath Community College
Childcare Learning Center

CIP Number

Submitted to:

Bid Deadline: 2:00PM , 9/9/2025

Nathan Buckley
Klamath Community College
7390 South 6th Street
Klamath Falls,
Oregon 97603

Submitted by: _____
(Company Name)

BASE BID

The undersigned proposes to furnish all material, equipment, and labor required for the complete project, and to perform all work in strict accordance with the Contract Documents for the lump sum prices indicated below with completion occurring on or prior to the dates indicated:

BASE BID

Bid: _____ $ _____
(Words) (Figures)

The undersigned agrees, if awarded the Contract, to substantially complete all Base Bid work on or before the dates specified in Section 01 11 00.

ALTERNATE BIDS

The Undersigned proposes to [ADD TO] [DEDUCT FROM] the Base Bid indicated above the items of work relating to the following Alternates as described in the Project Manual, Section 01 23 00.

Alternate #1 Irrigation

Bid: _____ $ _____
(Words) (Figures)

The undersigned agrees, if awarded the Contract, to substantially complete all Alternate No. 1 work on or before dates specified in Section 01 11 00.

Alternate #2 Soil Preparation and Planting

Bid: _____ $ _____
(Words) (Figures)

The undersigned agrees, if awarded the Contract, to substantially complete all Alternate No. 2 work on or before dates specified in Section 01 11 00.

It is understood that the Base Bid may be adjusted for any alternates in determining the amount of the Contract. Any or all of such Alternates may be accepted or reinstated by the Owner at any time within 60 days from the date of the Contract Award by the Owner, at the respective amounts named herein.

BID SECURITY

Accompanying herewith is the electronic copy of Bid Security, which is not less than ten percent (10%) of the total amount of the Base Bid plus additive alternates.

STIPULATIONS

The undersigned acknowledges the liquidated damages provision included in the A101-2017 Section 4.5

The undersigned agrees, if awarded the contract, to comply with the provisions of Oregon Revised Statutes 279C.800 through 279C.870 pertaining to the payment of prevailing rates of wage.

The undersigned agrees if awarded the contract to comply with Oregon Revised Statutes 326.603 giving the Owner authority to obtain fingerprints and criminal records check of Contractors, their employees, and subcontractors providing labor for the Project.

The undersigned agrees, if awarded the Contract, to execute and deliver to the Owner within ten (10) working days after receiving contract forms, a signed Agreement and a satisfactory Performance Bond and Payment Bond each in an amount equal to 100 percent (100%) of the Contract Sum.

For every Agreement of $100,000 or greater in value, all Contractors and Subcontractors shall have a public works bond in the amount of $30,000, filed with the Construction Contractors' Board (CCB), in compliance with ORS 279C.836, before starting work on the project unless exempt. Contractor agrees to provide a copy of the Contractor's BOLI Public Works bond with the signed Agreement as Specified in the Supplementary Conditions.

The undersigned agrees that the Bid Security accompanying this proposal is the measure of liquidated damages which the Owner will sustain by the failure of the undersigned to execute and deliver the above named agreement and bonds; and that if the undersigned defaults in executing that agreement within ten (10) days after forms are provided or providing the bonds, then the Bid Security shall become the property of the Owner; but if this proposal is not accepted within sixty (60) days of the time set for the opening of bids, or if the undersigned executes and delivers said agreement and bonds, the Bid Security shall be returned.

By submitting this Bid, the Bidder certifies that the Bidder:
a) has available the appropriate financial, material, equipment, facility and personnel resources and expertise, or the ability to obtain the resources and expertise, necessary to meet all contractual responsibilities;
b) has a satisfactory record of past performance;
c) has a satisfactory record of integrity, and is not disqualified under ORS 279C.440;
d) is qualified legally to contract with the Owner; and
e) will promptly supply all necessary information in connection with any inquiry the Owner may make concerning the responsibility of the Bidder.
Prior to award of a Contract, the Bidder shall submit appropriate documentation to allow the Owner to determine whether or not the Bidder is "responsible" according to the above criteria.

The contractor agrees with the provisions of Oregon Revised Statutes 279C.505, which requires that the contractor shall demonstrate it has established a drug-testing program for employees and will require each subcontractor providing labor for the Project to do the same.

The undersigned has received addenda numbers_____to_____inclusive and has included their provisions in the above Bid amounts.

The undersigned has visited the site to become familiar with conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.

The undersigned certifies that the Bidder is a_____Bidder under ORS. ("Resident" or "Non-resident", to be filled in by Bidder)

Names of Firm: _____

Street Address: _____
(City) (State) (Zip)

Telephone Number:_____ FAX Number: _____

Email Address: _____

Signed By:_____Printed Name:_____
(Signature of Authorized Official. If bid is from a partnership, one of the partners must sign bid).

Date Signed: _____

Official Capacity: _____

If corporation, attest:_____Date: _____
(Secretary of Corporation)

SEAL (If Corporate)

_____Corporation
_____Partnership
_____Individual

Enclosed: Bid Security

NON-DISCRIMINATION REQUIREMENT

Contractor certifies that the Contractor has not discriminated against minorities, women or emerging small business enterprises in obtaining any required subcontracts.

The Contractor agrees not to discriminate against any client, employee, or applicant for employment or for services, because of race, color, religion, sex, national origin, physical or mental handicap, sexual orientation or age, unless based upon bona fide occupational qualifications, and that they are otherwise in compliance with all federal, state and local laws prohibiting discrimination, with regard to, but not limited to, the following: Employment upgrading, demotion or transfer; Recruitment or recruitment advertising; Layoffs or termination; Rates of pay or other forms of compensation; Selection for training; Rendition of services. It is further understood that any vendor who is in violation of this clause shall be barred forthwith from receiving awards of any purchase order from the School District, unless a satisfactory showing is made that discriminatory practices have terminated and that a recurrence of such acts is unlikely.

FIRM NAME: _____

ADDRESS: _____

TELEPHONE: _____

BY: _____
(Company or Firm Officer)

BY: _____
(Type or Print Name)

NON-COLLUSION AFFIDAVIT

STATE OF_____)

County of_____)

I state that I am_____ of _____
(Title) (Name of Firm)

and that I am authorized to make this affidavit on behalf of my firm, and its owners, directors, and officers. I am the person responsible in my firm for the price(s) and the amount of this bid.

I state that:

(1) The price(s) and amount of this bid have been arrived at independently and without consultation, communication or agreement with any other contractor, bidder or potential bidder, except as disclosed on the attached appendix.

(2) That neither the price(s) nor the amount of this bid, and neither the approximate price(s) nor approximate amount of this bid, have been disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed before bid opening.

(3) No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, or to submit a bid higher than this bid, or to submit any intentionally high or noncompetitive bid or other form of complementary bid.

(4) The bid of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or noncompetitive bid.

(5) _____, its affiliates, subsidiaries, officers, directors and
(Name of my Firm)

employees are not currently under investigation by any governmental agency and have not in the last four years been convicted of or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract, except as described on the attached appendix.

I state that_____understands and acknowledges that the above representations
(Name of my Firm)

are material and important, and will be relied on by Oakridge School District in awarding the contract(s) for which this bid is submitted. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment from Oakridge School District of the true facts relating to the submission of bids for this contract.

_____
(Authorized Signature)

Sworn to and subscribed before me this_____day of_____, 20

_____
(Notary Public for Oregon)

My Commission Expires: _____

END OF BID FORM

SECTION 00 4323
ALTERNATES FORM

PARTICULARS

1.01 THE FOLLOWING IS THE LIST OF ALTERNATIVES, AS DESCRIBED IN SECTION 01 2300 REFERENCED IN THE BID SUBMITTED BY:

1.02 (BIDDER) _____

1.03 TO (OWNER): KLAMATH COMMUNITY COLLEGE

1.04 PROJECT: KLAMATH COMMUNITY COLLEGE CHILDCARE LEARNING CENTER

1.05 DATED _____ AND WHICH IS AN INTEGRAL PART OF THE BID FORM.

1.06 THE BIDDER PROPOSES TO ADD TO, OR DEDUCT FROM, THE BASE BID INDICATED IN SECTION 00 4100, THE ITEMS OF WORK RELATING TO THE FOLLOWING ALTERNATES AS DESCRIBED IN SECTION 01 2300.

1.07 THE BIDDER AGREES, IF AWARDED THE CONTRACT, TO SUBSTANTIALLY COMPLETE ALL OF THE FOLLOWING ALTERNATES ON OR BEFORE THE DATES SPECIFIED IN THE CONTRACT.

ALTERNATES LIST

2.01 THE FOLLOWING AMOUNTS SHALL BE ADDED TO OR DEDUCTED FROM THE BID AMOUNT. REFER TO SECTION 01 2300 - ALTERNATES.

2.02 ALTERNATE # 1: IRRIGATION –

- **COMPLETE IRRIGATION SYSTEM DOWNSTREAM OF THE IRRIGATION POINT OF CONNECTION**

A. Add/Deduct_____
$_____
1. (Words) (Figures)

2.03 ALTERNATE # 2: SOIL PREPARATION AND PLANTING -

- **TOPSOIL, AMENDMENTS, PREPARATION, AND FINISH GRADING IN ALL LANDSCAPE AREAS**
- **PLANTING TREES, SHRUBS, AND GROUND COVERS**
- **WEED BARRIER AND MULCH (BARK, CRUSHED ROCK, AND COBBLE) IN PLANTING AREAS**
- **HYDROSEEDING ROUGH SEED AREAS**

A. Add/Deduct_____
$_____
1. (Words) (Figures)

IT IS UNDERSTOOD THAT THE BASE BID MAY BE ADJUSTED FOR ANY ALTERNATES LISTED ABOVE, IN DETERMINING THE AMOUNT OF THE CONTRACT. ANY OR ALL OF SUCH ALTERNATES MAY BE ACCEPTED OR REINSTATED BY THE OWNER AT ANY TIME WITHIN 60 DAYS FROM THE DATE OF THE CONTRACT AWARD BY THE OWNER, AT THE RESPECTIVE AMOUNTS NAMED HEREIN.

END OF SECTION

DRAFT

AIA® Document A101® – 2017 Exhibit A

Insurance and Bonds

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the « » day of « » in the year « »
(In words, indicate day, month and year.)

for the following **PROJECT**:
(Name and location or address)

«Hershner Hunter Office Tenant Improvements»
«675 Oak Street
Eugene, Oregon 97401»

THE OWNER:
(Name, legal status and address)

«Hershner Hunter »«, Limited Liability Partnership»
«180 E. 11th Avenue
Eugene, Oregon 97401»

THE CONTRACTOR:
(Name, legal status and address)

«John Hyland Construction»«, General Corporation»
«1941 Laura Street
Springfield, OR 97477»

TABLE OF ARTICLES

ARTICLE A.1 GENERAL

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A201™–2017, General Conditions of the Contract for Construction.

ARTICLE A.2 OWNER'S INSURANCE

§ A.2.1 General

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Document A201®–2017, General Conditions of the Contract for Construction. Article 11 of A201®–2017 contains additional insurance provisions.

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§ A.2.2 Liability Insurance
The Owner shall be responsible for purchasing and maintaining the Owner's usual general liability insurance.

§ A.2.3 Required Property Insurance
§ A.2.3.1 Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, the Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

§ A.2.3.1.1 Causes of Loss. The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:
(Indicate below the cause of loss and any applicable sub-limit.)

Causes of Loss	Sub-Limit

§ A.2.3.1.2 Specific Required Coverages. The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to falsework and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect's and Contractor's services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:
(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)

Coverage	Sub-Limit

§ A.2.3.1.3 Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.

§ A.2.3.1.4 Deductibles and Self-Insured Retentions. If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

§ A.2.3.2 Occupancy or Use Prior to Substantial Completion. The Owner's occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

§ A.2.3.3 Insurance for Existing Structures
If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

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§ A.2.4 Optional Extended Property Insurance.
The Owner shall purchase and maintain the insurance selected and described below.
(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)

[« »] **§ A.2.4.1 Loss of Use, Business Interruption, and Delay in Completion Insurance**, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.

« »

[« »] **§ A.2.4.2 Ordinance or Law Insurance**, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.

« »

[« »] **§ A.2.4.3 Expediting Cost Insurance**, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.

« »

[« »] **§ A.2.4.4 Extra Expense Insurance**, to provide reimbursement of the reasonable and necessary excess costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.

« »

[« »] **§ A.2.4.5 Civil Authority Insurance**, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.

« »

[« »] **§ A.2.4.6 Ingress/Egress Insurance**, for loss due to the necessary interruption of the insured's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.

« »

[« »] **§ A.2.4.7 Soft Costs Insurance**, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.

« »

§ A.2.5 Other Optional Insurance.
The Owner shall purchase and maintain the insurance selected below.

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(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)

[« »] **§ A.2.5.1 Cyber Security Insurance** for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information. *(Indicate applicable limits of coverage or other conditions in the fill point below.)*

« »

[« »] **§ A.2.5.2 Other Insurance**
(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage	Limits

ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

§ A.3.1 General

§ A.3.1.1 Certificates of Insurance. The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies.

§ A.3.1.2 Deductibles and Self-Insured Retentions. The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

§ A.3.1.3 Additional Insured Obligations. To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04.

§ A.3.2 Contractor's Required Insurance Coverage

§ A.3.2.1 The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:
(If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)

« »

§ A.3.2.2 Commercial General Liability

§ A.3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than « » ($ « ») each occurrence, « » ($ « ») general aggregate, and « » ($ « ») aggregate for products-completed operations hazard, providing coverage for claims including

.1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;

.2 personal injury and advertising injury;

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.3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
.4 bodily injury or property damage arising out of completed operations; and
.5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

§ A.3.2.2.2 The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

.1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
.2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
.3 Claims for bodily injury other than to employees of the insured.
.4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured.
.5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
.6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
.7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
.8 Claims related to roofing, if the Work involves roofing.
.9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
.10 Claims related to earth subsidence or movement, where the Work involves such hazards.
.11 Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

§ A.3.2.3 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than « » ($ « ») per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

§ A.3.2.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ A.3.2.5 Workers' Compensation at statutory limits.

§ A.3.2.6 Employers' Liability with policy limits not less than « » ($ « ») each accident, « » ($ « ») each employee, and « » ($ « ») policy limit.

§ A.3.2.7 Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks

§ A.3.2.8 If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than « » ($ « ») per claim and « » ($ « ») in the aggregate.

§ A.3.2.9 If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than « » ($ « ») per claim and « » ($ « ») in the aggregate.

§ A.3.2.10 Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than « » ($ « ») per claim and « » ($ « ») in the aggregate.

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§ A.3.2.11 Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than « » ($ « ») per claim and « » ($ « ») in the aggregate.

§ A.3.2.12 Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than « » ($ « ») per claim and « » ($ « ») in the aggregate.

§ A.3.3 Contractor's Other Insurance Coverage

§ A.3.3.1 Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:
(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)

« »

§ A.3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.
(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)

[« »] **§ A.3.3.2.1** Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below:
(Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)

« »

[« »] **§ A.3.3.2.2 Railroad Protective Liability Insurance**, with policy limits of not less than « » ($ « ») per claim and « » ($ « ») in the aggregate, for Work within fifty (50) feet of railroad property.

[« »] **§ A.3.3.2.3 Asbestos Abatement Liability Insurance**, with policy limits of not less than « » ($ « ») per claim and « » ($ « ») in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.

[« »] **§ A.3.3.2.4** Insurance for physical damage to property while it is in storage and in transit to the construction site on an "all-risks" completed value form.

[« »] **§ A.3.3.2.5** Property insurance on an "all-risks" completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.

[« »] **§ A.3.3.2.6 Other Insurance**
(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

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Coverage	Limits

§ A.3.4 Performance Bond and Payment Bond

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows:
(Specify type and penal sum of bonds.)

Type	Penal Sum ($0.00)
Payment Bond	
Performance Bond	

Payment and Performance Bonds shall be AIA Document A312™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:

« »

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SECTION 01 1000

SUMMARY

PART 1 GENERAL

1.01 PROJECT

A. Project Name: Klamath Community College Childcare Learning Center.

B. Owner's Name: Klamath Community College.

C. Architect's Name: PIVOT Architecture.

D. The Project consists of the construction of construction of a 28,000 SF new childcare learning center building and associated site improvements.

1.02 CONTRACT DESCRIPTION

A. Project will be procured as a design-bid-build contract. Owner will utilize the AIA document cluster.

1.03 WORK BY OWNER

A. Items noted OFOI (Owner-Furnished, Owner-Installed) will be supplied and installed by Owner before Substantial Completion. Some items include:

1. Playground equipment
2. IT equipment
3. Carpet and resilient flooring will be purchased by the Owner from State purchasing contracts and applied by approved vendor.

B. Items noted OFCI (Owner-Furnished, Contractor-Installed) will be supplied by the Owner for installation by Contractor before Substantial Completion. Some items include:

1. Not applicable

C. CFCI, OFOI and OFCI item summary:

		CFCI	OFCI	OFOI	NOTES
	A. Cameras			X	Conduit pathway provided; Pull Wire
	B. Fire Alarm			X	Conduit pathway provided; Pull Wire
	C. Access Control (DSX)			X	Conduit pathway provided; Pull Wire
	D. Data			X	Conduit pathway provided; Vendor to Pull Wire
	E. Security (Burglar)			X	Conduit pathway provided; Pull Wire
	F. Conduit/ Pathway	X			Serves the installation of A - I
	G. Backbone/ Junction boxes	X			Serves the installation of A - I
	H. UPS			X	KCC and OCDC
FURNISHINGS + EQUIPMENT	I. Projector			X	
	J Projector Screen	X			
	K. Phones and Computers, etc.			X	KCC/ OCDC standard
	L. Playground Equipment and playground surfacing			X	By OCDC. Supplier and OCDC to coordinate Istallation schedule with contractor.
	M. Carpet/ resilient flooring			X	Single source from Oregon State Contract. 3 approved subs for installation. •LVT-1 through LVT-9 – Luxury Vinyl Tile •CPT-1 and CPT-2 – Carpet •WOM-1 – Walk off Mat •In the rooms where LVT 1-9, CPT 1 +2 and WOM-1 are installed, the required wall base will be installed by the owner's contractor.
		X			•RS-1 – Resilient Surface •SF-1 – Safety Flooring •In the rooms where RS-1 and SF-1 are installed the required wall base will be installed by the sub-contractor.
	N. Furniture			X	By OCDC and KCC for their respective spaces
	O. Toilet Accessories	X		X	Owner vendor supplies and installs. Contractor responsible for suitable backing in walls. See addition description below.
	P. Signage			X	all signage owner furnished. Shown to meet permitting requirements.
	Q. Residential Appliances			X	Microwaves, refrigerators

Toilet Accessories -

Contractor Furnished: Specified items - Commercial toilet accessories, changing tables, Utility room accessories, etc.

Owner Vendor: Toiletpaper dispenser, paper towel holder, soap dispenser, sanitary napkin disposal, seat cover etc.

1.04 OWNER OCCUPANCY

A. Owner intends to occupy the Project upon Substantial Completion.

B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.

C. Schedule the Work to accommodate Owner occupancy.

1.05 CONTRACTOR USE OF SITE AND PREMISES

A. Construction Operations: Limited to areas noted on Drawings.

B. Arrange use of site and premises to allow:
   1. Owner occupancy.
   2. Work by Others.

3. Work by Owner.
4. Use of site and premises by the public.

C. Provide access to and from site as required by law and by Owner:
1. Do not obstruct roadways, sidewalks, or other public ways without permit.

D. Utility Outages and Shutdown:
1. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, or security and access control systems, without 7 days notice to Owner and authorities having jurisdiction.
2. Prevent accidental disruption of utility services to other facilities.

E. Except as otherwise stipulated herein, Contractors will have complete use of the Premises within the boundaries of the project as shown on the Drawings for the execution of the Work.

F. The possession, use, or distribution of illicit drugs and alcohol on the Owner's premises is prohibited. Prescription medications brought to the project site shall be in the original container bearing the name of the drug, the name of the physician, the name of the patient, and the prescribed dosage.

G. NO SMOKING POLICY: Smoking is not allowed on the construction site and as additionally limited by city or county ordinance.

H. Tools and building materials shall never be left out when an unsecured work area is vacated.

I. Ladders and scaffolding will be taken down when an unsecured work area is vacated.

J. Open holes and other tripping hazards shall be fenced or barricaded when an unsecured work area is vacated.

K. "Secured Work Area" is defined as an exterior area having a perimeter cyclone fence at least 6 feet in height, with gates which close and lock so that no casual entrance is possible by unauthorized personnel, or an interior area protected by locked doors that reasonably prohibit unauthorized entry.

L. Operations resulting in vapors, emissions or flying objects shall be conducted in such a way as to prevent exposure to any unprotected parties or property.

1.06 REGULAR BUSINESS HOURS

A. Regular Business Hours shall be the hours between 7 AM and 6 PM, Monday through Friday.

1.07 PRODUCTS ORDERED IN ADVANCE

A. Products Ordered in Advance: None

1.08 COORDINATION AND PERMITS

A. Coordination
1. The Contractor is responsible for overall coordination of the Project.
2. The Drawings and Specifications are arranged for convenience only and do not necessarily determine which trades perform the various portions of the Work.
3. Coordinate sequence of work to accommodate agreed-upon Owner occupancy.
4. Perform all necessary work to receive and/or join the work of all trades.
5. Verify location of existing utilities and protect from damage.

B. Permits and Fees
1. The Owner will be responsible for filing and paying for building permits and all fees associated with the building permit, system development charges, impact fees, etc. The Contractor will be responsible for picking up all Project permits and will have full responsibility for requirements of and payments for all trade permits (i.e. electrical, plumbing, mechanical).

1.09 DELEGATED DESIGN REQUIREMENTS

A. Certain components of the Work under this project are Delegated Design. It is the Contractor's responsibility to coordinate and assume or assign to subcontractors the complete responsibilities for the design, calculation, submittals, fabrication, transportation and installation

of the Delegated Design portions or components as required. Delegated Design components of the Work are defined as complete operational systems, provided for their intended use.

B. Submit deferred submittals for delegated design elements to the governing agency for the separate approval of each Delegated Design item as defined in Section 01 3300 - Submittal Procedures.

C. Owner shall not be responsible to pay for any delays, additional products, additional hours of work or overtime, restocking or rework required due to failure by the Contractor or the subcontractor to coordinate their work with the work of the other trades on the project or to provide the Delegated Design portion or component in a timely manner to meet the schedule of the project.

D. Delegated Design components include, but are not limited to the following:
   1. Steel Joists, Section 05 2100 - Steel Joist Framing.
   2. Structural Design of Wood Trusses: As described in Section 06 1753 - Shop-Fabricated Wood Trusses
   3. Metal Roof Panels, Section 07 4113 - Metal Roof Panels.
   4. Firestopping, Section 07 84 00 - Firestopping.
   5. Aluminum Storefront, Section 08 4313 - Aluminum-Framed Storefronts.
   6. Glazed Aluminum Curtain Walls, Section - 08 4413.
   7. Seismic Anchorage for Suspended Acoustical Ceilings, Section 09 5100 - Acoustical Ceilings.
   8. Seismic Anchorage Foodservice Equipment, Section 11 4000 - Foodservice Equipment.
   9. Canopy Hood/Fire Protection, Section 11 4000 - Foodservice Equipment.
   10. Walk-in Cold Storage Rooms, Section 11 4000 - Foodservice Equipment.
   11. Seismic Anchorage Divisions 21, 23, 26, 27 and 28 equipment, hoods, panels and other components of mechanical, plumbing, gas and electrical systems.
   12. Fire Suppression, Division 21.
   13. Fire Alarm System, Division 28.
   14. Additional requirements from specific specification sections in this Project Manual and as shown on the Drawings.

1.10 DUST PROTECTION AND SAFETY BARRIERS

A. The Contractor shall place and maintain throughout the construction period, High-tack Disposable Floor Mats at all construction egress points leading to finished spaces.

B. The Contractor shall erect temporary Dust and Safety Barriers around all of the Construction Operations to keep dust and debris within the localized work area, and to protect the owner, staff, and the public from construction activities. Additional requirements may be required if airborne dust is judged by the Owner to be a problem.

C. The Contractor shall take precautions to protect existing smoke detectors from damage or deterioration from dust caused by work of this contract.

D. Without disabling these devices, the Contractor shall take precautions to protect existing smoke detectors to prevent dust or non-fire related smoke or fumes from initiating an alarm.

