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**ADDENDUM L**

**To the Contract Documents for**

**BIOLOGICAL AND COMPUTATIONAL SCIENCES FACILITY  
Richland, Washington**

**PACKAGE 3 BID SET**

**November 12, 2008**

This ADDENDUM modifies the original PROJECT MANUAL and DRAWINGS; dated October 15, 2008 as described below. The following sheets are to be issued with the following revisions:

**PROJECT MANUAL**

1. Section 26 5100 Lighting fixture schedule
  - a. A2D fixture added to lighting fixture specifications
2. Section 32.80.00 Irrigation
  - a. Previously, products related to drip irrigation were omitted in the specs. Irrigation section 32 80 00, page 3, includes the addition of drip tubing and drip valves.
3. Section 27 05 28.29, Hangars and Supports for Communications Systems
  - a. In PART 3 – EXECUTION ADD Red network fiber cabling as a group cabling category (added in 3.01 as item J).
4. Section 27 06 28.33, Conduits and Backboxes for Communications Systems
  - a. REVISE this section as shown on the attached reissued section.
5. Section 27 11 00, Communications Equipment Room Fittings
  - a. In subsection 2.93, the part number for the modular freestanding cabinets remains