1.11 OVERTIME WORK

A. The Contractor shall notify the Owner in writing, at least 48 hours in advance of any overtime work, including nights, weekends, and holidays. No overtime work shall be performed without the Owner's prior approval.

B. The Contractor shall reimburse the Architect and Owner for any expenses incurred by them because of Contractor's overtime work unless the overtime work is due to Owner initiated Change Orders.

1.12 WORK IN PUBLIC RIGHT-OF-WAY

A. Improvements in the Public Right of Way are to be performed under a Lane County Facility Permit. Drawings prepared under standards for Privately Engineered Public Improvements (PEPI) are included in the Work of this Contract. Follow referenced standards for Public Right

of Way work including but not limited to inspections, procedures, testing, standard specifications, standard details, and requirements. The requirements of the County Facility Permit notwithstanding, the Contractor shall be bound by the General and Supplementary General Conditions and to the Agreement between Owner and Contractor.

1.13 PROTECTING EXISTING UTILITIES

A. Original Building Drawings and Site Survey Drawings indicate approximate location of any known, concealed Utility Lines. Before starting work, Contractor shall determine exact location of any of these Lines that could be damaged by Contract Work.

B. Contractor shall assume that other unknown Utility Lines do exist, and Contractor shall proceed with caution when working in areas that could conceal unknown Utilities.

C. If such Utility Lines are encountered, immediately request disposition instructions from Architect.

D. If Utility Lines are damaged; remove, repair, or replace Lines as directed. Additional compensation and/or extension of time, if any, caused by removing, repairing, or replacing Lines will be determined in accordance with General Conditions.

1.14 PROTECTING EXISTING LANDSCAPING & TREES

A. Protect existing Trees, not designated for removal, against damage caused by work of this contract.

B. Provide necessary Fencing and Barricades. Erect prior to Work, and unless otherwise instructed, remove after Work completion. For any work around trees in the Right of Way, obtain approval of local jurisdiction's Urban Forester.

C. Prohibit Earth stockpiling, Material storage, and Vehicle Parking and Traffic within Drip-line of Trees.

D. Prohibit dumping of Refuse, Chemicals, and other Materials and puddling or running Water which may injure Plant growth including Root systems.

E. Prohibit Foot and Vehicle Traffic which may compact Soil over Root Systems.

F. Prohibit any unnecessary cutting, breaking and skinning of Branches and Roots, and prohibit skinning and bruising of Bark. All tree pruning activities shall be conducted by a certified arborist.

G. Prohibit all cutting, breaking, and skinning of branches and roots, and skinning or bruising of bark of any trees within the street Right of Way. Consult with a certified arborist and the City of Eugene Urban Forester prior to starting and construction activities that may threaten to damage street trees.

H. Prohibit Fires, High-heat and Smoke adjacent to Trees.

I. Repair or replace with plants of equal size, any material damaged by Construction Operations.

J. Where damaged Trees cannot realistically be repaired or replaced, pay Owner, as Liquidated Damage, value of Trees as determined by Council of Tree & Landscape Appraisers and as distributed by International Society of Arboriculture. Copies can be obtained from Society at Box 71, Urbana, IL 61801. http://treeandlandscapeappraisal.com/

1.15 PROTECTING EXISTING SUBGRADE

A. Contractor shall protect existing Subgrade and Earthwork against damage caused by work provided under this Contract.

B. Where necessary to accomplish required protection, provide additional Temporary Fill or other approved Cover over Work to be protected.

1.16 PROTECT EXISTING STRUCTURES

A. Contractor shall protect against damage to existing building parts not scheduled for repair or remodel under this contract.

B. Where necessary to accomplish required protection, provide additional Temporary barricades, cushioning, or other approved Cover over material to be protected.

1.17 ASBESTOS

A. The Contractor and Sub-contractors, and their workers shall be extremely careful when working around any asbestos or encapsulated asbestos materials, and take any necessary precautions to avoid disturbing the asbestos or the encapsulation materials. If the asbestos or the encapsulation is disturbed, immediately stop work in the area, and notify the Engineer and the Owners Facility Manager of the location and condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 2300
ALTERNATES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Description of Alternates.

B. Procedures for pricing Alternates.

C. Documentation of changes to Contract Sum and Contract Time.

1.02 RELATED REQUIREMENTS

A. Document 00 2113 - Instructions to Bidders: Instructions for preparation of pricing for Alternates.

B. Document 00 4323 - Alternates Form: List of Alternates as supplement to Bid Form.

C. Document 00 5200 - Agreement Form: Incorporating monetary value of accepted Alternates.

1.03 SUBMISSION REQUIREMENTS

A. Submit Alternates as requested on Bid Form.

B. Indicate variation of Bid Price for Alternates described below. The Bid Form requests a "difference" in Bid Price by adding to or deducting from the Base Bid Price.

1.04 ACCEPTANCE OF ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.

B. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.

C. Bids will be evaluated on the Base Bid price plus any or all of the Alternates intended to be exercised by the Owner. The order of the Alternates listed here does not represent the order in which any of these Alternates will be exercised.

1.05 SCHEDULE OF ALTERNATES

A. **Alternate No. 1 - Irrigation**:
   1. Under the Base Bid: _
      a. Irrigation Point of Connection (water meter and backflow prevention device)
      b. Irrigation sleeves
   2. Under Alternate #01: Complete irrigation system downstream of the Irrigation Point of Connection

B. **Alternate No. 2 - Soil Preparation and Planting:**
   1. Under the Base Bid:
      a. Subgrade preparation in all landscape areas
   2. Under Alternate #02:
      a. Topsoil, amendments, preparation, and finish grading in all landscape areas
      b. Planting trees, shrubs, and ground covers
      c. Weed barrier and mulch (bark, crushed rock, and cobble) in planting areas
      d. Hydroseeding rough seed areas

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 06 1516

WOOD ROOF DECKING

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes solid-sawn wood roof decking

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.03 INFORMATIONAL SUBMITTALS

A. Research/Evaluation Reports: For glued-laminated wood roof decking indicated to be of diaphragm design and construction, from ICC-ES.

PART 2 - PRODUCTS

2.01 WOOD ROOF DECKING, GENERAL

A. General: Comply with DOC PS 20 and with applicable grading rules of inspection agencies certified by ALSC's Board of Review.

2.02 SOLID-SAWN WOOD ROOF DECKING

A. Standard for Solid-Sawn Wood Roof Decking: Comply with AITC 112.
B. Roof Decking Species: Douglas fir-larch
C. Roof Decking Nominal Size: 2 by 6 or 3 by 6 as indicated in plans.
D. Roof Decking Grade: Select Decking or Select Dex.
E. Grade Stamps: Factory mark each item with grade stamp of grading agency. Apply grade stamp to surfaces that are not exposed to view.
F. Moisture Content: Provide wood roof decking with 19 percent maximum moisture content at time of dressing.
G. Face Surface: Smooth.
H. Edge Pattern: Vee grooved.

2.03 ACCESSORY MATERIALS

A. Fastener Material: Hot-dip galvanized steel.
B. Sealants: Latex, complying with applicable requirements in Section 079200 "Joint Sealants" and recommended by sealant manufacturer and manufacturer of substrates for intended application.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install solid-sawn wood roof decking to comply with AITC 112.
   1. Locate end joints for combination simple and two-span continuous lay-up
   2. Fasten each course of wood roof decking at each support with two fasteners straight through the face.
      a. Use 16d nails for 2-by-6 and 2-by-8 roof decking.
      b. Use Simpson SDWS500DB screws for 3-by-6 and 3-by-8 roof decking.
   3. Slant nail each course of wood roof decking to the tongue of the adjacent course at 30 inches (750 mm) o.c. and within 12 inches (300 mm) of the end of each unit. Stagger nailing 15 inches (380 mm) in adjacent courses.
      a. Use 6d nails for 2-by-6 and 2-by-8 roof decking.
      b. Use 8d nails for 3-by-6 and 3-by-8 roof decking.

3.02 PROTECTION

A. Provide water-resistive barrier over roof decking as the Work progresses to protect roof decking until roofing is applied.

END OF SECTION

SECTION 06 4100
ARCHITECTURAL WOOD CASEWORK

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Specially fabricated cabinet units.

B. Cabinet Hardware.

C. Factory finishing.

D. Preparation for installing utilities.

1.02 RELATED REQUIREMENTS

A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.

B. Section 06 1000 - Rough Carpentry: Support framing, grounds, and concealed blocking.

C. Section 08 8000 - Glazing: Glass for casework.

D. Section 12 3600 - Countertops.

1.03 REFERENCE STANDARDS

A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).

B. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.

C. HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood; 2024.

D. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Material for Finish Carpentry and Architectural Wood Casework to be purchased from same lot and finished by same finisher.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Shop Drawings: Indicate materials, component profiles and elevations, fastening methods, jointing details, connections to adjacent work, schedule of finishes, and accessories.

C. Product Data: Provide data for panel products and hardware accessories.

D. Samples: Submit actual sample items of proposed pulls, hinges, shelf standards, and locksets, demonstrating hardware design, quality, and finish.

E. Samples:
   1. Submit two samples of each plastic laminate color specified, 4 inch x 5 inch size.
   2. Submit two samples of each plastic laminate edge banding, 12 inches long
   3. Submit two samples of each hardwood veneer species specified, 12 inch x 12 inch size,

F. Resubmit Shop Drawings: If field measurements result in significant changes to the casework design, resubmit all shop drawings after field dimensions have been verified.
   1. Indicate on resubmitted drawings all dimensions which were verified.
   2. Indicate significant changes to casework resulting from field-measured conditions. Do not proceed with fabrication until apporved by Architect.

1.06 QUALITY ASSURANCE

A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.

B. Recycled Content of Medium-Density Fiberboard and Particleboard: Provide products with an average recycled content so Postconsumer recycled content plus one-half of preconsumer recycled content is not less than 20 percent.

C. Formaldehyde Free Panel Products: Provide fiberboard, particleboard and plywood products made with binders and adhesives containing no urea formaldehyde.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver casework to jobsite until notified by General Contractor that Project is conditioned and prepared to handle and store casework without damage or discoloration.

B. Protect units from moisture damage.

1.08 FIELD CONDITIONS

A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

PART 2 PRODUCTS

2.01 CABINETS

A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.

B. Hardwood Plywood (Appleply) Faced Cabinets:
   1. Exposed Surfaces: HPVA Grade A, White Maple, plain sliced, book-matched.
   2. Semi-Exposed Surfaces: HPVA Grade B, White Maple, plain sliced, pleasing-matched.
   3. Concealed Surfaces: Manufacturer's option.

C. Casework Construction Type: Type A - Frameless.

2.02 WOOD-BASED COMPONENTS

A. Wood fabricated from old growth timber is not permitted.

2.03 LAMINATE MATERIALS

A. Manufacturers:
   1. Formica Corporation; ____: www.formica.com/#sle.
   2. Panolam Industries International, Inc\Nevamar: www.nevamar.com.
   3. Wilsonart LLC: www.wilsonart.com/#sle.
   4. Laminart; www.laminart.com
   5. Substitutions: See Section 01 6000 - Product Requirements.

B. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications.

C. Provide specific types as indicated.
   1. Horizontal Surfaces: HGS, 0.048 inch nominal thickness, colors as scheduled, finish as scheduled.
   2. Vertical Surfaces: VGS, 0.028 inch nominal thickness, colors as scheduled, finish as scheduled.
   3. Cabinet Liner: CLS, 0.020 inch nominal thickness, colors as scheduled, finish as scheduled.
   4. Laminate Backer: BKL, 0.020 inch nominal thickness, undecorated; for application to concealed backside of panels faced with high pressure decorative laminate.

2.04 PANEL MATERIALS

A. ApplePly (Plywood): Veneer core panels constructed from uniform lamination of solid grade 1/16-INCH THICK ALDER AND BIRCH, WHITE MAPE SPECIES VENEER.
   1. Thickness: 3/4 inch, unless otherwise indicated.
   2. Match work of other sections: Apple Ply product in Section 06 2000 Finish Carpentry to
   3. Approved products: ApplePly manufactured by States Industries: www.statesind.com. or match product used in Section 06 4100 Architectural Wood Casework.
   4. Europly Plus by Columbia Forest Products.

B. Softwood Plywood Not Exposed to View: Any face species, veneer core; PS 1 Grade A-B; glue type as recommended for application.
   1. Extent: For use as substrate for Plastic Laminate.

C. Hardboard: AHA A135.4; Pressed wood fiber with resin binder, Class 1 - Tempered, 1/4 inch thick, smooth two sides (S2S); use for drawer bottoms, dust panels, and other components indicated on drawings.
   1. Provide prefinished hardboard for cabinet drawer bottoms.

2.05 COUNTERTOPS

A. Countertops: See Section 12 3600.

2.06 ACCESSORIES

A. Adhesive: Type recommended by fabricator to suit application.

B. VOC Limits for Installation Adhesives and Glues: Use installation adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
   1. Wood Glues: 30 g/L.
   2. Contact Adhesive: 250 g/L.

C. Plastic Edge Banding: Extruded PVC, convex shaped; smooth finish; self locking serrated tongue; of width to match component thickness.
   1. Color: to match adjacent plastic laminate color.
   2. Use 3 mm at all exposed edges, doors and drawer fronts, vertical case ends, bottoms and sub-tops.
   3. Use 3 mm at all exposed shelf edges.

D. Fasteners: Size and type to suit application.

E. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; chrome-plated finish in concealed locations and stainless steel finish in exposed locations.

F. Concealed Joint Fasteners: Threaded steel.

G. Coat Rod and Flanges: Integral, wall mounted, chrome metal finish. "660SS Series" with matching chrome Flanges at each end by Knape & Vogt, or approved.

H. Door Silencers: Felt or rubber to prevent noisy door to frame contact.

I. Provide clear rubber cabinet door bumpers at locations where cabinet doors or pulls hit adjacent walls, window sills, or other building elements.

2.07 HARDWARE

A. Adjustable Shelf Supports: Heavy duty type for nominal 1 inch spacing adjustments.

B. Drawer and Door Pulls: "U" shaped wire pull, steel with satin finish, 4 inch centers.

C. Cabinet Locks: Keyed cylinder, two keys per lock, each room different and master keyed, steel with satin finish. Locate where shown on Drawings. Provide with standard or custom-fabricated strike plate to fit the style of casework detailed.

1. Products:
    a. National Lock
    b. Russwin
    c. Yale
    d. Olympus
    e. Substitutions: See Section 01 6000 - Product Requirements.

D. Drawer Slides:
1. Type: Full extension.
2. Static Load Capacity: Heavy Duty grade.
3. Mounting: Side mounted.
4. Stops: Integral type.
5. Features: Provide self closing/stay closed type.
6. Manufacturers:
    a. Accuride International, Inc; Heavy-Duty Drawer Slides: www.accuride.com/#sle.
    b. Knape & Vogt Manufacturing Company; Heavy-Duty Drawer Slides: www.knapeandvogt.com/#sle.
    c. Substitutions: See Section 01 6000 - Product Requirements.

E. Hinges: European style concealed self-closing 170 degree opening angle, steel with satin finish.
1. Manufacturers:
    a. Julius Blum, Inc: www.blum.com.
    b. Substitutions: See Section 01 6000 - Product Requirements.

F. Countertop Supports:
1. Type-1: Hidden Countertop Bracket
    a. Freedom Hidden Countertop Brackets manufactured by Federal Brace, www.federalbrace.com
    b. Verify length suitable for countertop depth
    c. Color: Black

2.08 FABRICATION

A. Laminate Finished Surface Definitions: Comply with Requirements of AWI/AWMAC Architectural Woodwork Quality Standards Illustated and the following:
1. Exposed portions of casework include all surfaces visible when doors and drawers are closed, interior faces of cabinet doors and exposed surfaces of open cases including top and bottom of shelving, interior cabinet surfaces visible behind glass doors.
2. Semi-exposed surfaces of casework include those members behind opaque doors such as shelves, drawers, dividers, interior faces of ends, case backs and back and bottoms.
3. Concealed portions of casework include sleepers, dust panels, and other surfaces not visible after installation.

B. Cabinet Style: Type A Frameless or Flush Overlay.

C. Drawer construction Technique: Lock shoulder joints.

D. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.

E. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.

F. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.

G. Construct cabinets without integral base. Provide separate structural base as specified below.

H. Cabinet backs: Provide minimum 1/2 inch thick cabinet back. Where back of cabinet is exposed to view, provide 3/4 inch plywood with high pressure laminate facing.

I. Base Construction: Construct cabinet bases of 3/4 inch thick marine grade plywood, glued and screwed. Provide reinforcing blocks as required for maximum strength. Recess base for toe space as indicated. Set base on floor where casework is to be installed. Level top surface and scribe bottom surface to floor line leaving a height of 4 inches between floor and bottom of casework.

J. Drawers:
   1. Fronts: One piece 3/4 inch thick, plywood with 3 mm plastic edge facing on all four sides.
   2. Sides: 1/2 inch thick medium density overlay plywood.
   3. Back and Sub-Front: 3/4 inch thick plywood.
   4. Edge band top edges of sides, back and sub-front.
   5. Bottoms: Minimum 1/2 inch plywood or 1/4 inch hardboard set into 1/4 inch deep grooves at front, back and both sides.
   6. Drawer Reinforcement: Reinforce drawer bottoms in excess of 400 square inches in area with 1 inch by 3 inch wood strip running front to back centered on drawer.
   7. Fabricate drawers full depth of cabinet.
   8. Mount drawers with positive in and out stops.

K. Cabinet Doors: Plastic laminate clad 3/4 inch thick plywood or MDF with 3 mm plastic edge facing on all edges.
   1. Provide hinges in the following quantities:
      a. Two hinges for doors up to 36 inches high, 24 inches wide.
      b. Three hinges for doors up to 48 inches high, 24 inches wide
      c. Four hinges for doors up to 82 inches high, 24 inches wide
      d. For doors in excess of dimensions indicated above, comply with hinge manufacturer's recommendation for size and weight of door.
   2. Surface apply hinges, do not let-in hinges.

L. Semi-Exposed Cabinet Shelving: Provide plastic laminate clad plywood or MDF as follows:
   1. 3/4 inch thick plywood for shelving less than 32 inches wide.
   2. 1 inch thick plywood for shelving more than 32 inches wide.
   3. Provide "Line Bored" multi-hole shelf support holes.
   4. Allow 1/16 inch clearance at each of loose shelving (1/8 inch overall) for ease of moving shelves.

M. Filler Panels: Provide filler panels covered with matching plastic laminate to fill in all voids between cabinets and walls, including the full depth at underside of upper cabinets.

N. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises.
   1. Apply laminate backing sheet to reverse side of plastic laminate finished surfaces.
   2. Cap exposed plastic laminate finish edges with material of same finish and pattern.

O. Provide cutouts for plumbing fixtures, other built-in items, appliances, other built-in items, and other built-in items. Verify locations of cutouts from on-site dimensions. Seal cut edges.

P. All shelves shall be adjustable, unless required to be fixed in place for the stability of the casework, or as otherwise noted on Drawings.

Q. Provide square cut outs in cabinet doors where shown on drawings. Fabricate cut outs with smooth edges slightly eased. Cleanly cut inside corners.

R. Shop glaze glass materials using the Interior Dry method specified in Section 08 8000.

2.09 SHOP FINISHING

A. Sand work smooth and set exposed nails and screws.

B. Ease sharp external corners prior to finishing.

C. On items to receive transparent finishes, use wood filler matching or blending with surrounding surfaces and of types recommended for applied finishes.

D. Finish work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 5 - Finishing for grade specified and as follows:

1. Transparent:
   a. System - 5, Varnish, Conversion.
   b. Sheen: Semigloss.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify adequacy of backing and support framing.

B. Verify location and sizes of utility rough-in associated with work of this section.

3.02 INSTALLATION

A. Install work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade indicated.

B. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.

C. Use concealed joint fasteners to align and secure adjoining cabinet units.

D. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.

E. Secure cabinets to floor using appropriate angles and anchorages.

F. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.

3.03 ADJUSTING

A. Adjust installed work.

B. Adjust moving or operating parts to function smoothly and correctly.

3.04 CLEANING

A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

END OF SECTION

SECTION 07 4113
METAL ROOF PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Insulated metal roof panel system of preformed steel panels.

B. Metal roof panel system of preformed steel panels.

C. Snow and ice retention system.

1.02 RELATED REQUIREMENTS

A. Section 05 1200 - Structural Steel Framing: Roof framing and purlins.

B. Section 06 1000 - Rough Carpentry: Roof sheathing.

C. Section 07 2100 - Thermal Insulation: Rigid roof insulation.

D. Section 07 4213 - Metal Wall Panels: Preformed wall panels.

E. Section 07 9005 - Joint Sealers: Field-installed sealants.

1.03 REFERENCE STANDARDS

A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2022.

B. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.

C. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2023.

D. ASTM E1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference; 2005 (Reapproved 2017).

E. ASTM E1646 - Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference; 1995 (Reapproved 2024).

F. ASTM E1680 - Standard Test Method for Rate of Air Leakage through Exterior Metal Roof Panel Systems; 2016 (Reapproved 2022).

G. UL 580 - Standard for Tests for Uplift Resistance of Roof Assemblies; Current Edition, Including All Revisions.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Storage and handling requirements and recommendations.
   2. Installation methods.
   3. Specimen warranty.

C. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
   1. Show work to be field-fabricated or field-assembled.
   2. Include structural analysis signed and sealed by qualified structural engineer, indicating conformance of roofing system to specified loading conditions, with attachment schedule specific to project.

D. Verification Samples: For each roofing system specified, submit samples of minimum size 12 inches square, representing actual roofing metal, thickness, profile, color, and texture.

1. Include typical panel joint in sample.
2. Include typical fastening detail.

E. Test Reports: Indicate compliance of metal roofing system to specified requirements.

F. Warranty: Submit specified manufacturer's warranty and ensure that forms have been completed in Owner's name and are registered with manufacturer.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section and with at least three years of documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Provide strippable plastic protection on prefinished roofing panels for removal after installation.

B. Store roofing panels on project site as recommended by manufacturer to minimize damage to panels prior to installation.

1.07 WARRANTY

A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.

B. Finish Warranty: Provide 5-year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking. Complete forms in Owner's name and register with warrantor.

C. Special Warranty: Provide 2-year warranty for weathertightness of roofing system, including agreement to repair or replace metal roof panels that fail to keep out water commencing on the Date of Substantial Completion. Complete forms in Owner's name and register with warrantor.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Architectural Metal Roof Panel Manufacturers:
1. Basis of Design: Taylor Metal Products: MS-200; 180 degree; www.taylormetal.com/#sle.
2. AEP SPAN; www.aep-span.com.
3. Morin Corporation: www.morincorp.com/#sle.

B. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

A. Metal Roof Panels: Provide complete roofing assemblies, including roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for compliance with the following minimum standards:
1. Structural Design Criteria: Provide panel assemblies designed to safely support design loads at support spacing indicated, with deflection not to exceed L/180 of span length(L) when tested in accordance with ASTM E1592.
   a. Dead Loads: Weight of roofing system, and roof-mounted components where indicated.
   b. Live Loads: As required by ASCE 7.
2. Overall: Complete weathertight system tested and approved in accordance with ASTM E1592.
3. Wind Uplift: Class 90 wind uplift resistance of UL 580.
4. Air Infiltration: Maximum 0.06 cfm/sq ft at air pressure differential of 6.24 lbf/sq ft, when tested according to ASTM E1680.

5. Water Penetration: No water penetration when tested in accordance with procedures and recommended test pressures of ASTM E1646; perform test immediately following air infiltration test.
6. Thermal Movement: Design system to accommodate without deformation anticipated thermal movement over ambient temperature range of 100 degrees F.

2.03 METAL ROOF PANELS

A. Metal Roof Panels: Provide complete engineered system complying with specified requirements and capable of remaining weathertight while withstanding anticipated movement of substrate and thermally induced movement of roofing system.

B. Metal Panels: Factory-formed panels with factory-applied finish.
1. Steel Panels:
a. Aluminum-zinc alloy-coated steel complying with ASTM A792/A792M; minimum AZ50 coating.
b. Steel Thickness: Minimum 24 gauge, 0.024 inch.
2. Profile: Standing seam, with minimum 1-inch seam height; concealed fastener system for field seaming with special tool.
3. Texture: Smooth.
4. Length: Full length of roof slope, without lapped horizontal joints.
5. Width: Maximum panel coverage of 18 inches.

2.04 METAL SOFFIT PANELS

A. Design is based on Prestige Series, manufactured by AEP SPAN.

B. Soffit Panels: Factory-formed panels with factory applied-finish.

C. Profile: Flat - no pencil ribs

D. Dimensions:
1. Nominal exposed width: 12"
2. Depth: 1.5"

E. Base Metal Material: Steel, conforming to ASTM A792 Zincalume, minimum yield 40,000psi

F. Steel Thickness: 24 gage

G. Length: Maximum possible length to minimize lapped joints. Where lapped joints are unavoidable, space laps so that each sheet spans over three or more supports.

2.05 ATTACHMENT SYSTEM

A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.
1. Anchor clips shall be tested to establish that the clips will have 75% of the material thickness remaining after 100,000 cycles of the full range of motion.

B. Bearing Plates: 24 gauge 4”x6” Zincalume coated steel bearing plate.

2.06 FINISHES

A. Fluoropolymer Coil Coating System: Manufacturer's standard multi-coat metal coil coating system complying with AAMA 2605, including at least 70 percent polyvinylidene fluoride (PVDF) resin, and at least 80 percent of coil coated metal surfaces having minimum total dry film thickness (DFT) of 0.9 mil, 0.0009 inch; color and gloss to match sample.

B. Solar Reflectance Index (SRI): 82, Initial, less than 2:12 low-sloped roof.

C. Underside finish: Manufacturer's standard off-white enamel.

2.07 ACCESSORIES

A. Miscellaneous Sheet Metal Items: Provide flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, and equipment curbs of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.

B. Rib and Ridge Closures: Provide prefabricated, close-fitting components of steel with corrosion resistant finish or combination steel and closed-cell foam.

C. Sealants:
   1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
   2. Concealed Sealant: Non-curing butyl sealant or tape sealant.

D. Snow and Ice Retention System
   1. Material: Aluminum or stainless steel.
   2. Type: Clamp to standing seam of roofing system without penetration of roofing.
   3. Components: Clamping device at each roof seam and continuous single rod anchored to clamping device.
   4. Operation: Able to retain snow and ice and prevent snow and ice from falling from roof.
      a. Available Products:
         1) S-5! Corporation SnoRail S-5-ASF and SnoRod; www.s-5.com.
         2) Substitutions: See Section 01 60 00 - Product Requirements.
   5. Extent: Provide at roof eaves above exterior openings and above other exterior occupied areas and where indicated on drawings.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation of preformed metal roof panels until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

A. Broom clean wood sheathing prior to installation of roofing system.

B. Coordinate roofing work with provisions for weather barrier, slip sheet, roof drainage, flashing, trim, penetrations, and other adjoining work to assure that the completed roof will be free of leaks.

C. Remove protective film from surface of roof panels immediately prior to installation; strip film carefully to avoid damage to prefinished surfaces.

D. Separate dissimilar metals by applying a bituminous coating, self-adhering rubberized asphalt sheet, or other permanent method approved by metal roof panel manufacturer.

E. At locations where metal will be in contact with wood or other absorbent material subject to wetting, seal joints with sealing compound and apply one coat of heavy-bodied bituminous paint.

3.03 INSTALLATION

A. Overall: Install roofing system in accordance with metal roof panel manufacturer's instructions and recommendations, as applicable to specific project conditions; securely anchor components of roofing system in place allowing for thermal and structural movement.
   1. Install roofing system with concealed clips and fasteners, except as otherwise recommended by manufacturer for specific circumstances.

2. Minimize field cutting of panels. Where field cutting is required, use methods that will not distort panel profiles. Use of torches for field cutting is prohibited.

B. Accessories: Install necessary components that are required for complete roofing assembly, including flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, equipment curbs, rib closures, ridge closures, and similar roof accessory items.

C. If required by metal roof manufacturer or underlayment manufacturer, install slip sheet over weather barrier before installing metal roof panels.

D. Roof Panels: Install metal roof panels in accordance with manufacturer's installation instructions, minimizing transverse joints except at junction with penetrations.

3.04 INSTALLATION OF SNOW AND ICE RETENTION SYSTEM

A. Install in accordance with manufacturer's recommended installation instructions including distance away from roof eave and spacing between devices.

B. Extent: Install on roof edges as indicated to prevent snow and ice from falling to occupied areas below.

3.05 CLEANING

A. At completion of each day's work, sweep panels, flashings and gutters clean. Do not allow fasteners, cuttings, filings or scraps to accumulate.

B. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to the finish.

3.06 PROTECTION

A. Do not permit storage of materials or roof traffic on installed roof panels. Provide temporary walkways or planks as necessary to avoid damage to completed work. Protect roofing until completion of project.

B. Replace damaged roof panels or accessories before date of Substantial Completion. Panels or flashings that have severe paint and/or substrate damage shall be replaced as directed by the Architect's or Owner's representative.

END OF SECTION

SECTION 08 1416
FLUSH WOOD DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Flush wood doors; flush and flush glazed configuration; fire-rated, non-rated, acoustical, and special function.

B. Factory finishing.

1.02 RELATED REQUIREMENTS

A. Section 08 1113 - HOLLOW METAL DOORS AND FRAMES.

B. Section 08 7100 - Door Hardware.

C. Section 08 8000 - Glazing.

1.03 REFERENCE STANDARDS

A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).

B. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.

C. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

A. To provide a higher level of coordination the following building materials must be provided by the same sub-contractor.
   1. 08 1113 - Hollow Metal Doors and Frames
   2. 08 1416 - Flush Wood Doors
   3. 08 7100 - Door Hardware

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.

C. Warranty, executed in Owner's name.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section, with not less than three years of documented experience.

1.07 MOCKUP

A. Mockup one door with largest glass relite showing installation of door hardware, wood stops, glass and glazing tape.

B. Approved mock up may remain as part of the work.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Package, deliver and store doors in accordance with specified quality standard.

B. Accept doors on site in manufacturer's packaging, and inspect for damage.

C. Protect doors with resilient packaging sealed with heat shrunk plastic; do not store in damp or wet areas or areas where sunlight might bleach veneer; seal top and bottom edges with tinted sealer if stored more than one week, and break seal on site to permit ventilation.

1.09 WARRANTY

A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Wood Veneer Faced Doors:
   1. Algoma: www.algomahardwoods.com.
   2. Haley Brothers: www.haleybros.com/#sle.
   3. Lynden Door, Inc.
   4. Masonite Architectural; Aspiro Select Wood Veneer Doors: www.architectural.masonite.com/#sle.
   5. Vancouver Architectural Doors: www.vancouverdoorco.com.
   6. VT Industries: www.vtindustries.com.
   7. Western Oregon Door; www.oregondoor.com.
   8. Substitutions: See Section 01 6000 - Product Requirements.

2.02 DOORS

A. Low-Emitting Materials: Provide doors made with adhesives and composite wood products that do not contain added urea formaldehyde or doors that comply with CA 01350, the State of California's Department of Health Services Standard Practice for testing chemical emissions from building products used in schools, offices and other sensitive environments. Third party certification for this testing is required.

B. Doors: See drawings for locations and additional requirements.
   1. Quality Standard: Custom Grade, Heavy Duty performance, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
   2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.

C. Interior Doors: 1-3/4 inches thick unless otherwise indicated; flush construction.
   1. Provide solid core doors at each location.
   2. Fire Rated Doors: Tested to ratings indicated on drawings in accordance with UL 10C - Positive Pressure; Underwriters Laboratories Inc (UL) or Intertek/Warnock Hersey (WHI) labeled without any visible seals when door is open.

2.03 DOOR AND PANEL CORES

A. Doors with full light and half lite glass - Non-Rated Solid Core: Type: Staved lumber core (SLC), plies and faces as indicated.

B. All other doors - Non-Rated Solid Core and 20 Minute Rated Doors: Type particleboard core (PC), plies and faces as indicated.

C. Fire-Rated Doors: Mineral core type, with fire resistant composite core (FD), plies and faces as indicated above; with core blocking as required to provide adequate anchorage of hardware without through-bolting.

2.04 DOOR FACINGS

A. Veneer Facing for Transparent Finish: Maple , veneer grade in accordance with quality standard indicated, plain sliced (flat cut), with book match between leaves of veneer, running match of spliced veneer leaves assembled on door or panel face; unless otherwise indicated.
   1. Vertical Edges: Compatible hardwood.
   2. "Pair Match" each pair of doors; "Set Match" pairs of doors within 10 feet of each other when doors are closed.

B. Facing Adhesive: Type II - water resistant.

2.05 DOOR CONSTRUCTION

A. Fabricate doors in accordance with door quality standard specified.

B. Cores Constructed with stiles and rails:
   1. Provide solid blocks at lock edge for hardware reinforcement.
   2. Provide solid blocking for other throughbolted hardware.

C. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.

D. Fabricate any Fire Rated doors to receive panic hardware with inner blocking which will permit hardware installation without through-bolting

E. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.

F. Provide edge clearances in accordance with the quality standard specified.

2.06 FINISHES - WOOD VENEER DOORS

A. Finish work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 5 - Finishing for grade specified and as follows:
   1. Stain color: Maple, Clear
   2. Transparent:
      a. System - 11 Polyurethane Catalyzed.
      b. Sheen: Satin.

2.07 ACCESSORIES

A. Glazing Stops: Wood, of same species as door facing, butted corners; prepared for countersink style tamper proof screws.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that opening sizes and tolerances are acceptable.

C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

3.02 INSTALLATION

A. Install doors in accordance with manufacturer's instructions and specified quality standard.

B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.

C. Use machine tools to cut or drill for hardware.

D. Coordinate installation of doors with installation of frames and hardware.

E. Coordinate installation of glazing.

F. At Wood Glazing Stops: Install stops flush on both faces of doors, with no door face veneer showing. Install with tight miter corners.

G. Protect veneer from damage during construction. Do not wedge open doors with any material that might cause the veneer to split or chip.

3.03 TOLERANCES

A. Comply with specified quality standard for fit and clearance tolerances.

B. Comply with specified quality standard for telegraphing, warp, and squareness.

C. Maximum Vertical Distortion (Bow): 1/8 inch measured with straight edge or taut string, top to bottom, over an imaginary 36 by 84 inches surface area.

D. Maximum Width Distortion (Cup): 1/8 inch measured with straight edge or taut string, edge to edge, over an imaginary 36 by 84 inches surface area.

3.04 ADJUSTING

A. Adjust doors for smooth and balanced door movement.

B. Adjust closers for full closure.

3.05 SCHEDULE

A. See Door and Frame Schedule appended to this section.

END OF SECTION

DOOR HARDWARE SCHEDULE

PRODUCT	MANFACTURER SPECIFIED	APPROVED EQUAL
BUTTS	STANLEY	MCKINNEY
POWER TRANSFER	VON DUPRIN	NONE
LOCKSETS	SCHLAGE	NONE
PANICS / MULLIONS	SARGENT	NONE
ELECTRIC STRIKES	HES	NONE
CLOSERS	SARGENT	NONE
OVERHEAD STOPS	GLYNN JOHNSON	SARGENT
PULLS	TRIMCO	IVES
KICKPLATES	IVES	TRIMCO
STOPS	IVES	NONE
THRESHOLDS	PEMKO	MCKINNEY
SWEEPS	PEMKO	MCKINNEY
GASKET	STEELCRAFT	PEMKO

GROUP #1
DOORS # 100A, 102

2 EA	CONTINUOUS HINGE BY DOOR SUPPLIER		
2 EA	POWER TRANSFER EPT10	ALUM	VON DUPRIN
1 EA	PANIC 55-56-8504F L/C LESS PULL	630	SARGENT
1 EA	PANIC 55-56-8510F	630	SARGENT
2 EA	PULL 1191-3	630	TRIMCO
1 EA	MULLION L980 L/C		SARGENT
1 EA	CYLINDER 20-057 “C”	626	SCHLAGE
1 EA	CYLINDER 30-008 X B520-296 “C” 114	626	SCHLAGE
1 EA	CLOSER 281 CPS	EN	SARGENT
1 EA	DROP PLATE 281 D	EN	SARGENT
1 EA	SPACER 581-2	EN	SARGENT
1 EA	AUTO OPERATOR/ACTUATORS BY DOOR SUPPLIER HORTON 7100		

POWER SUPPLY / CARD READER BY SECURITY SECTION
BALANCE OF HARDWARE BY DOOR SUPPLIER

GROUP #2
DOORS # 100B

2 EA	CONTINUOUS HINGE BY DOOR SUPPLIER		
2 EA	POWER TRANSFER EPT10	ALUM	VON DUPRIN
1 EA	PANIC 55-56-8504F L/C LESS PULL	630	SARGENT
1 EA	PANIC 55-56-8510F	630	SARGENT
2 EA	PULL 1191-3	630	TRIMCO
1 EA	MULLION L980 L/C		SARGENT
1 EA	CYLINDER 20-057 “C”	626	SCHLAGE
1 EA	CYLINDER 30-008 X B520-296 “C” 114	626	SCHLAGE
1 EA	CLOSER 281 CPS	EN	SARGENT
1 EA	DROP PLATE 281 D	EN	SARGENT
1 EA	SPACER 581-2	EN	SARGENT
1 EA	PUSH BUTTON (RECEPTION) 660PB		SCHLAGE
1 EA	AUTO OPERATOR/ACTUATORS BY DOOR SUPPLIER HORTON 7100		

POWER SUPPLY / CARD READER BY SECURITY SECTION
BALANCE OF HARDWARE BY DOOR SUPPLIER

GROUP #3
DOORS # 100C

1 EA	CONTINUOUS HINGE BY DOOR SUPPLIER		
1 EA	POWER TRANSFER EPT10	ALUM	VON DUPRIN
1 EA	PANIC 55-56-8504F L/C LESS PULL	630	SARGENT
1 EA	PULL 1191-3	630	TRIMCO
1 EA	CYLINDER 20-057 “C”	626	SCHLAGE
1 EA	CLOSER 1431 CPS	EN	SARGENT
1 EA	DROP PLATE 1431 D	EN	SARGENT
1 EA	SPACER 581-2	EN	SARGENT

POWER SUPPLY / CARD READER BY SECURITY SECTION
BALANCE OF HARDWARE BY DOOR SUPPLIER

GROUP #4
DOORS #103, 106, 200

1 EA	CONTINUOUS HINGE BY DOOR SUPPLIER		
1 EA	POWER TRANSFER EPT10	ALUM	VON DUPRIN
1 EA	PANIC 55-56-8504F L/C LESS PULL	630	SARGENT
1 EA	PULL 1191-3	630	TRIMCO
1 EA	CYLINDER 20-057 “C”	626	SCHLAGE
1 EA	CLOSER 281 CPS	EN	SARGENT
1 EA	DROP PLATE 281 D	EN	SARGENT
1 EA	SPACER 581-2	EN	SARGENT

POWER SUPPLY / CARD READER BY SECURITY SECTION
BALANCE OF HARDWARE BY DOOR SUPPLIER

GROUP #5
DOORS #110, 111, 112, 113, 114, 115, 118, 119, 201, 207, 208

3 EA	BUTTS FBB168 4 ½ X 4 ½	652	STANLEY
1 EA	LOCKSET ND50PD RHO “C”	626	SCHLAGE
1 EA	WALLSTOP WS407CCV	630	IVES
1 SET	GASKET S44		PEMKO

GROUP #6
DOORS # 116, 168, 169, 170

3 EA	BUTTS FBB168 4.5 X 4.5	652	STANLEY
1 EA	LOCKSET L9496P 06A X 09-509 L583-363 “C”	626	SCHLAGE
1 EA	CLOSER 1431 RO	EN	SARGENT
1 EA	WALLSTOP WS407CCV	630	IVES
1 SET	GASKET S44		PEMKO

GROUP #7
DOORS # 202

3 EA	BUTTS FBB168 4.5 X 4.5	652	STANLEY
1 EA	LOCKSET L9496P 06A X 09-509 L583-363 “C”	626	SCHLAGE
1 EA	WALLSTOP WS407CCV	630	IVES
1 SET	GASKET S44		PEMKO

GROUP #8
DOORS # 117

3 EA	BUTTS FBB168 4.5 X 4.5	652	STANLEY
1 EA	LOCKSET ND80PD RHO “C”	626	SCHLAGE
1 EA	ELECTRIC STRIKE 1006 CLB	630	HES
1 EA	SMART PAC 2005 M3		HES
1 EA	WALLSTOP WS407CCV	630	IVES
1 SET	GASKET S44		PEMKO

POWER SUPPLY / CARD READER BY SECURITY SECTION

GROUP #9
DOORS # 121, 129, 134, 139, 144, 146, 155A, 155B, 156, 163

6 EA	BUTTS FBB168 4.5 X 4.5	652	STANLEY
1 EA	LOCKSET ND80PD RHO “C”	626	SCHLAGE
2 EA	FLUSHBOLT FB458	626	IVES
1 EA	OVERHEAD STOP 454S	630	GLYNN JOHNSON
2 EA	SILENCER SR64	GREY	IVES

GROUP #10
DOORS # 125A, 125B, 127A, 127B, 130A, 130B, 132A, 132B, 135A, 135B, 137A, 137B, 140A, 140B, 142A, 142B, 157, 159A, 159B, 161A, 161B, 164A, 164B, 204, 205, 209

3 EA	BUTTS FBB168 4.5 X 4.5	652	STANLEY
1 EA	LOCKSET ND80PD RHO “C”	626	SCHLAGE
1 EA	ELECTRIC STRIKE 1006 CLB	630	HES
1 EA	SMART PAC 2005 M3		HES
1 EA	CLOSER 1431 RO	EN	SAR
1 EA	OVERHEAD STOP 454S	630	GLYNN JOHNSON
1 SET	GASKET S44		PEMKO

POWER SUPPLY / CARD READER BY SECURITY SECTION

GROUP #11
DOORS # 125C, 125D, 127C, 127D, 130C, 130D, 132C, 132D, 135C, 135D, 137C, 137D, 140C, 140D, 142C, 142D, 159C, 159D, 161C, 161D, 164C, 164D

3 EA	BUTTS FBB168 4.5 X 4.5 NRP	652	STANLEY
1 EA	PANIC 8804F LD L/C LESS PULL	630	SARGENT
1 EA	PULL 1191-3	630	TRIMCO
1 EA	CYLINDER 20-057 “C”	626	SCHLAGE
1 EA	CLOSER 281 CPS	EN	SARGENT
1 EA	THRESHOLD 276A	ALUM	PEMKO
1 EA	DOOR SWEEP 315CN	ALUM	PEMKO
1 EA	RAIN DRIP 346C	ALUM	PEMKO
1 SET	GASKET PS074	BLK	STEELCRAFT

GROUP #12
DOORS # 126A, 126B, 128A, 128B, 131A, 131B, 133A, 133B, 136A, 136B, 138A, 138B, 141A, 141B, 143A, 143B, 158, 160A, 160B, 162A, 162B, 165A, 165B

2 EA	BUTTS FBB179 4.5 X 4.5	652	STANLEY
1 EA	PASSAGE ND10 RHO	626	SCHLAGE
1 EA	WALLSTOP WS407CCV	630	IVES
2 EA	SILENCER SR64	GRAY	IVES

GROUP #13
DOORS # 145A

3 EA	BUTTS FBB168 4.5 X 4.5	652	STANLEY
1 EA	LOCKSET ND80PD RHO “C”	626	SCHLAGE
1 EA	ELECTRIC STRIKE 1006 CLB	630	HES
1 EA	SMART PAC 2005 M3		HES
1 EA	CLOSER 1431 H	EN	SARGENT
1 EA	KICKPLATE 8400 10 X 34	630	IVES
1 EA	WALLSTOP WS407CCV	630	IVES
3 EA	SILENCER SR64	GRAY	IVES

GROUP #14
DOORS 166, 203

3 EA	BUTTS FBB168 4.5 X 4.5	652	STANLEY
1 EA	LOCKSET ND80PD RHO “C”	626	SCHLAGE
1 EA	WALLSTOP WS407CCV	630	IVES
3 EA	SILENCER SR64	GRAY	IVES

GROUP #15
DOORS # 145B

3 EA	BUTTS FBB168 4.5 X 4.5 NRP	652	STANLEY
1 EA	LOCKSET ND80PD RHO “C”	626	SCHLAGE
1 EA	ELECTRIC STRIKE 1006 CLB	630	HES
1 EA	SMART PAC 2005 M3		HES
1 EA	CLOSER 281 CPSH	EN	SARGENT
1 EA	KICKPLATE 8400 10 X 34	630	IVES
1 EA	THRESHOLD 276A	ALUM	PEMKO
1 EA	DOOR SWEEP 315CN	ALUM	PEMKO
1 EA	RAIN DRIP 346C	ALUM	PEMKO
1 SET	GASKET PS074	BLK	STEELCRAFT

GROUP #16
DOORS # 149, 167

3 EA	BUTTS FBB168 4.5 X 4.5 NRP	652	STANLEY
1 EA	LOCKSET ND80PD RHO "C"	626	SCHLAGE
1 EA	OVERHEAD STOP 454S	630	GLYNN JOHNSON
1 EA	THRESHOLD 276A	ALUM	PEMKO
1 EA	DOOR SWEEP 315CN	ALUM	PEMKO
1 EA	RAIN DRIP 346C	ALUM	PEMKO
1 SET	GASKET PS074	BLK	STEELCRAFT

GROUP #17
DOORS # 147A

3 EA	BUTTS FBB168 4.5 X 4.5	652	STANLEY
1 EA	LOCKSET ND80PD RHO "C"	626	SCHLAGE
1 EA	ELECTRIC STRIKE 1006 CLB	630	HES
1 EA	SMART PAC 2005 M3		HES
1 EA	CLOSER 1431 RO	EN	SAR
1 EA	KICKPLATE 8400 10 X 40	630	IVES
1 EA	WALLSTOP WS407CCV	630	IVES
1 SET	GASKET S44		PEMKO

POWER SUPPLY / CARD READER BY SECURITY SECTION

GROUP #18
DOORS # 147B

3 EA	BUTTS FBB168 4.5 X 4.5 NRP	652	STANLEY
1 EA	LOCKSET ND80PD RHO "C"	626	SCHLAGE
1 EA	ELECTRIC STRIKE 1006 CLB	630	HES
1 EA	SMART PAC 2005 M3		HES
1 EA	CLOSER 281 CPSH	EN	SAR
1 EA	KICKPLATE 8400 10 X 34	630	IVES
1 EA	THRESHOLD 276A	ALUM	PEMKO
1 EA	DOOR SWEEP 315CN	ALUM	PEMKO
1 EA	RAIN DRIP 346C	ALUM	PEMKO
1 SET	GASKET PS074	BLK	STEELCRAFT

GROUP #19
DOORS # 148

3 EA	BUTTS FBB168 4.5 X 4.5	652	STANLEY
1 EA	LOCKSET ND70P RHO “C”	626	SCHLAGE
1 EA	WALLSTOP WS407CCV	630	IVES
1 EA	KICKPLATE 8400 10 X 34	630	IVES
3 EA	SILENCER SR64	GRAY	IVES

GROUP #20
DOORS # 172

3 EA	BUTTS FBB168 4.5 X 4.5	652	STANLEY
1 EA	LOCKSET ND80P RHO “C”	626	SCHLAGE
1 EA	ELECTRIC STRIKE 1006 CLB	630	HES
1 EA	SMART PAC 2005 M3		HES
1 EA	WALLSTOP WS407CCV	630	IVES
3 EA	SILENCER SR64	GRAY	IVES

GROUP #21
DOORS # 150A

3 EA	BUTTS FBB168 4.5 X 4.5 NRP	652	STANLEY
1 EA	PANIC 8804F L/C LESS PULL	630	SARGENT
1 EA	PULL 1191-3	630	TRIMCO
1 EA	CYLINDER 20-057 “C”	626	SCHLAGE
1 EA	CLOSER 281 CPS	EN	SARGENT
1 EA	THRESHOLD 276A	ALUM	PEMKO
1 EA	DOOR SWEEP 315CN	ALUM	PEMKO
1 EA	RAIN DRIP 346C	ALUM	PEMKO
1 SET	GASKET PS074	BLK	STEELCRAFT

GROUP #22
DOORS # G001, G002, G003, G004, G005 (GATE)

HARDWARE TO BE DETERMINED

GROUP #23
DOORS # 150B

3 EA	BUTTS FBB168 4.5 X 4.5 NRP	652	STANLEY
1 EA	PANIC 8804F L/C LESS PULL	630	SARGENT
1 EA	PULL 1191-3	630	TRIMCO
1 EA	CYLINDER 20-057 “C”	626	SCHLAGE
1 EA	CLOSER 281 CPS	EN	SARGENT
1 SET	GASKET PS074	BLK	STEELCRAFT

SECTION 09 5426
WOOD CEILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Wood ceiling panels.

B. Suspension grid.

C. Trim and accessories.

D. Acoustical Liner

1.02 RELATED REQUIREMENTS

A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.

B. Section 09 2116 - Gypsum Board Assemblies

C. Section 09 2226 - Metal Suspension Systems

D. Section 09 5100 - Acoustical Ceilings.

E. Division 26 – “Electrical” for light fixture and other above ceiling equipment coordination with ceiling.

1.03 REFERENCE STANDARDS

A. ASTM A 641: Standard Specification for Zinc Coated (Galvanized) Carbon Steel Wire; 1992.

B. ASTM C 423: Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method; 1990.

C. ASTMC C 635: Standard Specifications for Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.

D. ASTM C 636: Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels; 1992.

E. ASTM E 84: Standard Test Method for Surface Burning Characteristics of Building Materials; 1991.

F. ASTM E 580: Standard Practice for Application of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Requiring Seismic Restraint; 1991.

G. AWI (QSI): Architectural Woodwork Quality Standards Illustrated; 2003.

H. CISCA: Ceiling Systems Handbook.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in panel ceiling installation with minimum [5] years experience, and approved by wood ceiling manufacturer.

B. Single-Source Responsibility for Wood Ceiling System: Obtain each type of ceiling panel from a single fabricator, with in-house shop drawing capabilities, in-house assembly and finishing capabilities, and with resources to provide products of consistent quality in appearance and physical properties without delaying the project.

C. Single-Source Responsibility for Suspension System: Obtain each type of suspension system from a single source with resources to provide products of consistent quality in appearance and physical properties without delaying project.

D. Pre-Installation Conference: Conduct conference at project site.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: For each type of product specified.

C. Samples: For verification of each type of exposed finish required. Where finishes involve normal color and texture variations, include sample sets showing the range of variations expected.
   1. 12” x 18” samples of each panel type, pattern, and color.

D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

E. Shop Drawings: Provide coordinated Shop Drawings to include reflected ceiling plan and product details. Coordinate layout and installation of wood panels and suspension system components with other construction elements that penetrate ceilings or are supported by them, including light fixtures, HVAC equipment, fire-suppression system components, partition assemblies and all perimeter conditions.

1.06 FIELD CONDITIONS

A. Do not install wood panel ceilings until spaces are enclosed and weatherproof, wet-work in spaces is completed and dry, work above ceilings is complete, and ambient temperature and humidity conditions are being maintained at the levels indicated for Project when occupied for its intended use.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Delivery & Unloading: Coordinate crate sizes, weights, unloading options, and delivery schedule with manufacturer prior to fabrication. Deliver wood panels and suspension system components to Project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other mistreatment.

B. Climatization: Before installing wood panels, permit them to reach room temperature and a stabilized moisture content (at least 72 hours) per AWI standards.

C. Handling: Handle Wood ceiling panels carefully to avoid chipping edges or damaging units in any way.

D. Protection:
   1. Personnel: Follow good safety and industrial hygiene practices during handling and installing of all products and systems, with personnel to take necessary precautions and wear appropriate protective equipment as needed. Read related literature for important information on products before installation. Contractor to be solely responsible for all personal safety issues during and subsequent to installation; architect, specifier, owner, and manufacturer will rely on contractor’s performance in such regard.
   2. Existing completed work: Protect completed work above suspension system from damage during installation of suspension system components.

1.08 EXTRA MATERIALS/WARRANTIES

A. Extra Materials: Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with labels clearly describing contents.
   1. Wood ceiling panels: Furnish quantity of full-size units equal to 2.0 percent of amount installed.
   2. Suspension System Components: Furnish quantity of each component equal to 2.0 percent of amount installed.

B. Warranties: Provide owner with a (1) year warranty for material and workmanship on all installed products.
   1. Manufacturers: All materials, wood ceiling and grid, shall be warranted for (1) one year for material and workmanship.
   2. Installer: All work shall be warranted for (1) year from date of substantial completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. 9wood, Inc., www.9wood.com.

B. Substitutions: See Section 01 6000 - Product Requirements.

2.02 WOOD CEILING PANELS

A. Suspended Wood Ceiling Panels: Type WD-1
   1. Basis of Design: 9Wood, Inc. Series: 2100 Panelized Linear Grille
      a. Members per Linear foot SKU: 2114-3
      b. Species: Douglas Fir, solid, clear, mixed grain
      c. Member Size: 3/4" inch x 3 1/4 inch
      d. Edge Profile: Square
      e. Members/LF: 3
      f. Assembly Style: Cross Piece Backer
      g. Panel Sizes: Nominal size, 4 feet to 12 feet;
      h. Fire Rating: Fire Rating Class, Class 1(A) Fire Rating
      i. Finish: Standard Clear Finish w/ Matte Sheen
      j. Color: Standard Maple Finish

2.03 SUSPENSION SYSTEMS

A. Metal T-grid Suspension System: ASTM C635, standard interior 15/16 inch heavy-duty metal suspension system using main runners, cross-tees, and wall angles, with "black" finishes as indicated. Comply with all applicable seismic codes and ordinances.

B. Attachment Devices: Size for 3 times the design load indicated in ASTM C 635, Table 1, Direct Hung unless otherwise indicated.

C. Wire, Braces, Ties, Hanger Rods, Flat Hangers and Angle Hangers: Provide wires, rods and hangers that comply with applicable ASTM specifications.

2.04 ACOUSTICAL LINER

A. Semi-rigid acoustical board applied to upper surface of certain wood grid sections, above the black fabric, where shown on drawings.

B. Manufactured by AcoustiCotton, www.acousticotton.com.
   1. Northwest Distributor: Architextures/Magicare, 206.634.1166.

C. Thickness: 2 inch.

D. Density: 4.5 pounds.

E. NRC: 1.00

F. Material: 100% recycled post-industrial denim and cotton fibers.

G. Fire Hazard Classification: Class A fire rating.

H. Color: Black.

PART 3 – EXECUTION

3.01 EXAMINATION

A. General: Examine substrates and structural framing to which ceilings attach or abut, with installer present, for compliance with requirements specified in this and other sections that affect ceiling installation and anchorage. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Coordination: Furnish layouts for cast-in-place anchors, clips, and other ceiling anchors whose installation is specified in other Sections.

B. Layout: Measure each ceiling area and establish the layout of Wood Panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders, and conform to the layout shown on reflected ceiling plans in accordance with wood ceiling manufacturer’s approved Shop Drawings.

3.03 INSTALLATION

A. General: Install ceiling grid and panel systems to comply with manufacturer's instructions and CISCA "Ceiling Systems Handbook."

B. Attachments: Suspend ceiling hangers from building's structural members per manufacturer’s instructions and in compliance with all local codes and regulations.

C. Installation of Metal T-Bar Grid: Install, align, brace, tie-off, mount, handle interferences, and space suspension T-Grid in accordance with suspension manufacturer’s instructions and in compliance with all local codes and regulations.

D. Suspension Runners: Install suspension system runners so they are square and securely interlocked with one another. Install number and use on-center spacing per wood ceiling manufacturer’s instructions, as indicated on approved Shop Drawings and in compliance with all local codes.

E. Installation of wood panels: Install wood ceiling panels in accordance with manufacturer’s installation instructions and in compliance with all local codes and regulations. Install with undamaged edges and fitted accurately to suspension system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide a neat, precise fit, as required.

F. Field stain all exposed field-cut panel ends to match finish of panels.

3.04 CLEANING

A. Clean exposed wood surfaces in accordance with manufacturer's instructions for cleaning and touchup of minor finish damage. Remove and replace wood ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION

SECTION 09 9000
PAINTING AND COATING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Field application of paints, stains, varnishes, and other coatings.

C. Materials for backpriming woodwork.

D. Scope: Finish all interior and exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
   1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
   2. Mechanical and Electrical:
      a. In finished areas, paint all insulated and exposed pipes, unless otherwise indicated.
      b. In finished areas, paint shop-primed items.
      c. On the roof and outdoors, paint all equipment that is exposed to weather or to view, including that which is factory-finished. **<<< ???? >>>**
      d. Paint interior surfaces of air ducts and convector and baseboard heating cabinets that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.

E. Do Not Paint or Finish the Following Items:
   1. Items fully factory-finished unless specifically so indicated; materials and products having factory-applied primers are not considered factory finished.
   2. Items indicated to receive other finishes.
   3. Items indicated to remain unfinished.
   4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
   5. Non-metallic roofing and flashing.
   6. Stainless steel, anodized aluminum, bronze, terne, and lead items, unless otherwise indicated.
   7. Marble, granite, slate, and other natural stones.
   8. Floors, unless specifically so indicated.
   9. Ceramic and other tiles.
   10. Brick, architectural concrete, cast stone, integrally colored plaster and stucco.
   11. Exterior insulation and finish system (EIFS).
   12. Glass.
   13. Acoustical materials, unless specifically so indicated.
   14. Concealed pipes, ducts, and conduits.

1.02 RELATED REQUIREMENTS

A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.

B. Section 05 1200 - Structural Steel Framing: Shop primed items.

C. Section 05 5000 - Metal Fabrications: Shop-primed items.

D. Section 09 9600 - High-Performance Coatings.

1.03 REFERENCE STANDARDS

A. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide complete list of all products to be used, with the following information for each:
   1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
   2. MPI product number (e.g. MPI #47).
   3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
   4. Manufacturer's installation instructions.

C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
   1. Where sheen is specified, submit samples in only that sheen.

D. Certification: By manufacturer that all paints and coatings comply with VOC limits specified.

E. Manufacturer's Instructions: Indicate special surface preparation procedures.

F. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used.

G. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 01 6000 - Product Requirements, for additional provisions.
   2. Extra Paint and Coatings: 1 gallon of each color; store where directed.
   3. Label each container with color in addition to the manufacturer's label.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.

B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum five years experience.

1.06 MOCK-UP

A. See Section 01 4000 - Quality Requirements, for general requirements for mock-up.

B. Provide panel, 10 feet long by 10 feet wide, illustrating paint coating cut-in, color, texture, and finish.

C. Provide door and frame assembly illustrating paint coating cut-in, color, texture, and finish.

D. Locate where directed.

E. Mock-up may remain as part of the work.

1.07 EXTERIOR COLOR STUDY

A. Assist the Architect in the final exterior color selection by painting the approved paint material in 3 feet x 6 feet test patches on the exterior finished wall surfaces where directed.

B. Provide up to six color samples.

C. After final color selection, cover over the test samples with primer to eliminate color bleedthrough and recoat with final approved colors.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

D. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction over project.

1.09 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.

B. Provide all paint and coating products from the same manufacturer to the greatest extent possible.
   1. In the event that a single manufacturer cannot provide all specified products, minor exceptions will be permitted provided approval by Architect is obtained using the specified procedures for substitutions.
   2. Substitution of MPI-approved products by a different manufacturer is preferred over substitution of unapproved products by the same manufacturer.

C. Paints:
   1. Glidden Professional, a product of PPG Architectural Coatings: www.gliddenprofessional.com.
   2. Benjamin Moore & Co: www.benjaminmoore.com/#sle.
   3. Parker Paint Mfg Co Inc., a Comex Group company: www.parkerpaint.com.
   4. PPG Paints: www.ppgpaints.com/#sle.
   5. Pratt & Lambert Paints: www.prattandlambert.com/#sle.
   6. Sherwin-Williams Company: www.sherwin-williams.com/#sle.

D. Primer Sealers: Same manufacturer as top coats.

E. Block Fillers: Same manufacturer as top coats.

F. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PAINTS AND COATINGS - GENERAL

A. Paints and Coatings: Ready mixed, unless intended to be a field-catalyzed coating.
   1. Where MPI paint numbers are specified, provide products listed in Master Painters Institute Approved Product List, current edition available at www.paintinfo.com, for specified MPI categories, except as otherwise indicated.
   2. Provide paints and coatings of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
   3. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

4. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color.
5. Supply each coating material in quantity required to complete entire project's work from a single production run.
6. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.

B. Primers: As follows unless other primer is required or recommended by manufacturer of top coats; where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

C. Volatile Organic Compound (VOC) Content: Comply with Section 01 6116.

D. Chemical Content: The following compounds are prohibited:
1. Aromatic Compounds: In excess of 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
2. Acrolein, acrylonitrile, antimony, benzene, butyl benzyl phthalate, cadmium, di (2-ethylhexyl) phthalate, di-n-butyl phthalate, di-n-octyl phthalate, 1,2-dichlorobenzene, diethyl phthalate, dimethyl phthalate, ethylbenzene, formaldehyde, hexavalent chromium, isophorone, lead, mercury, methyl ethyl ketone, methyl isobutyl ketone, methylene chloride, naphthalene, toluene (methylbenzene), 1,1,1-trichloroethane, vinyl chloride.

E. Flammability: Comply with applicable code for surface burning characteristics.

F. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

G. Colors: To be selected from manufacturer's full range of available colors.
1. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.
2. In utility areas, finish equipment, piping, conduit, and exposed duct work in colors according to the color coding scheme indicated.

2.03 REFERENCED GLOSS LEVELS

A. Some of the following Gloss Level references may be used in the Paint Systems outlined below and are defined here for reference. Gloss units are as measured at 60 degrees from perpendicular, per ASTM D523.
1. Gloss Level 1 a traditional matte finish - flat: maximum 5 units.
2. Gloss Level 2 a high side sheen flat - a 'velvet-like' finish: maximum 10 units.
3. Gloss Level 3 a traditional 'eggshell-like' finish: 10-25 units.
4. Gloss Level 4 a 'satin: 20-35 units.
5. Gloss Level 5 a traditional semi-gloss: 35-70 units.
6. Gloss Level 6 a traditional gloss: 70-85 units.
7. Gloss Level 7 a high gloss: more than 85 units.

2.04 PAINT SYSTEMS - EXTERIOR

A. Concrete, Opaque, Latex, 3 Coat:
1. One coat of latex primer sealer, alkali-resistant, MPI #3.
2. Satin: Two coats of latex enamel, MPI #161.

B. Ferrous Metals: Specified in Section 09 9600 High-Performance Coatings.

C. Galvanized-Metal Substrates:
1. Two-Component, Pigmented Aliphatic Acrylic Polyurethane: One finish coat, over intermediate coat and metal primer.
a. Prime: Manufacturer's recommended metal primer.
1) AkzoNobel Devoe Coatings: 224HS Devran Epoxy Coating.
2) Sherwin Williams: Dura Plate 235 Multi-Purpose Epoxy Primer (High Solids).

b. Intermediate Coat: Polyamide Epoxy; MPI #108.
    1) AkzoNobel Devoe Coatings: Bar-Rust 235 Epoxy.
    2) Sherwin Williams: Macropoxy 646 Fast Cure Epoxy B58.
    3) Applied 3.0 - 5.0 mils dry film thickness, or greater if recommended by
c. Finish Coat: Aliphatic Urethane - Finish Coat; MPI #72.
    1) AkzoNobel Devoe Coatings: Devthane 379.
    2) Sherwin Williams: Hi-Solids Polyurethane 250.
    3) Applied 2.0 - 3.0 mils dry film thickness, 3.2 - 4.8 wet.
    4) Gloss: MPI gloss level 6-7.
d. Additional Topcoats: Manufacturer's recommended clear topcoat, it any, as required to ensure colorfastness of final coating system.

2.05 PAINT SYSTEMS - INTERIOR

A. Concrete Masonry, Opaque, Latex, 3 Coat:
    1. One coat of block filler, MPI #4.
    2. One coat of latex primer sealer, MPI #6.
    3. Semi-gloss: Two coats of latex enamel, MPI #163.

B. Wood, Transparent, Low-VOC Polyurethane Varnish:
    1. One coat sealer recommended by varnish manufacturer.
    2. Satin: Two coats of varnish, MPI #128.

C. Ferrous Metals in reach of building occupants: Specified in Section 09 9600 High-Performance Coatings.

D. Ferrous Metals, shop-primed, Low-VOC dry-fall Latex:
    1. Spot-prime with rust-inhibitiveprimer, MPI #107. << or 76, 79? >>
    2. One coat of latex dry-fall, MPI #155. <<or 118, 131, 133, 158, 226 >>

E. Galvanized Metals, Low-VOC Latex:
    1. One coat galvanize primer, MPI 134.
    2. Semi-gloss: Two coats of latex enamel, MPI #147.

F. Gypsum Board/Plaster, Wet Areas (restrooms, showers, kitchens, janitor's rooms, and where noted):
    1. One coat of PVA epoxy primer sealer, MPI #50.
    2. Semi-gloss: Two coats of epoxy enamel, MPI #215.
    3. Apply primer prior to wall texture provided by 09 2116.

G. Gypsum Board/Plaster, all other areas:
    1. One coat of PVA primer sealer, MPI #50.
    2. Eggshell (Satin): Two coats of latex enamel, MPI #146.
    3. Apply primer prior to wall texture provided by 09 2116.

2.06 ACCESSORY MATERIALS

A. Accessory Materials: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required to achieve the finishes specified whether specifically indicated or not; commercial quality.

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

D. Test shop-applied primer for compatibility with subsequent cover materials.

E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
   1. Gypsum Wallboard: 12 percent.
   2. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.
   3. Interior Wood: 15 percent, measured in accordance with ASTM D4442.
   4. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

A. Clean surfaces thoroughly and correct defects prior to coating application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

D. Seal surfaces that might cause bleed through or staining of topcoat.

E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

F. Galvanized Surfaces to be Painted: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.

G. Interior Wood Surfaces to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats. Prime concealed surfaces with gloss varnish reduced 25 percent with thinner.

3.03 APPLICATION

A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

B. Apply products in accordance with manufacturer's instructions.

C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

D. Apply each coat to uniform appearance.

E. Sand wood and metal surfaces lightly between coats to achieve required finish.

F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

G. Wood to Receive Transparent Finishes: Tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.

H. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.05 PROTECTION

A. Protect finished coatings until completion of project.

B. Touch-up damaged coatings after Substantial Completion.

END OF SECTION

SECTION 09 9600
HIGH-PERFORMANCE COATINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. High performance coatings (HPC or HP) for the following conditions:
   1. Exterior Substrates:
      a. Steel.
      b. Galvanized steel.
   2. Interior Substrates:
      a. Steel.
      b. Galvanized steel.

B. Special preparation of surfaces.

1.02 RELATED REQUIREMENTS

A. Section 05 1200 - Structural Steel Framing: Shop priming of metal substrates with primers specified in this Section.

B. Section 05 1213 - Architecturally-Exposed Structural Steel Framing:

C. Section 05 5000 - Metal Fabrications: Shop priming of metal substrates with primers specified in this Section.

D. Section 05 5100 - Metal Stairs: Shop priming of metal substrates with primers specified in this Section.

E. Section 05 2100 - Steel Joist Framing: Shop priming of metal substrates with primers specified in this Section.

F. Section 05 3100 - Steel Decking: Shop priming of metal substrates with primers specified in this Section.

G. Section 08 1113 - Hollow Metal Doors and Frames: Shop priming of metal substrates with primers specified in this Section.

1.03 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency.

B. ASTM D3359 - Standard Test Method for Measuring Adhesion by Tape Test.

C. SSPC-PA 2 - Measurement of Dry Coating Thickness with Magnetic Gages.

D. SSPC-SP 3 - Power Tool Cleaning; Society for Protective Coatings.

E. SSPC-SP 6 - Commercial Blast Cleaning; Society for Protective Coatings.

1.04 SUBMITTALS

A. See Section 01 3300 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data indicating coating materials.
   1. Include printed statement of VOC content and chemical components for interior coatings.

C. Samples for Verification: For each type of coating system and in each color and gloss of finish coat indicated.
   1. Submit Samples on shop primed and galvanized steel, 8 inches square.

D. Product List: For each product indicated. Cross-reference products to coating system and locations of application areas. Use same designations indicated on Drawings and in schedules.

E. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention, and surface preparation requirements.

F. Maintenance Data: Include cleaning procedures and repair and patching techniques.
   1. At project completion, provide an itemized list complete with manufacturer, coating type and color coding for all colors used for Owner's later use in maintenance.

G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Extra Coating Materials: 1 gallon of each type and color. All extra stock containers are to be new and unopened.
   2. Label each container with manufacturer's name, product number, color number, and room names and numbers where used.

1.05 PREINSTALLATION CONFERENCE

A. Preinstallation Conference: Convene a preinstallation meeting one week before starting work of this section; require attendance by all relevant installers. Agenda items will include field conditions, substrate conditions, coordination of shop applied primers with finish coatings, application methods, and field quality control testing and inspection.
   1. Bring copies of reviewed color draw-downs for all required colors.

1.06 QUALITY ASSURANCE

A. Master Painters Institute (MPI) Standards:
   1. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and coating systems indicated.

B. Surface Preparation: Obtain written confirmation of the specific surface preparation procedures and primers used for all fabricated steel items from the fabricator(s) to ascertain appropriate and manufacturer compatible finish coat materials to be used before painting any such work.

C. Comply with requirements of SSPC-PA 2 for measurement of coating thickness.

1.07 MOCK-UP

A. Mockups: Apply benchmark samples of each coating system indicated to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
   1. Architect will select one surface to represent surfaces and conditions for application of each type of coating and substrate.
   2. Apply interior benchmark samples after permanent lighting and other environmental services have been activated.
   3. Final approval of color selections will be based on benchmark samples.
      a. If preliminary color selections are not approved, apply additional benchmark samples of additional colors selected by Architect at no added cost to Owner.

B. Locate where directed.

C. Mock-up may remain as part of the Work.

1.08 FIELD CONDITIONS

A. Do not install materials when temperature is below 55 degrees F or above 90 degrees F.

B. Maintain this temperature range, 24 hours before, during, and 72 hours after installation of coating.

C. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

D. Restrict traffic from area where coating is being applied or is curing.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Products: Provide one of the products listed in Part 2.

B. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in Part 2:
   1. AkzoNobel Devoe Coatings (AkzoNobel)
   2. Sherwin-Williams Co. (S-W).
   3. Tnemec Company, Inc. (Tnemec).

C. Substitutions: Not permitted.

2.02 MATERIALS

A. Coatings - General: Provide complete multi-coat systems formulated and recommended by manufacturer for the applications indicated, in the thicknesses indicated.
   1. For shop primed items, omit specified primer if shop primer is compatible with finish coats and in good condition as determined by finish coating manufacturer.

B. Material Compatibility: Provide materials for use within each coating system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.

C. Volatile Organic Compound (VOC) Content:
   1. Provide coatings that comply with the most stringent requirements specified in the following:
      a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
         1) Anti-Corrosive and Anti-Rust Paints Applied to Ferrous Metals: VOC not more than 250 g/L.
   2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

D. Chemical Content: The following compounds are prohibited at interior applications:
   1. Aromatic Compounds: In excess of 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
   2. Acrolein, acrylonitrile, antimony, benzene, butyl benzyl phthalate, cadmium, di (2-ethylhexyl) phthalate, di-n-butyl phthalate, di-n-octyl phthalate, 1,2-dichlorobenzene, diethyl phthalate, dimethyl phthalate, ethylbenzene, formaldehyde, hexavalent chromium, isophorone, lead, mercury, methyl ethyl ketone, methyl isobutyl ketone, methylene chloride, naphthalene, toluene (methylbenzene), 1,1,1-trichloroethane, vinyl chloride.

2.03 EXTERIOR, HIGH-PERFORMANCE COATING SCHEDULE

A. Ferrous Metal: Provide the following finish systems over exterior ferrous metal. Primer is not required on appropriately shop-primed items.
   1. Two-Component, Pigmented Aliphatic Acrylic Polyurethane: One finish coat, over one intermediate coat, and one metal primer coat.
      a. Prime: Manufacturer's recommended Zinc-rich metal primer; MPI#19, MPI #20.
         1) AkzoNobel Devoe Coatings: 302H Catha-Coat Reinforced Zinc Primer.
         2) Sherwin Williams: Zinc-Clad XI
         3) Tnemec: Series 394 PerimePrime
         4) Applied 4.0 - 7.0 mils dry film thickness.

b. Intermediate Coat: Polyamide Epoxy; MPI #108
    1) AkzoNobel Devoe Coatings: Bar-Rust 235 Epoxy
    2) Sherwin Williams: Macropoxy 646 Fast Cure Epoxy B58.
    3) Tnemec: Series 27 Typoxy WB at 3 to 5 mils.
    4) Applied 5.0 - 10.0 mils dry film thickness, or greater if recommended by manufacturer for even color.
c. Finish Coat: Aliphatic Urethane - Finish Coat; MPI #72
    1) AkzoNobel Devoe Coatings: Devthane 379
    2) Tnemec: Series 750 Endura-Shield at 2 to 3 mils.
    3) Sherwin Williams: Hi-Solids Polyurethane 250
    4) Applied 3.0 - 5.0 mils dry film thickness, or greater if recommended by manufacturer for even color.
    5) Gloss: MPI gloss level 6-7
d. Additional Topcoats: Manufacturer's recommended clear topcoat, it any, as required to assure colorfastness of final coating system.

B. Zinc-Coated Metal: Provide the following finish systems over exterior zinc-coated (galvanized) metal surfaces:
1. Two-Component, Pigmented Aliphatic Acrylic Polyurethane: One finish coat, over one intermediate coat.
    a. Intermediate Coat: Polyamide Epoxy; MPI #108
        1) AkzoNobel Devoe Coatings: Bar-Rust 235 Epoxy
        2) Sherwin Williams: Macropoxy 646 Fast Cure Epoxy B58.
        3) Tnemec: Series 27 Typoxy WB at 3 to 5 mils.
        4) Applied 3.0 - 5.0 mils dry film thickness, or greater if recommended by manufacturer for even color.
    b. Finish Coat: Aliphatic Urethane - Finish Coat; MPI #72
        1) AkzoNobel Devoe Coatings: Devthane 379
        2) Tnemec: Series 750 Endura-Shield at 2 to 3 mils.
        3) Sherwin Williams: Hi-Solids Polyurethane 250
        4) Applied 3.0 - 5.0 mils dry film thicknessor greater if recommended by manufacturer for even color.
        5) Gloss: MPI gloss level 6-7
    c. Additional Topcoats: Manufacturer's recommended clear topcoat, it any, as required to assure colorfastness of final coating system.

2.04 INTERIOR HIGH-PERFORMANCE COATING SCHEDULE

A. Ferrous Metal: Provide the following finish systems over interior ferrous metal.
1. Semi-Gloss, Two-Component, VOC Compliant or Waterborne Pigmented Aliphatic Acrylic Polyurethane: One or two finish coats, of two-component, aliphatic acrylic polyurethane coating, over metal primer with total dry film thickness not less than 6.0 mils, unless noted otherwise.
2. Primer Coat: Polyamide Epoxy; MPI #108
    a. AkzoNobel Devoe Coatings: Bar-Rust 235 Epoxy
    b. Sherwin Williams: Macropoxy 646 Fast Cure Epoxy B58.
    c. Tnemec: Series 27 Typoxy WB at 3 to 5 mils.
    d. Applied 4.0 - 6.0 mils dry film thickness, or greater if recommended by manufacturer for even color.
3. Finish Coat: Aliphatic Urethane - Finish Coat; MPI #72
    a. AkzoNobel Devoe Coatings: Devthane 379
    b. Tnemec: Series 750 Endura-Shield at 2 to 3 mils.
    c. Sherwin Williams: Hi-Solids Polyurethane 250

d. Applied 3.0 - 5.0 mils dry film thickness, or greater if recommended by manufacturer for even color.
e. Gloss: MPI gloss level 6-7

4. Additional Topcoats: Manufacturer's recommended clear topcoat, it any, as required to assure colorfastness of final coating system.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that substrate surfaces are ready to receive work as instructed by the coating manufacturer. Obtain and follow manufacturer's instructions for examination and testing of substrates.

3.02 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Remove plates, machined surfaces, and similar items already in place that are not to be coated. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and coating.

1. After completing coating operations, reinstall items that were removed; use workers skilled in the trades involved.

C. Clean substrates of substances that could impair bond of coatings, including dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers as required to produce coating systems indicated.
2. At interior steel abrade the top layer of primer, unless otherwise required by coating manufacturer.
3. At exterior steel, provide surface preparation equivalent to SSPC-SP 6 "Commercial Blast Cleaning."

D. Steel Substrates: Remove rust and loose mill scale.

1. Prepare interior surfaces as recommended by coating system manufacturer and according to SSPC-SP 3 "Power Tool Cleaning."
2. Blast steel surfaces clean as recommended by coating system manufacturer and according to SSPC-SP 6 "Commercial Blast Cleaning," unless otherwise recommended by manufacturer.
3. Level of surface preparation specified is a minimum. If the coating manufacturer requires a higher degree of preparation, comply with the coating manufacturer's recommendations.

E. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied coatings.

F. Remove finish hardware, fixture covers, and accessories and store.

G. Protect adjacent surfaces and materials not receiving coating from spatter and overspray; mask if necessary to provide adequate protection. Repair damage.

3.03 PRIMING

A. Apply primer to unprimed surfaces, unless specifically not required by coating manufacturer. Apply in accordance with coating manufacturer's instructions.

3.04 COATING APPLICATION

A. Apply coatings in accordance with manufacturer's instructions, to thicknesses specified. Use applicators and techniques suited for coating and substrate indicated.

B. Apply in uniform thickness coats, without runs, drips, pinholes, brush marks, or variations in color, texture, or finish. Finish edges, crevices, corners, and other changes in dimension with full coating thickness.

C. If undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color and appearance.

D. When the color of a door frame changes from side to side, the change shall be made at the edge of the stop, where the transition is not visible when the door is in a closed position.

3.05 FIELD QUALITY CONTROL

A. Painted surfaces shall be considered to lack uniformity and soundness if any of the following defects are apparent to Architect.
   1. Brush/roller marks, streaks, laps, runs, sags, drips, heavy stippling, hiding or shadowing by inefficient application methods, skipped or missed areas, or foreign materials in paint coatings.
   2. Evidence of poor coverage at rivet heads, plate edges, lap joints, crevices, pockets, corners, reentrant angles or similar conditions.
   3. Damage due to touching before paint is sufficiently dry or any other contributory cause.
   4. Damage due to application on moist surfaces or caused by inadequate protection from the weather.
   5. Damage and/or contamination of paint due to blown contaminants (dust, spray paint, etc.).

B. Painted surfaces shall be considered unacceptable if any of the following are evident under natural lighting source for exterior surfaces:
   1. Visible defects are evident on vertical or horizontal surfaces when viewed at normal viewing angles from a distance of not less than 39 inches.
   2. Visible defects are evident on ceilings, soffits and other overhead surfaces when viewed at normal viewing angles.
   3. When the final coat on any surface exhibits a lack of uniformity of color, sheen texture and hiding across full surface area.
   4. Dry mil thicknesses do not meet manufacturer’s recommended thickness or specified thickness.
   5. Lack of adhesion. Test surfaces indicating lack of adhesion in accordance with ASTM D3359 or as recommended by coating manufacturer.

C. Owner will provide field inspection and testing.
   1. Painted surfaces will be tested for dry mil thickness for each coat.
   2. Shop primers and painted surfaces will be tested for adhesion.
   3. Surfaces will be tested at frequency discussed in the preinstallation conference and as deemed appropriate by Owner.

3.06 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

B. Clean surfaces immediately of overspray, splatter, and excess material.

C. Protect work of other trades against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, as approved by Architect, and leave in an undamaged condition.

D. After coating has cured, clean and replace finish hardware, fixtures, and fittings previously removed.

E. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

3.07 PROTECTION

A. Protect finished work from damage.

3.08 EXTERIOR SCHEDULE

A. Ferrous Metal: Semigloss, Two-Component, Pigmented Aliphatic Acrylic Polyurethane. One finish coat, over one intermediate coat, and one metal primer coat:
   1. Trike Canopy Structural Steel Columns and Beams
   2. Steel Bollards
   3. Hollow metal doors and frames
   4. Other locations where indicated

B. Galvanized Metal: Semigloss, Two-Component, Pigmented Aliphatic Acrylic Polyurethane. One finish coat, over intermediate coat:
   1. Steel Pipe Downspouts
   2. Steel Lintels

3.09 INTERIOR SCHEDULE

A. Steel: Semigloss, Two-Component, Pigmented Aliphatic Acrylic Polyurethane. One finish coat, over intermediate coat and metal primer:
   1. Hollow metal doors and frames.
   2. Other locations where indicated.

END OF SECTION

SECTION 10 2239
FOLDING PANEL PARTITIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Paired Panel Operable Panel Partition

B. Ceiling track and operating hardware.

1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Wood blocking and track support shimming.

B. Section 09 2116 - Gypsum board assemblies - Enclosure around structural support framing.

1.03 REFERENCE STANDARDS

A. ASTM E557 - Standard Guide for Architectural Design and Installation Practices for Sound Isolation Between Spaces Separated by Operable Partitions; 2012 (Reapproved 2020).

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on partition materials, operation, hardware and accessories, electric operating components, track switching components, and colors and finishes available.

C. Design Data: Design calculations, bearing seal and signature of structural engineer licensed to practice in the State in which the Project is located, showing loads at points of attachment to the building structure.

D. Shop Drawings: Indicate opening sizes, track layout, details of track and required supports, static and dynamic loads, location and details of pass door and frame, adjacent construction and finish trim, and stacking depth.

E. Samples for Review: Submit two samples of surface finish, 12 by 12 inches size, illustrating quality, colors selected, texture, and weight.

F. Certificates: Certify that partition system meets or exceeds specified acoustic requirements.

G. Manufacturer's Instructions: Indicate special procedures, perimeter conditions requiring special attention, and installation sequence.

H. Maintenance Data: Include recommended cleaning methods, cleaning materials, and stain removal methods. Describe cleaning materials detrimental to finish surfaces and hardware finish.
   1. Seals, hardware, track, carriers, and other operating components.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified this section with minimum three years of documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified and with at least 5 years of documented experience.

1.06 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Provide two year manufacturer warranty against defects in material and workmanship, excluding abuse.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Folding Panel Partitions - Horizontal Opening:
   1. Basis od Design Product: Pixel manufactured by Maharam
   2. Hufcor, Inc; Series 600: www.hufcor.com/#sle.
   3. Corflex; Series 5500 - 5600; https://corflex.ca/en/products/movable-partitions/
   4. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PAIRED PANEL OPERABLE WALL

A. Paired Panel Operable Panel Partition: Side opening; paired panels; center stacking as indicated; manually operated, top supported with operable floor seals and automatic seals.
   1. Basis of Design: Modernfold Acousti-Seal 932 - Operable Wall between classrooms
      a. Panel Finish: Fabric wall covering.
         1) Bottom 4 feet of each face of panel: Plastic laminate, color to be selected from manufacturer's standard line.
         2) Fabric: To be selected from manufacturer's standard line.
   2. Sound Transmission Class (STC): Minimum 54 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90, on panel size of 100 sq ft.
   3. Surface Burning Characteristics of Panel Finish: Flame spread/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84.
   4. Installed partition system track capable of supporting imposed loads, with maximum deflection of 1/360 of span.

B. Panel Construction:
   1. Panel Frame: 16-gage formed steel with overlapped and welded corners.
      a. Top channel reinforced to support suspension system components.
   2. Panel Skins: Steel sheet, 4.25 inch thick.
      a. construction. 21-gage steel construction.
      b. Panel skins shall be lock formed and welded directly to the frame for unitized construction. 21-gage steel construction.
   3. Core: Fiberglass construction utilizing manufacturer's standard fabrication methods.

C. Core: 16 gage formed sheet steel frame top, bottom, jambs, and intermediates; welded construction, internally reinforced at suspension points, with acoustical insulation fill.
   1. Factory applied surface finish.
   2. Trim: Trimless. Wrap surface covering around panel edge and into astragal for fine line panel joint.
   3. Hinges: Full leaf butt hinges attached directly to panel with welded hinge anchor plates within panel. Provide reinforcing backer plate welded to frame for attachment of hinges.
   4. Panel to Panel Seals: Grooved and gasketed astragals; continuous flexible ribbed vinyl seal fitted to panel edge construction. Provide wall mounted interlocking jamb at each wall.

D. Track: Minimum 11 gage roll-formed steel track, supporting the load-bearing surface of the track, connected to structural support by pairs of threaded rods.
   1. Exposed Track Soffit: Steel, integral to track, prefinished.
   2. Products:
      a. Hufcor: #11 Track.
      b. Modernfold: #17 Track.

E. . Carriers: Provide 2 each - Ball bearing, steel 4-wheeled trolley carriers at top of every individual panel, sized to carry imposed loads, with threaded pendant bolt for vertical adjustment.

F. Carriers: One all-steel trolley with steel tired ball bearing wheels per panel, except hinged panels.

G. Acoustic Top and Bottom Seals: 2-inch automatic bottom seals and fixed bulb/two finger top seals. Continuous contact sweep bottom seals are not permitted.

H. Acoustic Jamb Seals: Flexible acoustic seals at jambs at each wall.

I. Hardware: Latching door handles of cast steel, satin chrome finish; pull bars; and all other hardware for a complete installation.

J. Acoustic Wall Panel - Fabric Covered Tackboard: Natural cork tackboard with fabric covering; 1/4 inch thick; color as selected from manufacturer's standard range for fabric manufacturer, style, and color.

K. Acoustic Sealant: Partition manufacturer's standard type .

2.03 MATERIALS

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify track supports are laterally braced and will permit track to be level within 1/4 inch of required position and parallel to the floor surface.

C. Verify floor flatness of 1/8 inch in 10 feet, non-cumulative.

D. Verify wall plumbness of 1/8 inch in 10 feet, non-cumulative.

3.02 INSTALLATION

A. Install partition in accordance with manufacturer's instructions and ASTM E557.

B. Fit and align partition assembly and pass door level and plumb.

C. Lubricate moving components.

D. Install acoustic sealant to achieve required acoustic performance.

E. Coordinate electrical connections.

3.03 ADJUSTING

A. Adjust partition assembly to provide smooth operation from stacked to full open position. Do not over-compress acoustic seals.

B. Visually inspect partition in full extended position for light leaks to identify a potential acoustical leak.

C. Adjust partition assembly to achieve lightproof seal.

3.04 CLEANING

A. Clean finish surfaces and partition accessories.

3.05 CLOSEOUT ACTIVITIES

A. Demonstrate operation of partition and identify potential operational problems.

B. Training: Provide a minimum of 2 hours of training on operation, maintenance and repair.

END OF SECTION

SECTION 11 40 00
FOOD SERVICE EQUIPMENT

PART 1 GENERAL

1.01 SECTION INCLUDES:

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 0 and Division 1 Specification Sections apply to this Section.

1.02 RELATED WORK

A. Rough-ins and Final Connections: Service lines from rough-in to point of final connections are provided by plumbing and electrical contractors.

B. Electrical: Wiring, conduit, fuses, breakers, final disconnects, junction boxes, and other required electrical apparatus not built-in or mounted on equipment are provided by electrical contractor.

C. Plumbing: Controls, regulators, valves, stops, traps, strainers, checks, grease traps, and fittings not mounted on/in equipment are provided by plumbing contractor.

D. Mechanical: Ductwork from above finished ceiling to building exhaust and supply fans, flue pipes, exhaust and supply fans for hoods, room ventilation, and air supply blowers are provided by mechanical contractor.

E. Miscellaneous by General Contractor:
   1. Provides backing plates or blocking in wall or ceiling partitions.
   2. Provides fittings secured to structural ceiling to accommodate hangers.
   3. Provides the forming of architectural enclosures, floor, wall openings or recesses for equipment.
   4. Caulks and seals Cold Storage Room floor sections to building floor.
   5. Finishes floors (masonry or poured-in-place) in cold storage rooms, concrete curbs and pads.

1.03 DEFINITIONS

A. Furnish - Supply and deliver to Project Site, ready for unloading, unpacking, assembly, installation, and similar operations.

B. Install (set in place) - Work at Project Site, including actual unloading, unpacking, assembly, erecting, rigging, placing, anchoring, applying, finishing, curing, protecting, cleaning, and similar operations, ready for final utility connections by other Sections as appropriate.

C. Coordinate – Relay required information requested by other trades to ensure they are able to correctly perform their work related to the food service or laundry equipment installation.

D. Provide - Furnish and install complete, ready for intended use.

E. Contractor - All references to the Contractor in this Section 114000 shall refer to the Kitchen Equipment Contractor. Reference to any other Contractor shall be specific, such as General Contractor, Plumbing Contractor, Electrical Contractor, Architect, designated, etc.

F. Fabricated Equipment: Constructed to configuration, dimension, detail, and design as shown with materials and workmanship as specified.

G. Manufactured Equipment: Mass produced and referenced by manufacturer’s name and model number.

1.04 LAWS, ORDINANCES AND STANDARDS

A. STANDARDS: Except as otherwise indicated, comply with the following standards as applicable to the manufacture, fabrication, and installation of the work of this Section:
   1. Air Conditioning and Refrigeration Institute (ARI): Comply with the applicable regulations and references of the latest edition of standards for remote refrigeration system(s), components, and installation.

2. American Gas Association (AGA): Comply with AGA standards for gas heated equipment and provide equipment with the AGA seal. Automatic safety pilots shall be provided on all equipment, where available. (Canadian Gas Association or alternate testing lab's seals may be accepted if acceptable to local code jurisdictions.)
3. American National Standards Institute (ANSI): Comply with ANSI Z21-Series standards for gas-burning equipment and provide labels indicating name of testing agency.
4. American National Standards Institute (ANSI): Comply with ANSI B57.1 for compressed gas cylinder connections and with applicable standards of the Compressed Gas Association for compressed gas piping.
5. American National Standards Institute (ANSI): Comply with ANSI A40.4 and A40.6 for water connection air gaps and vacuum breakers.
6. American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE): Comply with the applicable regulations and the latest edition of standards for remote refrigeration system(s), components, and installation.
7. American Society of Mechanical Engineers (ASME): Comply with ASME Boiler Code requirements for steam generating and steam heated equipment and provide ASME inspection, stamp, and registration with National Board.
8. American Society for Testing and Materials (ASTM): Comply with ASTM C1036 for flat glass.
9. American Society for Testing and Materials (ASTM): Comply with ASTM C1048 for heat-treated flat glass – Kind HS, Kind FT coated and uncoated glass.
10. American Welding Society (AWS): Comply with AWS D1.1 structural welding code.
11. National Electric Code (NEC): Comply with NFPA Volume 5 for electrical wiring and devices included with food service equipment, ANSI C2 and C73, and applicable NEMA and NECA standards.
12. National Electrical Manufacturers Association (NEMA): Comply with NEMA LD3 for high-pressure decorative laminates.
13. National Fire Protection Association (NFPA): Comply with the applicable sections of the NFPA for exhaust hood, ventilators, duct and fan materials, hoods fire suppression systems, construction and installation, as well as local codes and standards.
14. National Sanitation Foundation (NSF): Comply with the latest Standards and Revisions established by NSF for equipment and installation. Provide NSF Seal of Approval on each applicable manufactured item and on items of custom fabricated work. (UL Sanitation approval and seal may be accepted if acceptable to local code jurisdictions.)
15. Sheet Metal and Air Conditioning National Association (SMACNA): Comply with the latest edition of SMACNA guidelines for seismic restraint of kitchen equipment and applicable local regulatory agencies requirements.
16. Underwriters Laboratories (UL): Provide either UL labeled products for electrical components and assemblies or, where no labeling service is available, "recognized markings" to indicate listing in the UL "Recognized Component Index". (Canadian Standards Association or alternate testing lab's seals may be accepted if acceptable to local code jurisdictions.)
17. UL 300 Standard: Wet chemical fire suppression systems for exhaust hoods/ventilators shall comply with these requirements.
18. American with Disabilities Act (ADA): Comply with requirements as applicable to this Project.
19. Refrigeration Service Engineers Society (RSES): Comply with the applicable regulations, the latest edition of standards for remote refrigeration system(s), components and installation, and the 1995 requirements of the Montreal Protocol Agreement.
20. All refrigerants used for any purpose shall comply with the 1995 requirements of the Montreal Protocol Agreement and subsequent revisions and amendments. No CFC refrigerants shall be allowed on this Project.
21. All refrigeration components installation, repairs, and/or associated work on any refrigeration system, self-contained or remote, shall be performed by a Certified Refrigeration Mechanic.

22. Comply with all applicable local codes, standards and regulations, and any special local conditions (example only: City of Los Angeles Testing Lab requirements or seismic standards compliance).
23. Jails, prisons, and all detention facilities shall comply with Correctional Standards as applicable to the specific Project. Verify the level of security and construction required with the Project Architect and provide all items in compliance. As a minimum, no part or component of any item provided shall be easily removable and used as a weapon.
24. Subway grating installed in floor drain troughs must meet IBC 1104.3.1 standards for maximum opening sizes in grates.
25. Confirm all drawings, specifications, and project documentation meet all federal, state, and local codes and regulations.

1.05 CONTRACTOR QUALIFICATIONS

A. In addition to requirements of Related Sections 1.02, submit evidence of compliance with the following qualifications and conditions:
   1. Five (5) years minimum continuous operation under the same company name and ownership.
   2. Evidence of Company's financial stability and financial ability to complete this Project without endangering that stability.
   3. List a minimum of comparable size and scope projects completed in the last five (5) years with Owner's contact name and telephone number.
   4. Have manufacturer's authorization to purchase, distribute, and install all items specified with this Project.
   5. Maintain a staff or have access to personnel with a minimum of five (5) years' experience in the installation of comparable size and scope projects, and meeting NSF standards and requirements. (UL Sanitation standards and requirements may be accepted if acceptable to local code jurisdictions.)
   6. Maintain or have access to a fabrication shop meeting NSF standards and labeling requirements. (UL Sanitation approval and seal may be accepted if acceptable to local code jurisdictions.) If other than the Contractor's own fabrication shop, they shall have five (5) years minimum experience in the fabrication of comparable size, scope, and level of quality projects. The Contractor shall submit their company name and credentials to the Architect, who shall have the right of approval or disapproval
   7. Maintain a staff or have access to personnel experienced in the preparation of professional style shop drawings and submittals.
   8. Maintain or have access to manufacturer's authorized service personnel together with readily available stock of repair and replacement parts.
   9. Any sub-Contractor employed by Contractor for this Project shall comply with the same qualification requirements.

1.06 SUBSTITUTIONS

A. Refer to Section 01 25 00 – Substitution Procedures for Substitution Request requirements.

1.07 APPROVED SUBSTITUTIONS AND/OR LISTED ALTERNATES

A. Substitutions approved as noted in article entitled "SUBSTITUTIONS" above and/or any Listed Alternate Manufacturers listed in these Itemized Specifications or added by Addendum may be utilized in lieu of the primary specified manufacturer with the following conditions and understanding:
   1. The Project Documents are designed and engineered using the primary specified manufacturer and model. The Contractor shall assume total responsibility for any deviations required due to the utilization of a substitution/alternate manufacturer or model including, but not limited to, fitting alternates into the available space, providing directions for required changes, and assuming any and all associated costs for utility, building, food service design, architectural, or engineering changes directly or indirectly related to the substitution.

2. The Contractor shall be responsible for supplying the model, which is equal to the primary specified model in regard to general function, features, options, sizes, accessories, utility requirements, finish, operation, and listing approvals. If the Owner or their appointed representative determines at any time during the construction and installation, prior to the final acceptance of the Project, that the substitution/alternate model submitted is not equal to the primary specified model, the Contractor shall assume all associated cost and implications required to replace the model submitted with the correct model.
3. The bid proposal shall clearly state any substitutions/alternates which will be utilized, including the manufacturer and model number. The proposal shall also include a data sheet for each substitution/alternate with any and all deviations between the primary specified manufacturer and the substitution/alternate manufacturer itemized and listed on the data sheet. The manufacturers' cut sheets are not acceptable as a substitute for the data sheet. Complex alternates, such as utility distribution systems, exhaust hoods, ventilators, etc., shall include a shop drawing specific to the Project.
4. Inclusion of an alternate manufacturer in the Itemized Specifications is not intended to indicate that there is an equal alternate unit to match every primary specified unit. It shall be the responsibility of the Contractor to ensure that the alternate unit submitted matches the primary specified unit and meets the other conditions, as stated above.
5. Manufacturers not approved as substitutions or listed as a Listed Alternate will not be permitted unless submitted for prior approval, as described above and in the General and Supplementary Conditions and applicable Division-1 Specifications Sections.
6. Submittal of a substitution/alternate manufacturer or model shall indicate agreement to the above stated conditions. Solely at the Owner's discretion, failure to comply with any of these conditions or to supply complete and correct data information shall result in the Contractor being required to provide the primary specified manufacturer at no additional cost to the Owner or to adjust the Contract cost.

1.08 DISCREPANCIES

A. Where discrepancies are discovered between the drawings and the specifications regarding quality or quantity, the higher quality or the greater quantity shall be included in the Bid Proposal. The Contractor shall notify the Architect, in writing, of any discrepancies discovered and await clarification prior to proceeding with the items or areas in question.

1.09 SUBMITTALS

A. The Contractor shall review all submittals for basic compliance with the Contract Documents and correct as required prior to submitting to the Design Team (Architects/Engineers/ Consultants/Owner) for review. Failure to comply with this requirement, the submission of submittal(s) which are significantly inconsistent with the Contract Documents, or inconsistencies that are discovered during review by a Design Team member shall be justification for reimbursement by the Contractor to the Design Team member's company for the "lost" time or for the time required for a second review.

B. Rough-In Drawings
   1. Submit electronic PDF file for approval. After approval, reproduce and supply the required number of distribution prints for record and construction purposes.
   2. Submit 1/4 inch (1:50) scale rough-in drawings for approval. These drawings shall be dimensioned from grid lines showing location of ducts, stubs, floor and wall sleeves for ventilation, plumbing, steam, electrical, refrigeration lines, beverage lines, concrete base and curb dimensions as required for equipment so supported.
   3. Site-verify mechanical, electrical and ventilating rough-in and sleeve locations.
   4. The Contractor shall be responsible for the accuracy of the information on their submittals.
   5. In the event rough-ins have been accomplished before the award of this contract, the Contractor shall check the existing facility and make adjustments to their equipment to suit building conditions and utilities, where possible. If not possible, the Contractor shall so state in a letter to the Owner and Architect with reasons and an alternate method and pricing.

C. Shop Drawings
   1. Submit electronic PDF file for approval. After approval, reproduce and supply the required number of distribution prints for record and construction purposes.
   2. Submit shop drawings for items of custom fabrication included in this contract. Shop drawings shall be submitted at 3/4 inch (1:20) and/or 1-1/2 inch (1:10) scale and shall show dimensions, materials, details of construction, features and options, installation and relation of adjoining work requiring cutting or close fitting. Shop drawings shall also indicate reinforcements, anchorage and related work required for the complete installation of fixtures.
   3. Before proceeding with the fabrication of any item, the Contractor shall be responsible for verifying and coordinating all dimensions and details with site dimensions and conditions.

D. Product Data Submittal Manuals
   1. Submit electronic PDF file of Product Data Submittal Manuals with a cover sheet and detailed information on every item included in this Section for approval. Detailed information shall include, but not be limited to, item number, description, quantity, model numbers, options and accessories provided, exact utility requirements, manufacturer's cut-sheets, reference to specific shop drawings, etc. Distribute one additional copy of installation and start-up instructions to the Installer. Mark each data sheet with the applicable project equipment item number. Each data sheet shall include NEMA plug and receptacle configuration for applicable items, where applicable. Every cover sheet and associated detailed submittal shall provide sufficient and complete information to verify that the Contractor is providing each item in compliance with the Contract documents.
   2. Architect review of drawings, shop details, product data brochures, and service and parts manuals are for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the Contractor from compliance with the contract documents or departures there from. The Contractor remains responsible for details and accuracy, for confirming and correlating all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing their work in a safe, satisfactory, and professional manner.

E. LEED Submittals: For components of this section submit the following in compliance with 01 35 00 Sustainable Building Requirements.
   1. LEED Submittal Coversheet
   2. Low-Emitting Materials Submittal
      a. EQ Credit Low Emitting Materials: Additional VOC content requirements for wet-applied paints and coatings products applied onsite: Documentation of certification from the manufacturer that the product meets the applicable VOC limits shall comply with VOC limits of authorities having jurisdiction.

1.10 OPERATION AND MAINTENANCE DATA MANUALS

A. Operation and Maintenance Manuals (Service and Parts Manuals): Three (3) bound sets of manuals shall be furnished for items of standard manufacture on/or before the date of the first event to occur of the following: demo/start-up, start-up for intended use by the Owner/Operator, completion of installation of kitchen equipment contract package, or final acceptance of installation by Owner. Manuals shall be in alphabetical order according to manufacturer, including item numbers and utility options provided for the equipment installed.
   1. Installing company’s name, address, telephone number, and date of completed installation.
   2. Serial numbers of principal pieces of equipment.
   3. Part numbers of all replaceable items.
   4. Lubrication data and belt sizes.
   5. Electrical characteristics including data for motors and heaters.

B. Service Agency List: Submit a complete list of local service agencies with the service and parts manuals for included manufacturers, complete with telephone numbers for all buy-out equipment installed.

C. Provide video tapes for maintenance, training, operation, etc. where available from the manufacturer.

1.11 AS-BUILT/ RECORD DOCUMENTS

A. Maintain one record set of Food service Equipment Plans with any related corrections, revisions, additions, deletions, changes, etc. noted during construction and installation. Provide an "as-built" set in reproducible transparency form and electronic computer disk form.

B. Provide one (1) final set of Product Data Submittal Manuals with any related corrections, revisions, additions, deletions, changes, etc. noted during construction and installation as a specifications record set.

C. These documents shall be provided on/or before the date of the first event to occur of the following: demo/start-up, start-up for intended use by the Owner/Operator, completion of installation of kitchen equipment contract package, or final acceptance of installation by Owner.

D. Provide two (2) final complete set of Submittals to be retained by Architect as a Record Set.

1.12 SCHEDULE

A. General: Time is of the essence in this agreement. Acceptance constitutes a guarantee that the Contractor can and will obtain materials, equipment, and manpower to permit overall completion of the entire building project on schedule upon notice to proceed. The Contractor shall coordinate their work with the progress schedule, as prepared and updated periodically by the General Contractor or Construction Manager.

B. The Contractor shall notify the Food Service Consultant and the Architect in writing of anticipated delays not within the realm of control of the Contractor immediately upon the Contractor's realization that delays are imminent.

C. The Contractor will not be granted relief for failure to meet schedules or failure of manufacturers to meet promised delivery dates unless the Contractor can establish, in writing, that orders were received by the manufacturer with reasonable lead times.

D. The Contractor shall pay extra charges resulting from special handling or air shipment in order to meet the schedule if insufficient time was allowed in placing factory orders.

1.13 PRODUCT HANDLING

A. Delivery of Materials: Deliver materials (except bulk materials) in manufacturer's containers fully identified with manufacturer's name, trade name, type, class, grade, size, color, power requirement, if any, and item number.

B. Storage of Materials, Equipment and Fixtures: Contractor is responsible for receiving and warehousing of equipment and fixtures until ready for installation. The Contractor will store materials, equipment, and fixtures in sealed containers. They shall be stored off the ground and under cover, protected from damage.

C. Handling Materials and Equipment: The Contractor will verify and coordinate conditions at the building site, particularly door and/or wall openings and passages to assure access for all equipment. Pieces too bulky for existing facilities shall be hoisted or otherwise handled with apparatus as required. All special handling equipment charges shall be arranged for and paid for by the Contractor.

1.14 PRODUCT PROTECTION

A. The Contractor is responsible to protect their equipment against theft or damage during the progress of the project until final acceptance by the Owner. Items delivered to the job site at the Owner's or Contract Manager's request before the site is ready for installation should be signed for as approved by the Owner or Contract Manager.

B. The Contractor will use all reasonable means to protect the materials of this Section before, during, and after installation and to protect the associated work and materials of the other trades.

C. Pre-fabricated walk-in boxes, on-site and installed in advance of the rest of the equipment are not to be used for general storage by other trades and should be locked before leaving the site. Damage and theft resulting from the failure to secure boxes shall be repaired or replaced at the Contractor's own expense. The Contractor shall be available, as needed, to open and secure walk-in boxes for the other trades to perform their work related to these walk-in boxes, within the other trades' schedules as not to delay their work.

D. Contractor will verify if the flooring is to be acid washed. In the event of this type of cleansing, any equipment constructed of stainless steel shall not be delivered until a minimum of 24 hours after the final cleansing is completed.

1.15 WARRANTY

A. Work shall be guaranteed against defects for one (1) year from the date of operation of the equipment. The Contractor will provide a written warranty of each component to include work in this Section to cover all testing and re-testing as may become necessary for one year past the Contract final acceptance date. Any equipment, system, or element failing to perform as directed in this Section shall be repaired or replaced at no cost to the Owner (including labor and transportation), excluding replacement cost of damaged components or work caused by misuse of the equipment.

B. Additional Warranty: Refrigeration systems shall include a start-up and one-year service and maintenance contract in addition to the regular one-year warranty as stated above, plus an additional four-year warranty on sealed portions of condensing units, including refrigerant lost. This shall include all refrigerators, ice cream makers and cabinets, ice makers, freezers, dispensers, walk-in coolers/freezers compressors, and/or any other items with refrigeration system(s).

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Delegated Design: Design canopy hoods with fire protection system, walk-in cold storage rooms, and seismic restraint of equipment using performance requirements and design criteria indicated, including comprehensive engineering analysis by a qualified professional engineer licensed by the State.

B. Refer to Sections 01 10 00 – Summary; and 01 40 00 – Quality Requirements for additional requirements regarding Delegated Design.

2.02 EQUIPMENT

A. Equipment schedule: Refer to schedule on Food service Drawings and Part 2 Itemized Specifications for equipment included in this Section.

2.03 MATERIALS

A. Metals

1. Stainless Steel: AISI Type 302/304, hardest workable temper, and No.4 directional polish. Standard gauges are noted in these specifications under Heading 2.04; Section B.1.
2. Galvanized Steel Sheet: ASTM A526, except ASTM A527 for extensive forming; ASTM A525, G90 zinc coating, chemical treatment.

Note: Where painted finish is indicated, provide mill phosphatized treatment in lieu of chemical treatment.

3. Steel Sheet: ASTM A569 hot-rolled carbon steel.
4. Galvanized Steel Pipe: ASTM A53 or ASTM A120, welded or seamless, schedule 40, galvanized.
5. Steel Structural Members: Hot rolled or cold formed, carbon steel unless stainless steel is indicated.

Note: Galvanized Finish (G.I.): ASTM A123 hot-dipped zinc coating, applied after fabrication.

B. Aluminum: ASTM B209B221 sheet, plate and extrusions (as indicated), alloy, temper and finish as determined by manufacture / fabricator, except 0.40-mil natural anodized finish on exposed work unless another finish is indicated.

C. Plastic Laminate: NEMA LD3, Type 2, 0.050" thick, except Type 3, 0.042" for post-forming smooth (non-textured). Color and texture as selected by the Architect/Interior Designer.
   1. Comply with NSF Standard No. 35.
   2. Veneered with approved waterproof and heat proof cement. Rubber base adhesives are not acceptable.
   3. Applied directly over close grained plywood, such as solid Mahogany or solid Birch, of selected, smooth, sanded stock to ensure a smooth ripple-free laminated surface; or commercial grade furniture particle board, Cortron or equal.
   4. If specified plywood or particle board is unavailable, submit specifications and sample of alternate material for approval. If specified for a “wet” area, only marine grade wood products will be approved for these areas.
   5. Exposed faces and edges shall be faced with 1/16 inch (1.6mm) thick material. Cover corresponding backs with approved backing and balancing sheet material. No unfinished exposed plywood/particle board will be acceptable.

D. Hardwood Work Surfaces: Laminated edge grained hard maple (Acer saccharum), NHLA First Grade with knots, holes and other blemishes culled out, kiln dried at 8 percent or less moisture, waterproof glue, machined, sanded, and finished with NSF approved oil-sealer.

E. Solid Surface Material (SSM): Unless otherwise specified, provide 1/2" thick 100% homogeneous filled acrylic material meeting ANSI Z124.6 Type 6, as manufactured by DuPont Company and known as Corian. Color(s) and pattern(s) as selected by the Architect/ Interior Designer.
   1. Comply with NSF Standard No. 51.
   2. Acrylic adhesive shall be used for all joints.
   3. Install directly over 3/4" thick (minimum) substrate of close grained plywood, such as solid Mahogany or solid Birch, of selected, smooth, sanded stock to ensure a smooth ripple-free surface or a commercial grade furniture particle board, Cortron or equal. Provide additional bracing and support as required by the SSM manufacturer.
   4. Fabrication shall be by a fabricator trained by DuPont factory authorized training personnel and Certified as a Commercial Corian Fabricator.
   5. Installation shall be by an installer trained by DuPont factory authorized training personnel and Certified as a Commercial Corian Installer.
   6. All fabrication and installation of Corian and all components attached to or installed in or through Corian shall be in compliance with manufacturer's instructions and the DuPont Corian Food Service Guidelines and Design Manual. Of particular concern are the sections, details, and instructions on the installation of drop-in or built-in hot or cold components.
   7. All other Solid Surface Material (SSM), which may be specified by others to be used in food service areas, must comply with NSF certification and ANSI Standard No. 51.

F. Insulation
   1. For low temperature applications, such as ice bins, cold pans, or fabricated under counter freezers, use urethane, rigid board foam or foamed-in-place, not less than 2 inches (50mm) thick, except that vertical surfaces of cold pans and ice bins may be 1 inch (25mm) thick. Insulation shall be bonded at joints to prevent condensation on exterior.
   2. For refrigerated applications, such as fabricated undercounter refrigerators, use urethane rigid board foam or foamed-in-place, or Styrofoam rigid board foam 2 inches (50mm) thick, bonded at joints.
   3. For heated type applications, such as plate warmers, use block type rock wool, minimum 1 inch (25mm) thick.
   4. At counter tops, subject to heat from cooking equipment and refrigeration compressors, use 1 inch (25mm) thick B&Z Products (1-800-999-0890) Marinite I, or equal, to insulate underside of top.
   5. Marinite material shall be added between freezer or refrigerator and 14 gauge (2.0) stainless steel top.
   6. All insulation shall be fully encased or enclosed.

G. Joint Materials
   1. Sealants: 1-part or 2-part, polyurethane or silicone based, liquid elastomeric sealant, non-solvent release type, Shore A hardness of 30, except 45 if subject to traffic. Sealants shall be NSF Listed for use in food zones. Installation shall comply with applicable requirements of NSF Standards.
   2. Backer Rod: 3/8 inch or larger joints shall be polyurethane rod stock, larger than joint width.
   3. Gaskets: Solid or hollow (but not cellular) neoprene or polyvinyl chloride, light grey, minimum of 40 Shore A hardness, self-adhesive or prepared for either adhesive application or mechanical anchorage.

H. Paint and Coatings
   1. Provide the types of painting and coating materials which, after drying or curing, are suitable for use in conjunction with food service, durable, non-toxic, non-dusting, non-flaking, mildew resistant, and comply with governing regulations for food service.
   2. All paints and coatings, including accessories, applied on site must comply with the VOC limits, emissions testing and Submittal requirements for IEQ Credit Low-Emitting Materials as specified by authorities having jurisdiction.
   3. Galvanize Repair Paint: MIL-P-21035.
   4. Sound Deadener: NSF listed sound deaden material such as latex sound deadener for internal surfaces of metal work and underside of metal counters and tables between work top and underbracing.
   5. Pretreatment: SSPC-PT2 or PT3, of FS TT-C490.
   6. Primer Coating for Metal: FS TT-P-86, type suitable for baking, where indicated.
   7. Enamel for Metal: Synthetic type, FA TT-P-491, type suitable for baking, where indicated.

2.04 FABRICATED PRODUCTS

A. Hardware
   1. General: Manufacturer's standard, but not less than ANSI 156.9 Type 2 (Institutional), satin finish stainless steel or dull chrome finish on brass, bronze, or steel.
   2. Hinged Door Hardware: Hinged doors shall be mounted with heavy duty NSF approved hinges with Component Hardware Group, Model No. P62-1010 pulls, or equal. Catches shall be heavy-duty magnetic type, except as otherwise indicated.
   3. Drawer Hardware: Slides to be 200 pounds minimum capacity per pair, 300 series stainless steel, full extension, side-mounting, self-closing type, with stainless steel ball bearings and positive stops, Component Hardware Group Series S52, or equal. Pulls shall be Component Hardware Group, Model No. P62-1 012, or equal.
   4. Sliding Door Hardware: Sliding doors shall be mounted on large, quiet ball bearing rollers in 14-gauge (2.0mm) stainless steel overhead tracks and be removable without the use of tools. Bottom of cabinet shall have stainless steel guide-pins and not channel tracks for doors.
   5. All hardware shall be identified with manufacturer's name and number so that broken or worn parts may be replaced.

B. Casters
   1. Type and size as recommended by caster manufacturer, NSF approved for the type and weight of equipment supported, but not less than 5 inch (127mm) diameter heavy-duty, ball bearing, solid or disc wheel with non-marking grease proof rubber, neoprene or polyurethane tire, unless otherwise specified. Minimum width of tread shall be 1-3/16 inch (30mm). Minimum capacity per caster shall be 250 pounds (113.4kg), unless otherwise noted in itemized specifications.
   2. Provide solid material wheels with stainless steel rotating wheel guard.
   3. To be sanitary, provide sealed wheel and swivel bearings and polished plated finish per NSF.
   4. Unless otherwise indicated, equip each item with two (2) swivel-type casters and two (2) fixed casters. Provide foot brakes on two (2) casters on opposite front corners of equipment.

5. Unless equipment item is equipped with another form of all-around protective bumper, provide circular rotating bumper above each caster, 5 inch (127mm) diameter tire of light grey synthetic rubber (hollow or closed-cell) on cadmium-plated disc.

C. Plumbing Fittings, Trim and Accessories
   1. General: Where exposed or semi-exposed, provide bright chrome plated brass or polished stainless steel units. Provide copper or brass where not exposed.
   2. Vacuum Breakers: Provide with food service equipment as listed in the itemized specifications.
   3. Water Outlets: At sinks and at other locations where water is supplied (by manual, automatic or remote control), furnish commercial quality faucets, valves, dispensers or fill devices of the type and size indicated and as required to operate as indicated.
   4. Waste Fittings: Except as otherwise indicated, furnish 2 inch (50mm) remote-lever waste valve and 3-1/2 inch (89mm) strainer basket.

D. Electrical Materials
   1. General: Provide standard materials, devices and components as recommended by the manufacturer or fabricator, selected and installed in accordance with NEMA standards and recommendations and as required for safe and efficient use and operation of the food service equipment without objectionable noise, vibration and sanitation problems.
   2. Before ordering equipment, confirm pertinent electrical requirements with the serving electrical utility, such as actual voltages available, number of phases and number of wires in the system.
   3. Wire electrical work for fabricated equipment completely to a junction or pull box which is wholly accessible and mounted on the equipment. Wiring shall be labeled for outlet or item served. Verify local requirements for UL Listing on complete assembly and provide if required.
   4. Components shall bear the UL label or be approved by the prevailing authority.
   5. Provide Custom fabricated refrigerator units with vapor tight light receptacles, shatterproof lamps and automatic switches. Conceal wiring.
   6. Controls and Signals: Provide recognized commercial grade signals, on-off push buttons or switches, and other speed and temperature controls as required for operation, complete with pilot lights and permanent signs and graphics to assist the user of each item. Provide stainless steel cover plates at control and signal electrical boxes. Locate controls and switches out of heat zones, in easily accessible locations that preclude accidental contact by employees.
   7. Internal Wiring of Fixtures and Equipment
      a. The Contractor shall be responsible for internal wiring of electrical devices built into or forming an integral part of fabricated equipment items. Wiring will be in metal conduit, connected to an accessible pull-box or j-box, and tagged for intended use. Refer to Section 26 Specifications for color coding of wiring.
      b. Each standard item shipped in sections shall be properly connected internally and verified by the Contractor.
      c. Furnish dish washers and conveyors internally wired to junction box or distribution panel as specified, including push button switches, motors, immersion heaters, solenoids, etc.
      d. Where light fixtures are specified or detailed as part of counters, furnish and install cases or fixtures, light fixtures, lamps and shields. Provide warm white lamps unless otherwise specified. If fluorescent light fixtures are specified, provide ballasts and include shields. Provide shields for all light fixtures.
      e. Wiring for built-in strip heaters or immersion-type elements shall be provided as follows:
         1) In heat zone: shall have UL approved insulation and be not less than 300-volt rated heat resistant insulation with nickel wire.

2) Connection wiring extended in raceway or conduit to junction or pull box shall be not less than 600 volt rated heat resistant insulation covered wire, UL approved, or equal.

f. Wiring for fabricated refrigerator and freezer cabinets shall be UL approved insulated cable from exterior junction box to internal components, within insulation unless code requires metallic conduit:
   1) Conduit shall be Electrical Metallic Tubing, rigid or flexible (Greenfield). For freezer applications, Seal-Tite Flex or approved equal shall be used.
   2) Internal wiring shall be UL approved rubber covered 600 volt rated conductor, except door heaters, which shall be Nichrome wire with silicone braided jacket, having resistance of 10.4 watts per lineal foot.
   3) Mount convenience outlets, lighting receptacles, (rubber or porcelain) and door switches in approved boxes. Convenience outlets for evaporators shall be twist lock type. Solid connections, as for freezer evaporators, shall be made vapor tight.

g. Exposed flexible steel conduit on kitchen equipment shall be neoprene jacketed Seal-Tite conduit equal to Anaconda type "UA". UL approved, complete with approved liquid tight connectors on each end, and designed to provide electrical grounding continuity.

h. Exposed electrical conduit used in kitchen wet area applications, except for flexible connections, shall be rigid galvanized steel. Thin wall conduit (EMT) shall not be permitted for wet areas. Exposed outlet boxes shall be liquid tight type, with threaded hubs.

8. Convenience and Power Outlets
   a. Make cutouts and install appropriate boxes or outlets in fabricated fixtures, complete with wiring, conduit, outlet and stainless steel cover plate.
   b. Outlets and plugs shall conform to NEMA standards.
   c. Electrical outlets and devices shall be first quality "Specification Grade".
   d. Furnish GFCI outlets where adjacent to sink compartments, as per the National Electrical Code.
9. Plugs and Cords: Where cords and plugs are provided, they shall comply with National Electrical Manufacturer's Association (NEMA) requirements. Indicate NEMA configuration for each applicable item.
10. Heating Equipment
    a. Install electric and heating equipment as to be readily cleanable or removable for cleaning.
    b. Steam heated custom fabricated equipment shall be a self-contained assembly, complete with control valves located in an accessible position.
11. Motors: Totally enclosed type, except drip-proof type where not exposed to a dust or moisture condition; ball bearings, except sleeve bearings on small timing motors; windings impregnated to resist moisture; horse-power and duty-cycle ratings as required for the service indicated.
12. Power Characteristics: Refer to Division 26 specifications for project power characteristics. Also, refer to individual equipment requirements, for loads and ratings.

2.05 FABRICATION OF METAL WORK

A. General Fabrication Requirements
   1. Remove burrs from sheared edges of metalwork, ease the corners and smooth to eliminate cutting hazard. Bend sheets of metal at not less than the minimum radius required to avoid grain separation in the metal. Maintain flat, smooth surfaces without damage to finish.
   2. Reinforce metal at locations of hardware, anchorages, and accessory attachments wherever metal is less than 14 gauge (2.0mm) or requires mortised application. Conceal reinforcements to the greatest extent possible. Weld in place, on concealed faces.

3. Exposed screws or bolt heads, rivets, and butt joints made by riveting straps under seams and then filled with solder will not be accepted. Where fasteners are permitted, provide Phillips head, flat or oval head machine screws. Cap threads with acorn nuts, unless fully concealed in inaccessible construction, and provide nuts and lock washers unless metal for tapping is at least 12 gauge (2.5mm). Match fastener head finish with finish of metal fastened.
4. Where components of fabricated metal work are indicated to be galvanized and involve welding or machining of metal heavier than 16 gauge (1.6mm), complete the fabrication and provide hot-dip galvanizing of each component, after fabrication, to the greatest extent possible (depending upon available dip-tank sizes). Comply with ASTM A123.
5. Welding and Soldering
    a. Materials 18-gauge (1.27mm), or heavier, shall be welded.
    b. Seams and joints shall be shop welded or soldered as the nature of the material may require.
    c. Welds must be ground smooth and polished to match original finish.
    d. Where galvanizing has been burned off, clean and touch up the weld with high grade aluminum paint.
6. Provide removable panels for access to mechanical and electrical service connections, which are concealed behind or within food service equipment, but only where access is not possible and not indicated through other work.
7. Closures: Where ends of fixtures, splash backs, shelves, etc., are open, fill by forming the metal or welding sections, if necessary, to close entire opening flush to walls or adjoining fixtures.
8. Rolled Edges: Rolled edges shall be as detailed, with corners bull nose, ground and polished.
9. Coved Corners: Stainless steel food service equipment shall have 1/2 inch (13mm) or larger radius coves in horizontal and vertical corners, and intersections, per NSF standards.

B. Metal and Gauges
1. Except as otherwise indicated, fabricate exposed metalwork from stainless steel. Fabricate the following components from the gauge of metal indicated and other components from not less than 20 gauge (0.8mm) metal:
    a. Table and counter tops: 14 gauge.
    b. Sinks and drain boards: 14 gauge.
    c. Shelves: 16 gauge.
    d. Front drawer and door panels: 18 gauge (double pan construction).
    e. Single pan doors and drawer fronts: 16 gauge.
    f. Enclosed base cabinets: 18 gauge.
    g. Enclosed wall cabinets: 18 gauge.
    h. Exhaust hoods and ventilators: 18 gauge.
    i. Pan-type insets and trays: 16 gauge.
    j. Removable covers and panels: 18 gauge.
    k. Skirts and enclosure panels: 18 gauge.
    l. Closure and trim strips over 4" wide: 18 gauge.
    m. Hardware reinforcement: 12 gauge.
    n. Gusset plates: 10 gauge.
    o. Custom channel bases: 14 gauge.

C. Work-Surface Fabrication
1. Fabricate metal work surfaces by forming and welding to provide seamless construction using welding rods matching sheet metal, grinding and polishing. Where necessary for disassembly, provide waterproof gasketed draw-type joints with concealed bolting.
2. Reinforce work surfaces 30 inches on center both ways with galvanized or stainless steel concealed structural members. Reinforce edges, which are not self-reinforced, by formed edges.

D. Metal Top Construction
   1. Metal tops shall be one-piece welded construction, including field joints. Secure to a full perimeter galvanized steel channel frame cross-braced not farther than 2'-6" (760mm) on center. Fasten top with stud bolts or tack welds. If hat sections are used in lieu of channels, close ends.
   2. Use properly designed draw fastening, trim strip, or commercial joint material to suit requirement, only if specified.

E. Structural Framing
   1. Except as otherwise indicated, provide framing of minimum 1 inch (25mm) pipe-size round pipe or tube members with mitered and welded joints and gusset plates ground smooth. Provide 14 gauge (2.0mm) stainless steel tube for exposed framing, and galvanized steel pipe for concealed framing.
   2. Where indicated, flange rear and end edges up to form splashes integrally with top, with vertical and horizontal corners coved of not less than 1/4 inch (6mm) radius, die formed. Turn back splashes 1 inch to wall across top and ends with rounded edge on break, unless otherwise specified.
   3. For die-crimped edges, use inverted "V" 1/2 inch (13mm) deep inside and 2 inch (38mm) deep on outside, unless otherwise shown. For straight down flanges, make 1- 3/4 inch (45mm) deep on outside. For bull nose edges, roll down 1-3/4 inch (45mm).
   4. Edges: die-formed, integral with top. For rounded corners, form to 1 inch radius, weld, and polish to original finish.

F. Field Joints: For any field joint required because of size of fixture, use butt-joints, reinforce on underside with angles of same material, bolt together with non-corrosive bolts and nuts, field weld, grind and polish.

G. Pipe Bases: Construct pipe bases of 1-5/8 inch (41mm) diameter 18 gauge (1.2mm) stainless steel tubing. Fit legs with polished stainless steel sanitary adjustable bullet feet to provide for adjustment of approximately 1-1/2 inch (38mm), without exposing threads. Space legs to provide ample support for tops, precluding any possibility of buckling or sagging and in no case more than 6'-0" centers.

H. Legs and Cross-rails
   1. Equipment legs and cross rails shall be 1-5/8 inch (41mm), 16-gauge (1.59mm) stainless steel tubing.
   2. Welds at cross rails shall be continuous and ground smooth. Please note: tack welds are not acceptable.
   3. Camber bottom of legs inward and fit with a stainless steel bullet-type foot with not less than 2 inch (50mm) adjustment. Flanged feet with bolt holes may be required dependent on design applications. Provide proper type feet in compliance with local codes. Use stainless steel in all applications.
   4. Peg free standing legs to floor with 1/4 inch (6mm) stainless steel rod.
   5. Components
      a. Stainless Steel Gusset: Stainless steel exterior to fit 1-5/8 inch (41mm) tubing, with Allen screw for fastening and adjustment. Not less than 3 inches (76mm) diameter at top and 3-3/4 inch (95mm) long. Outer shell 16-gauge (1.6mm) stainless steel, reinforced with 12-gauge (2.5mm) mild steel insert welded interior shell, or approved equal.
      b. Stainless Steel Low Counter Legs: Stainless steel exterior 5-3/4 inch (146mm) minimum, 7 inch (178mm) maximum length with stainless steel 3- 1/2 inch (89mm) square plate with four counter-sunk holes, welded to top for fastening.
      c. Stainless Steel Adjustable Foot: Stainless steel 1-1/2 inch (38mm) diameter tapered at bottom to 1 inch (25mm) diameter, fitted with threaded cold rolled rod for minimum 1-1/2 inch (38mm) diameter x 3/4 inch (19mm) threaded bushing plug welded to legs, or approved equal. Push-in foot not acceptable.
   6. Fasten legs to equipment with gussets, as follows:
      a. Sinks: Reinforced with bushings and set screw.

b. Metal Top Tables and Dish Tables: Welded to galvanized steel channels, 14- gauge (1.98mm) or heavier, anchored to top with screws through slotted holes.
c. Wood Top Tables: Welded to stainless steel channels, 14-gauge (1.98mm) or heavier, anchored to top with screws through slotted holes.

I. Shelves
1. Construct solid shelves under pipe base tables of 16 gauge stainless steel, with 1-1/2 inch turned down and under edges on exposed sides, and 2 inch turn up against walls or equipment. Fully weld to pipe legs.
2. In fixtures with enclosed bases, turn up shelves on back and sides with 1/4 inch (6mm) (minimum) radius and feather slightly to ensure a tight fit to enclosure panels.

J. Sinks
1. Construct sinks of 14 gauge stainless steel with No.4 finish inside and outside.
2. Form back, bottom and front of one piece, with ends and partitions welded into place. Partitions: double thickness, 1 inch minimum space between walls. Multiple compartments shall be continuous on the exterior, without applied facing strips or panels.
3. Cove interior vertical and horizontal corners of each tub not less than 1/4 inch radius, die formed. Outer ends of drain boards to have roll rim risers not less than 3 inches high.
4. Drill faucet holes in splashes 2-1/2 inches below top edge. Verify center spacing with faucet specified.
5. Sink insets shall be deep drawn of 16-gauge (1.59mm), or heavier, polished stainless steel. Weld into sink drain boards with 1-1/2 inch x 1-1/2 inch x 14 gauge stainless steel angle brackets, securely welded to sinks and galvanized cross angles spot welded to underside of drain boards to form an integral part of the installation.
6. The bottom of each compartment shall be creased such as to ensure complete drainage to waste opening. Slope bottom of sink bowls toward outlet.

K. Drains, Wastes and Faucets
1. Furnish and install T&S Brass faucets model B-3940-01 stainless steel rotary drain assembly with connected overflow assembly, in die-drawn inset type sinks and bain-marie sinks.
2. Other custom fabricated sinks shall be furnished with T&S Brass faucets model B3940-01 stainless steel rotary drain assembly, with S/S cap nut over overflow outlet. Waste connection shall have 2 inch (50mm) external thread size, with 1-1/2 inch (38mm) internal thread size.
3. Rotary Handle: Of sufficient length to extend to front edge of sink. No riveting, screws or soldering permitted to fit drains to sinks, with all parts of drains easily removable for servicing and replacement. Rotary handle bracket to be provided as part of the sink fabrication.
4. Water pans for steam tables shall be fitted with 1 inch (25mm) drains with chrome-plated brass stand pipes.
5. All faucets furnished with equipment included in this Section shall be lead-free and comply with NSF Standard #61, Section #9, such as manufactured by Fisher, Chicago, or T&S. Where the itemized specifications list a faucet by manufacturer and model, the Contractor shall verify that the listed faucet complies with this requirement.
6. If the listed faucet does not comply, the Contractor shall submit similar model which does comply from the same manufacturer where available or from one of the above manufacturers.

L. Workmanship
1. Best quality in the trade. Field verify dimensions before fabricating, conform all items to dimensions of building, neatly fit around pipes, offsets and other obstructions.
2. Fabricate only in accordance with approved shop drawings, showing pipes, obstructions to be built around, and location of utilities and services.

M. Enclosures
   1. Provide enclosures, including panels, housings, and skirts for service lines, operating components and mechanical and electrical devices associated with the food service equipment, except as specifically indicated to be "open".
   2. Where equipment is exposed to customer view, enclose of service lines, operating components, and mechanical and electrical devices.

N. Casework
   1. Enclosure: except as otherwise indicated, provide each unit of casework (base, wall, overhead and free-standing) with a complete-enclosure metal cabinet, including fronts, backs, tops, bottoms, and sides.
   2. Bases shall be made of 18-gauge (1.27mm) stainless steel sheets reinforced by forming the metal.
   3. Ends, partitions and shelves are stainless steel.
   4. Unexposed backs and structural members are galvanized.
   5. Vertical ends and partitions are single wall, with a 2 inch (50mm) face.
   6. Sides and through partitions are flush with bottom rail, welded at intersections.
   7. Shelves: Provide adjustable standards for positioning and support of shelves in casework, except bottom shelf of cabinet mounted on legs or as specified. Turn back of shelf units up 2 inches and hem. Turn other edges down to form open channel. Reinforce shelf units to support 40 pounds per square foot loading, plus 100 percent impact loading.
   8. Bottom front rail of bases set on masonry platform shall be continuously closed and sealed to platform.

O. Doors
   1. Metal doors shall be double-cased stainless steel. Outer pans shall be 18-gauge (1.27mm) stainless steel with corners welded, ground smooth and polished. Inner pan shall be 20-gauge (.95mm) stainless steel fitted tightly into outer pan with a sound-deadening material such as Celotex or Styrofoam used as a core. The two pans shall be tack welded together and joints solder filled. Doors shall finish approximately 3/4 inch (19mm) thick and be fitted with flush recessed type stainless steel door pulls.
   2. Wood doors shall be fabricated as detailed. If Formica or other plastic surfaces are used, sides and backs must be laminated.
   3. Hinged doors shall be mounted on heavy-duty NSF approved hinges, or as noted on plans or specifications.

P. Drawer Assemblies
   1. Assemblies shall consist of removable drawer body mounted in a ball bearing slide assembly with fully enclosed housing.
   2. Slide assembly consists of one pair of 200 pound stainless steel roller bearing extension slides, with side and back enclosure panels, front spacer angle, two drawer carrier angles secured to slides and stainless steel front.
   3. Drawer bodies for general storage are to be 20 inches x 20 inches (508mm x 508mm), with 18 gauge stainless steel containers.
   4. Drawers intended to hold food products shall be removable type with 12 x 20 (305mm x 508mm) stainless steel food pans in a stainless steel assembly.
   5. Drawer fronts are double cased, 3/4 inch (19mm) thick with 18 gauge (1.27mm) stainless steel welded and polished front pan. Steel back pan is tightly fitted and tack welded. Sound deaden with rigid insulation material.
   6. Provide drawers with replaceable soft neoprene bumpers or for refrigerated drawers, a full perimeter soft gasket.

Q. Closed Base: Where casework is indicated to be located on a raised-floor base, prepare casework for support without legs and for anchorage and sealant application, as required for a completely enclosed and concealed base.

R. Support from Floor: Equip floor supported mobile units with casters and equip items indicated as roll-out units with manufacturer's standard one-directional rollers. Otherwise, and except for closed-base units, provide pipe or tube legs with adjustable bullet-design feet for floor supported items of fabricated metalwork. Provide 1-1/2 inch adjustment of feet (concealed threading).

S. Shop Painting
   1. Clean and prepare metal surfaces to be painted. Remove rust and dirt. Apply treatment to zinc coated surfaces which have not been mill phosphatized. Coat welded and abraded areas of zinc coated surfaces with galvanize repair paint.
   2. Apply 1.5 mil (dry film thickness) metal primer coating, followed by 2, 1.0 mil (dry film thickness) metal enamel finish coatings.
   3. Bake primer and finish coatings in accordance with paint manufacturer's instructions for a baked enamel finish.

T. Sound Deadening
   1. Sound deaden underside of metal tops, drain boards, under shelves, cabinet interior shelves, etc., above the underbracing/reinforcing/framing only.

2.06 FILTER EXHAUST HOODS

A. Filter Exhaust Hoods
   1. 18 Gauge type 304 stainless steel external welded construction, in accordance with the latest edition of NFPA No.96, including all applicable appendices. Exposed welds to be ground and polished.
   2. Grease Removal: UL classified, non-adjustable, stainless steel grease filters with drip-channel gutters, drains and collection basins.
   3. Light Fixtures: Furnish type of fixture specified. Fixtures shall be UL listed for hoods, NSF approved, with sealed safety lenses and stainless steel exposed conduit for wiring.
   4. Exhaust Duct: Furnish welded stainless steel formed duct collars at ceiling or wall duct connections, where exposed. Furnish exposed to view ductwork as specified. Verify size and location of duct connections required in this contract, before fabrication. Other ductwork will be by the Mechanical Section.
   5. Fire Extinguishing System: Pre-piped liquid chemical or water fire suppressant system, as specified, complying with applicable local and NFPA regulations. Wet chemical fire suppression systems shall comply with UL 300 Standards.

2.07 REFRIGERATION EQUIPMENT

A. General
   1. Furnish either single or multiple compressor units, as specified or recommended by the manufacturer for the sizes and variations between connected evaporator loads as indicated.
   2. Furnish units of the capacities indicated, arranged to respond to multiple-evaporator thermostats and defrosting timers. Include coils, receivers, compressors, motors, motor starters, mounting bases, vibration isolation units, fans, dryers, valves, piping, insulation, gauges, winter control equipment and complete automatic control system.
   3. Refrigerant: Pre-charge units with type or types recommended by manufacturer for services indicated, with quick-disconnect type connections where specified, ready to receive refrigerant piping runs to evaporators and (where remote) to condensers. All refrigerant and associated components shall comply with the requirements of the Montreal Protocol Agreement. No CFC refrigerants or associated components shall be allowed on this Project. HFC refrigerants and components shall be used where available. HCFC refrigerants and components, with a minimum 2010 phase-out date, and intermediate replacement refrigerants are to be used only when HFC refrigerants are not available. Contractor shall be responsible for coordinating with manufacturers. Provide refrigerant leak monitoring devices where required by federal, state, or local codes.

4. The minimum outdoor operating ambient temperature for design of units is -10 degrees Fahrenheit, or as applicable for extreme low local conditions. The maximum indoor design temperature for operation of compressor units is 95 degrees Fahrenheit. The maximum outdoor ambient design temperature shall be determined with prevailing conditions at mounting location(s) of compressor(s), such as sun exposure, limited ventilation, high fences/walls, roof color and materials, local climatic extremes, etc., but in no case shall it be less than 100 degrees Fahrenheit.

B. Components
   1. Coils: Coils for fabricated refrigerators shall have vinyl plastic coatings, stainless steel housings and shall be installed in such a manner as to be replaceable.
   2. Expansion Valves: Remote refrigeration system shall be complete with thermostatic expansion valves at the evaporator.
   3. Thermometers
      a. Fabricated refrigerated compartments to be fitted minimally with a flush dial thermometer, with chrome plated bezels and to be provided as specified.
      b. Thermometers shall be adjustable and shall be calibrated after installation.
      c. Thermometers shall have an accuracy of ± 2 degrees Fahrenheit (1 degree Centigrade).
   4. Hardware
      a. Refrigerator hardware for fabricated refrigerator compartments shall be heavy-duty components.
      b. Self-closing hinges.
      c. Latches to be magnetic edge mount type, unless specified or detailed otherwise.
   5. Locks
      a. Doors and drawers for walk-in coolers/freezers and reach-in refrigerated compartments, both fabricated and standard, shall be fitted with cylinder locking type latches and provided with master keys.

C. Cold Pans: Ice pans, refrigerated pans and cabinets shall be provided with breaker strips, where adjoining top or cabinet face materials, to prevent transfer of cold.

D. All open top mechanically cooled custom fabricated or standard buy-out refrigerators and/or cold pans shall comply with NSF Standard #7 requirements, as of April 1, 1998. The Contractor shall verify that the specified unit complies with this requirement or submit a similar model, which does comply, from the same manufacturer where available.

E. Ventilation of Refrigerated Equipment
   1. Adequate ventilation shall be provided for custom fabricated equipment with integral refrigeration condensing units, both built-in and drop-in. If flow through ventilation cannot be provided, provide flow direction partitions and an additional fan capable of cooling the condensing unit.
   2. If, in the opinion of the Contractor, additional room ventilation is required to ensure correct operating temperatures of standard buy-out, custom fabricated or remote refrigeration condensing units, or compressor rack assemblies, they shall so state in a letter to the Architect for evaluation and direction.

2.08 MISCELLANEOUS MATERIALS

A. Nameplates: Whenever possible, locate nameplates and labels on manufactured items, in accessible position, but not within customer's normal view. Do not apply name-plates or labels on custom fabricated work, except as required for compliance with governing regulations, insurance requirements, or operator performance.

B. Manufactured Equipment Items: Furnish items as scheduled or herein specified. Verify dimensions, spaces, rough-in and service requirements, and electrical characteristics before ordering. Provide trim, accessories and miscellaneous items for complete installation.

C. Insert Pans
   1. General: Provide cut-outs, openings, drawers, or equipment specified or detailed to hold stainless steel insert pans with a full complement of pans as follows:
      a. One (1) stainless steel, 20-gauge (.95mm) minimum, solid insert pan for each space, sized per plans, details, or specifications.
      b. Where pan sizes are not indicated in plans, details, or specifications, provide one full-size pan for each opening.
      c. Provide maximum depth pan to suit application and space.
   2. Provide 18-gauge (1.27mm) removable stainless steel adapter bars where applicable.
   3. Provide all cut-outs and openings or equipment specified or detailed to hold stainless steel insert pans with a hinged stainless steel removable night cover.

D. Tray Slides: Before fabrication of counters with tray slides, verify:
   1. Size and shape of tray. Edge of tray shall not overhang outer support/slider by more than 2". If edge of tray exceeds this dimension, notify Architect, in writing, for evaluation and adjustment, if necessary.
   2. Configuration of corners, turns, and shape of tray slides for proper support and safe guidance of trays.
   3. Tray slide capable of supporting 200 pounds per linear foot, live load.

E. Self-leveling dispensers: Verify type and make of ware, dimensions and weight, request samples from Operator and submit to the dispenser manufacturer for proper sizing and calibration of dispensers.

F. Carbon dioxide (co') equipment: Where equipment requires connection with compressed co' cylinder for operation, provide proper sized cylinder manifold and control system (integral with equipment) with proper connectors for Department of Transportation (DOT) approved type cylinders, complete with cylinder safety devices and supports.

G. Reasonable quietness of operation of equipment is a requirement. The Kitchen Equipment Contractor will be required to replace or repair any equipment producing out-of-the-ordinary intolerable noise. This also includes providing and installing bumpers and gaskets for doors and drawers on fabricated and standard manufactured items and sound insulation where feasible.

2.09 ITEMIZED SPECIFICATIONS

A. Refer to the following pages for specific specification information on each item included in this Section.

ITEM 1 DRY STORAGE SHELVING: 1 LOT REQUIRED

A. Metro, Super Adjustable Super Erecta super adjustable stainless steel shelving. Shelf sections shall be five tier high using individual posts with adjustable feet and top caps equally spaced over 86 inch stainless steel posts with bottom shelf located 8 inches above finished floor. Install in sizes and configuration as shown on Sheet FS101.

B. Verify room size before ordering.

ITEM 2 CUBE ICE MACHINE WITH BIN: 1 REQUIRED

A. Scotsman, model CU0715MA-1 with the following:
   1. Include SSM1-P water filtration system. Locate system in easy to access location.

B. Install assembly complete.

ITEM 3 WALK-IN COLD STORAGE ROOMS: 2 REQUIRED

A. Imperial Brown Manufacturing, modular sandwich panel (Hybrid Construction design) cold storage rooms complete in configuration shown on Sheet FS101. Each room shall incorporate the following:

1. Provide G3 cooler and freezer walk-in doors and door frames 36 inch x 78 inch stainless steel inside and out with 14 inch x 14 inch insulated glass window (heated) and 36” high 1/8” polished aluminum diamond tread plate interior and exterior kick plates. Doors hinged as shown on plan. Include Kason #944 deadbolt mortise locksets with interior safety releases, Kason #1229 chrome pull handles, Kason #1094000013 concealed mounting door closers, and Kason #1248 chrome spring assisted hinges (three per door). Hinge doors as shown on plans.
2. Provide 1/8” polished aluminum diamond tread plate wainscot up to 36” above finished floor (align with top of door wainscot) on exposed exterior face of walk-ins.
3. Exposed exterior, closure panels, and trim strips to adjacent walls and ceiling shall be 20 gauge stainless steel finish. Exposed interior shall be .040 stucco embossed aluminum except ceiling which shall be .040 aluminum with baked white acrylic finish. Unexposed surfaces shall be 26 gauge galvanized steel.
4. Finished exterior height of nominal 8 foot-4 inches. Interior height of rooms shall be nominal 8 foot-0 inches. Wall and ceiling insulation shall be 4 inch thick foamed in place, Class 1, low-density urethane insulation.
5. Install in floor depression complete with 4” prefabricated high density urethane floor panel. Install in recess with 3” concrete topping slab by GC. See Sheet FS301 for depression details.
6. Install surface mount 4-1/2 inch diameter dial thermometers above each door.
7. Heated vacuum vent for freezer.
8. Provide 3/8 inch diameter nylon coil hangers mounted on 3 inch x 3 inch aluminum plates with nuts and retainers to support evaporator hung from ceiling panel.
9. Furnish penetrations to accommodate all electrical, plumbing, and refrigeration lines. Furnish stainless steel escutcheons.
10. Provide Keil LED48X754-CL-N LED cooler and freezer ceiling light fixtures as shown on Sheet FS104. Field connections under Division 26. Include lamps.
11. Modularm 75LCT multi-monitor temp alarm with IP-1 illuminated push button and MD-1 motion sensor mounted at each door.
12. All electrical conduit shall be run concealed within the walk-in walls or above the ceiling panels (coordinate with electrician).
13. Provide 6” high stainless steel cove base inside and outside of each walk-in. Seal to wall panels and floor.
14. Refer to Architectural Room Finish Schedule for cooler/freezer wearing floor inside and out in Division 9.
15. Sealants for all walk-in panel penetrations: 1-part or 2-part, polyurethane or silicone based, liquid elastomeric sealant, non-solvent release type, Shore A hardness of 30, except 45 if subject to traffic. Sealants shall be N.S.F. Listed for use in food zones. Installation shall comply with applicable requirements of N.S.F. Standards.

B. Walk-ins shall comply with current state energy codes.

C. Walk-ins shall be installed by this manufacturer or this manufacturer’s certified installer only and must have a minimum of 5 years’ experience installing Imperial walk-ins.

D. Walk-in doors are to be secured in the “open” position until the concrete sub-floor cures and until the manufacturer states that it is safe to close. Oxidized panels will be replaced at the Contractors’ expense.

ITEM 4 REFRIGERATION SYSTEMS: 2 REQUIRED

A. Refrigeration Design Technologies, model ZS1-02Z-CT3-EST Outdoor Air-Cooled Refrigeration system. Refer to sheet FS302 for factory drawing and all system components.

B. System A: Cooler @ +35°F to +40°F.
   1. Evaporator: Model BEL0060 with ECOSMART Controller + EEV.
   2. Condensing Unit: YB07KA.

C. System B: Freezer @ -10°F to +0°F.
   1. Evaporator: Model BEL0100 with ECOSMART Controller + EEV.

2. Condensing Unit: Model YF10KAE.

D. AIR COOLED RACK SYSTEM: The system shall be an "U.L. or E.T.L. Listed" package system for outdoor installation. Pre-wired to main fused disconnect switch and pre-piped for single point connection. External penetrations for ground-mounted installations. Flush mounted internal electrical panel or external. Rack constructed of 16 gauge (or heavier) formed sheet metal parts or structural steel frame, housing to be power coated finish and constructed to prevent any vibration noises. Condensers to be sized for ambient and altitude.
   1. Internal piping must meet ASHRAE standards for pressure drop and velocities. All copper piping must have a plastic bushing where secured to a steel support. Air-cooled condenser will be built within main housing. Condenser to be riffled tubing for maximum heat transfer and have Gold coating for long life. Receivers must before 100% pump down of each system, no matter of the line length. Each suction line will be insulated back to compressor suction valve. Receiver to be insulated/ heated and controlled by a thermostat if ambient drops below 0 degrees F. Rack is supplied under Nitrogen pressure.
   2. Rack is located outside on the roof above the Kitchen. Verify exact location with Architectural plans. Raised pad specified by architectural division.

E. PARALLEL AND INDIVIDUAL COMPRESSOR SYSTEMS: Parallel Systems will have oil management system with compressor floats, oil separator and reservoir. All coils supplied by factory will be supplied with shipped loose ball valves to be installed by refrigeration contractor. Installing refrigeration contractor must supply ball valves on field fixtures supplied by others.
   1. Medium temperature semi-hermetic compressor (System A).
   2. Low temperature semi-hermetic compressor (System B).
   3. All systems will use Copeland Compressors R-448A refrigerant, unless otherwise indicated. Compressors and refrigeration piping will be installed in such a manner as to eliminate noise, and vibration eliminators in refrigeration lines, as needed. Each compressor shall have a high-low automatic reset pressure control. All compressors over five (5) horsepower if semi-hermetic shall have a Sentronic oil failure pressure control.
   4. Each compressor shall have all necessary breakers, wiring and controls for operation for proper operation, a liquid line drier, sight glass, suction line filter/drier and suction accumulator (low temp only) and oil separator when needed (when used must be supplied with a check valve), and crankcase heaters (on all compressors). Freezer time clocks mounted and pre-wired at rack system unless noted on R-1 drawing. Capillary tubes on all controls shall be tightly wrapped and protected with silicone in a manner to eliminate excessive vibration and contact with other metals.

F. EVAPORATORS: Dual-speed cooling coils shall be direct expansion type of such size and designed as to affect required temperatures, humidity and to meet the application intended. Evaporators used will be all "Underwriters Laboratory Listed or ETL" supplied from factory with an expansion valve, solenoid valve, in line strainer, Eco-Smart Defrost System and, pre-wired and pre-piped under nitrogen pressure as listed in the refrigeration schedule. Each coil will need an electrical circuit from a building panel as listed on the refrigeration schedule. Select Defrost System will allow the coil to defrost only when needed to save energy.
   1. The factory will supply coils for the parallel system with ball valves and all coils are shipped under pressure. All other fixtures or coils supplied by others that connect to the parallel the installing contractor to supply ball valves.

G. PIPING INSTALLATION: All field piping installed as per factory standards and the sizing of the piping shall meet proper velocities as per factory standards. Insulation will be foam type 25/50 smoke and fire type. Medium temperature will use 3/4" thick wall, low temperature will use 1" thick wall and drain lines will be 3/4" thick wall. All field piping be installed with plastic bushing wherever steel to copper tubing comes together. Include all labor, material, equipment, tools, refrigerant, oil, and other required accessories for the complete installation of the systems as shown and specified. Interconnection of all accessories accomplished for ease of servicing. Attention given to oil return, refrigerant pressure drops and neatness. Tubing must have minimum of 1/2" per 20' of line length and piping traps every 15' of vertical rise. Placement of all exposed pipes must be approved prior to installation with General Contractor. Spacing of piping hangers to be in accordance with factory standards not to exceeding 8'-0". Furnish manufacturer's dimensional and schematic drawings and wiring diagrams. This entire assembly must be installed by a Licensed Refrigeration Contractor, under the direction of the factory, as a sub-contract to this section of work. 15% Sil-Flos must be used on piping.

H. TESTING: After installation and before charging, evacuate all piping systems to a 500-micron evacuation. After evacuation, charge system with nitrogen and maintain pressure of 150% working pressure for 6 hours. Cap off, install pressure gauge and hold for 24 hours minimum. Re-evacuate, hold for 6 hours, charge and make electronic detector test all joints.
   1. Final wiring connections, conduit and pull boxes, will be provided under electrical. See R-1 drawing for wiring schematic for field wiring.

I. WARRANTY AND SERVICE: Included shall be a full one (1) year warranty for all parts by factory and labor on the entire refrigeration package by installing contractor, from the day of final acceptance of the installation as previously specified. Refrigeration Contractor shall also provide an extended one (1) year service and installation warranty on this scope of work. Manufacturer shall also include a five (5) year extended warranty on the compressors for exchange. All defective or replaced parts must be returned to the factory for replacement. Lack of maintenance, nuisance calls or wrong setting of temperature controls at evaporators, are not covered under labor warranty.

J. Refrigeration system rack is located outside in the service yard as shown on Sheet FS302. Verify location with Architectural plans. Raised pad specified by architectural division.

K. Computer Monitoring Intelligence Network Controller. Verify Office location.

L. Where refrigerant suction lines are trapped, use next size smaller pipe in vertical portion of the trap than that indicated so as to acquire sufficient gas velocity for proper oil return.

M. Provide anti-sweat pipe covering 3/4-inch Armstrong Armaflex or equivalent for suction lines from evaporator to condensing unit.

ITEM 5 WALK-IN FREEZER SHELVING: 1 LOT REQUIRED

A. Metro, Metroseal 3 Super Adjustable Super Erecta wire shelving. Shelf sections shall be four tier high using 74 inch high individual posts with adjustable feet and top caps. Shelves to be equally spaced with bottom shelf located 8" above finished floor. Install in sizes and configuration as shown on Sheet FS101.

B. Verify room size before ordering.

ITEM 6 WALK-IN COOLER SHELVING: 1 LOT REQUIRED

A. Metro, Metroseal Super Adjustable Super Erecta wire shelving. Shelf sections shall be four tier high using 74 inch high individual posts with adjustable feet and top caps. Shelves to be equally spaced with bottom shelf located 8" above finished floor. Install in sizes and configuration as shown on Sheet FS101.

B. Include 22" x 48" model HP2248PMD dunnage rack.

C. Verify room size before ordering.

ITEM 7 MANUAL CAN OPENER: 1 REQUIRED

A. Edlund, model #1 S.

ITEM 8 MOBILE WASTE RECEPTACLES: 2 REQUIRED

A. Rubbermaid, model FG263200GRAY with FG264000BLA dolly and FG263100GRAY matching lid.

ITEM 9 VEGETABLE PREP SINK TABLE: 1 REQUIRED

A. Pacific Stainless Products, model DCS-1824-B30 fully welded prep sink table modified to have a marine edge instead of rolled edges. Sink table shall incorporate the following:
   1. Fisher Manufacturing, model 53449 spray rinse faucet with 6” swing spout. Include wall bracket.
   2. Two Fisher Manufacturing, model 22411 rotary waste assemblies with 14 gauge stainless steel lever waste brackets welded to underside of sink.
   3. Two model TMSC table mount cantilever shelves over each drainboard with 18” clearance from underside of shelf to table top. Refer to elevations. Seal post penetrations at backsplash.
   4. Install Item 7 Manual Can Opener at left end per plan.
   5. Stainless steel under shelf below right drain board.
   6. Sound deaden underside of top and sink compartments.

B. Install assembly complete. Clip and seal to wall.

ITEM 10 HAND WASHING SINK: 1 REQUIRED

A. Advance Tabco, model 7-PS-62. Provide 12” high welded splash shield on left side.

B. Seal to wall.

ITEM 11 NOT USED

ITEM 12 NOT USED

ITEM 13 CHANNEL GUARDS (FULL WALL HEIGHT): 2 LOT REQUIRED

A. Fabricate as detailed and construct vertical corner/channel guards and low wall caps of one piece all welded 14 gauge stainless steel. Install in locations shown on Sheet FS101.

B. Seal guards to walls and at joints as required.

ITEM 14 CANOPY HOOD WITH FIRE PROTECTION SYSTEM: 1 REQUIRED

A. Captive-Aire, model 5430ND-2, Type I 18 gauge stainless steel exhaust only canopy hood. Refer to Factory Drawing #7598576. The hood shall incorporate the following:
   1. DCV-111 in hood mount utility cabinet.
   2. Flush LED light fixtures as shown on Captive-Aire factory drawings. Furnish and install lamps.
   3. HDMI Light and fan on/off switch to be mounted on wall in location shown on Sheet FS104.
   4. TANK Fire Suppression System furnished and installed by Captive-Aire. Install in accordance with NFPA bulletin 96, including all current amendments to protect this hood including surface protection as required. All piping and conduit shall be run concealed in walls or above ceiling, except where exposure in necessary for functional reasons. Exposed piping shall be chrome plated or run in stainless steel sleeves. Include reset relays and manual remote pull station. All contactors are furnished by the Electrical Division for shut down of electric supply to all equipment in the event of system activation. System to be installed inside remote wall mount utility cabinet as shown.
   5. Include 18 gauge stainless steel removable closure panels and trim as required to seal hood to ceiling. Verify ceiling height. Submit shop drawings prior to fabrication.
   6. Install hood with 80” clearance from finished floor.

B. Exhaust duct work and fan furnished and installed by Division 23.

ITEM 15 STAINLESS STEEL WALL FLASHING: 1 LOT REQUIRED

A. Fabricate 20 gauge stainless steel Number 4 finish 1” thick (using mineral wool) wall flashing bonded to gypsum board with heat resistant mastic beginning directly above base tile on wall and terminating 2” above bottom edge of canopy hoods. Flashing shall run full length of canopy hood and full width of wall at east end of hood.

B. Note: ceiling and wall flashing shall meet Mechanical Code Sections 507.4 and 507.9. Verify all requirements and provide flashing (insulated for 1 hour rating if required) to meet the codes.

C. Install flashing with no exposed fasteners or screws in interlocking sections of equal lengths. Verify that surfaces are flat and smooth with a maximum variation of 1/16” in 10 feet.

D. Install assembly complete.

ITEM 16 HOT PLATE/FLAT TOP COOKTOPS WITH STAND: ~~OPEN BURNER / FLAT TOP RANGE:~~ 1 REQUIRED

A. Royal Range of California ~~Garland~~ models as follows: ~~G60-4G36SS. Include the following~~:
   1. Model RTGE-36 on left.
   2. Model RHPE-24-4 on right.
   3. Fisher ~~T&S Brass~~, model 54100 B-0289 wall mount fill faucet.
   4. Model RSS-60HD stainless steel stand, all welded, with 5” swivel casters ~~6” heavy-duty levelling swivel caster set~~; front casters with brakes.
   5. Dormont, model RDC36 restraining device. ~~48" long gas quick disconnect assembly with cable restraint.~~

B. Install complete.

ITEM 17 DOUBLE STACK CONVECTION OVEN: 1 REQUIRED

A. Garland, model MCO-ES-20S with the following accessories:
   1. Swivel casters (with front brakes).
   2. Dormont, model RDC36 restraining device.

B. Install assembly complete.

ITEM 18 COOK’S SUPPORT WORK TABLE: 1 REQUIRED

A. Pacific Stainless Products, model WKS-9630-IS fully welded "spec line” table with the following accessories:
   1. Two model SDAS-202006S stainless steel drawer assemblies as shown.
   2. Model TMSS-9612P. Secure to table top.
   3. Two under table mount stainless steel electrical receptacle boxes held back 3” from table edge.
   4. Flanged stainless steel leg sets.
   5. Provide finished cut-out in top for Item 19 cord drop.
   6. Sound deaden underside of top.

B. Install assembly complete.

ITEM 19 MICROWAVE OVEN: 1 REQUIRED

A. Panasonic, model NE-1054F.

ITEM 20 MEAL DELIVERY CARTS: 4 REQUIRED

A. GSW, model C-2333.

ITEM 21 NOT USED

ITEM 22 NOT USED

ITEM 23 BAKERS SUPPORT TABLE: 1 REQUIRED

A. Pacific Stainless Products, model WKS-8430-A0 with the following accessories:
   1. Model TMSC-8414 full length cantilever shelf. Install with 18 inch clearance from table top. Seal post penetrations in backsplash.

B. Install assembly complete.

C. Clip and seal to wall.

ITEM 24 MOBILE INGREDIENT BINS: 3 REQUIRED

A. Cambro, model IB32.

ITEM 25 30-QUART MIXER: 1 REQUIRED

A. Hobart, model HL-300 LEGACY+ with the following accessories:
   1. HL300-1STD standard accessory package.
   2. Bowl truck.

B. Install assembly complete.

ITEM 26 FOLD DOWN EYE WASH STATION: 1 REQUIRED

A. Specified by Plumbing Division.

ITEM 27 DISHTABLE WITH POT WASHING SINKS: 1 REQUIRED

A. Fabricate as detailed and construct top, integral sinks, and backsplash of one piece all welded 14-gauge stainless steel. Reinforce underside of top with enclosed stainless steel hat sections and mount on a stainless steel leg stand consisting of circular gussets, tubular legs, and adjustable bullet feet. Reinforce legs with 16-gauge stainless steel leg braces as shown. Sound deaden underside of top. Dishtable shall incorporate the following:
   1. Fisher Manufacturing, model 53449 pre-rinse faucet with 6” swing spout centered behind single sink. Include wall bracket.
   2. Two Fisher Manufacturing, model 53139 splash mount faucets.
   3. Four Fisher Manufacturing, model 22411 rotary waste assemblies with 14-gauge stainless steel lever waste brackets welded to undersides of sinks.
   4. Pacific Stainless, model WSS7814DD and WSS7214DD wall mount shelves as detailed. Install with 28” clearance to table top. Seal to wall.
   5. Provide clearance under drain board for Item 8 Mobile Waste Receptacle.

B. Install assembly complete. Clip and seal to walls.

ITEM 28 HOSE REEL WITH RECESSED CONTROL CABINET: 1 REQUIRED

A. Fisher, model 75394 with 35’ hose and pro spray valve. Include model 1801 recessed reel rinse control box assembly.

B. Install in location shown. Coordinate recess in wall with General Contractor.

ITEM 29 UNDERCOUNTER WAREWASHER WITH BOOSTER HEATER: 1 REQUIRED

A. Jackson WWS, model DishStar HT-E with the following accessories:
   1. Drain water tempering kit.
   2. Back panel.

B. Install assembly complete.

ITEM 30 NOT USED

ITEM 31 NOT USED

ITEM 32 MOBILE POT AND PAN SHELVING: 1 REQUIRED

A. Metro, model PR48VX3 modified to have top shelf with cutting board/tray drying rack and two intermediate and bottom shelves to be flat louvered with 4” high end and back shelf ledges.

PART 3 EXECUTION

3.01 SUPERVISION

A. A competent supervisor, representing the Contractor, shall be present at all times during progress of the Contractor's work.

3.02 SITE EXAMINATION

A. Verify site conditions under the provisions of the General Conditions, Supplementary Conditions and applicable provisions of Division 1 Sections. Notify the Architect, in writing, of unsatisfactory conditions for proper installation of food service equipment.

B. Verify wall, column, door, window, and ceiling locations and dimensions. Fabrication and installation should not proceed until dimensions and conditions have been verified and coordinated with fabrication details.

C. Verify that wall reinforcement or backing has been provided and is correct for wall supported equipment. Coordinate placement dimensions with wall construction Section.

D. Verify that ventilation ducts are of the correct characteristics, and in the required locations.

E. Verify that utilities are available, of the correct characteristics, and in the required locations.

3.03 INSTALLATION

A. Sequence installation and erection to ensure correct mechanical and electrical utility connections are achieved.

B. Install items in accordance with manufacturer's instructions.

C. Set each item of non-mobile and non-portable equipment securely in place, leveled and adjusted to correct height. Anchor to supporting substrate where indicated and where required for sustained operation and use without shifting or dislocation. Conceal anchorages wherever possible. Adjust counter tops and other work surfaces to a level tolerance of 1/16 inch (maximum offset, and plus or minus on dimension, and maximum variation in 2'-0" run from level or indicated slope). Provide anchors, supports, bracing, clips, attachments, etc., as required to comply with the local seismic restraint requirements. The Guidelines for Seismic Restraint of Kitchen Equipment, as prepared for the Sheet Metal Industry Fund of Los Angeles and endorsed by SMACNA, should be followed.

D. Complete field assembly joints in the work (joints which cannot be completed in the shop) by welding, bolting-and-gasketing, or similar methods as indicated and specified. Grind welds smooth and restore finish. Set or trim flush, except for "T" gaskets as indicated.

E. Provide closure plates and strips where required, with joints coordinated with units of equipment.

F. Provide sealants and gaskets all around each unit to make joints airtight, waterproof, vermin-proof, and sanitary for cleaning purposes.

G. Joints up to 3/8 inch wide will be stuffed with backer rod to shape sealant bead properly, at 1/4 inch depth.

H. At internal corner joints, apply sealant or gaskets to form a sanitary cove of not less than 3/8 inch radius.

I. Shape exposed surfaces of sealant slightly concave with edges flush with faces of materials at joint.

J. Provide sealant filled or gasketed joints up to 3/8 inch joint width. Wider than 3/8 inch, provide matching metal closure strips, with sealant application each side of strips. Anchor gaskets mechanically or with adhesives to prevent displacement.

K. Treat enclosed spaces, inaccessible after equipment installation, by covering horizontal surfaces with powdered borax at a rate of 4 ounces per square foot.

L. Insulate to prevent electrolysis between dissimilar metals.

M. Cut and drill components for service outlets, fixtures, piping, conduit, and fittings.

N. Coordinate the installation of approved dry pendant sprinkler head in each cooler and freezer. Sprinkler heads should be installed in coolers/freezers only if required by local codes.

O. Verify and coordinate the mounting heights of all wall shelves and equipment, with equipment located below them for proper clearances.

P. Coordinate with the Plumbing and Electrical Divisions and provide holes in food service equipment for plumbing and electrical service to and through the fixtures, as required. This includes welded sleeves, collars, ferrules, or escutcheons. Locate these services so that they do not interfere with intended use and/or servicing of the fixture. No alterations of the building are allowed without written permission by the General Contractor and/or Architect. (i.e. – routing refrigerant lines).

Q. All paints and coatings, including accessories, applied on site must comply with the VOC limits, emissions testing, and Submittal requirements for IEQ Credit Low-Emitting Materials shall comply with VOC limits of authorities having jurisdiction.

3.04 ADJUSTING

A. Test and adjust equipment, controls and safety devices to ensure proper working order and conditions.

B. Repair or replace equipment which is found to be defective in its operation, including units which are below capacity or operating with excessive noise or vibration.

3.05 CLEANING AND RESTORING FINISHES

A. After completion of installation and completion of other major work in food service areas, remove protective coverings and clean food service equipment internally and externally.

B. Restore exposed and semi-exposed finishes, to remove abrasions and other damages, polish exposed metal surfaces and touch-up painted surfaces. Replace work, which cannot be successfully restored.

C. Polish glass, plastic, hardware and accessories, fixtures and fittings.

D. Wash and clean equipment and leave in a condition ready for the Owner to sanitize and use.

3.06 TESTING, START-UP AND INSTRUCTIONS

A. Delay the start-up of equipment until service lines have been tested, balanced, and adjusted for pressure, voltage and similar considerations and until water and steam lines have been cleaned and treated for sanitation.

B. Make arrangements for demonstration of food service equipment operation and maintenance in advance with the Owner/Operator.

C. Demonstrate food service equipment to familiarize the Owner and the Operator on operation and maintenance procedures, including periodic preventative maintenance measures required. Include an explanation of service requirements and simple on-site service procedures as well as information concerning the name, address and telephone number of qualified local source of service. The individual performing the demonstration shall be knowledgeable of operating and service aspects of the equipment.

D. Provide a written report of the demonstration to the Owner, outlining the equipment demonstrated and malfunctions or deficiencies noted. Indicate individuals present at demonstration.

E. Final Cleaning: After testing and start-up, clean the food service equipment and leave in a condition ready for the Owner to sanitize and use.

3.07 CLEAR AWAY

A. Throughout the progress of their work, the Contractor shall keep the working area free from debris and shall remove rubbish from premises resulting from work being done by them. At the completion of their work, the Contractor shall leave the premises in a clean and finished condition.

END OF SECTION

SECTION 12 3600
COUNTERTOPS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Countertops for architectural cabinet work.

B. Wall-hung counters and vanity tops.

C. Sinks molded into countertops.

1.02 RELATED REQUIREMENTS

A. Section 06 4100 - Architectural Wood Casework.

1.03 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2024.

B. ISFA 2-01 - Classification and Standards for Solid Surfacing Material; 2013.

C. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Specimen warranty.

C. Shop Drawings: Complete details of materials and installation ; combine with shop drawings of cabinets and casework specified in other sections.

D. Selection Samples: For each finish product specified, color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, minimum size 6 inches square, representing actual product, color, and patterns.

F. Test Reports: Chemical resistance testing, showing compliance with specified requirements.

G. Installation Instructions: Manufacturer's installation instructions and recommendations.

H. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

1.05 QUALITY ASSURANCE

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.07 FIELD CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.01 COUNTERTOPS

A. Quality Standard: See Section 06 4100.

B. Plastic Laminate Countertops: High-pressure decorative laminate (HPDL) sheet bonded to substrate.

1. Laminate Sheet: NEMA LD 3, Grade HGS, 0.048 inch nominal thickness.
    a. Manufacturers:
        1) Formica Corporation: www.formica.com.
        2) Wilsonart: www.wilsonart.com/#sle.
        3) Substitutions: See Section 01 6000 - Product Requirements.
    b. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
    c. Finish: Matte or suede, gloss rating of 5 to 20.
    d. Surface Color and Pattern: As indicated on drawings.
2. Exposed Edge Treatment: Square, substrate built up to minimum 1-1/4 inch thick; covered with matching laminate.
3. Back and End Splashes: Same material, same construction.

C. Solid Surfacing Countertops: Solid surfacing sheet or plastic resin casting over continuous substrate.
1. Flat Sheet Thickness: 1/2 inch, minimum.
2. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA 2-01 and NEMA LD 3; acrylic or polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
    a. Manufacturers:
        1) Formica Corporation: www.formica.com.
        2) Corian: www.corian.com
        3) Wilsonart: www.wilsonart.com/#sle.
        4) Substitutions: See Section 01 6000 - Product Requirements.
    b. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
    c. Finish on Exposed Surfaces: Matte, gloss rating of 5 to 20.
    d. Color and Pattern: As indicated on drawings.
3. Other Components Thickness: 1/2 inch, minimum.
4. Back and End Splashes: Same sheet material, square top; minimum 4 inches high.

2.02 MATERIALS

A. Wood-Based Components: As specified in Section 06 4100.

B. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.

C. Grommets:
1. Utility Grommets: plastic material for cut-outs with removable cap, black color, 3 1/2 inch O.D.; similar to "XG" by Doug Mockett & Company.

2.03 FABRICATION

A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
1. Join lengths of tops using best method recommended by manufacturer.
2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall.
3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.

B. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.

1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
2. Height: 4 inches, unless otherwise indicated.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.02 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.

B. Attach plastic laminate countertops using screws with minimum penetration into substrate board of 5/8 inch.

C. Seal joint between back/end splashes and vertical surfaces.

3.04 TOLERANCES

A. Variation From Horizontal: 1/8 inch in 10 feet, maximum.

B. Offset From Wall, Countertops: 1/8 inch maximum; 1/16 inch minimum.

C. Field Joints: 1/8 inch wide, maximum.

3.05 CLEANING

A. Clean countertops surfaces thoroughly.

3.06 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION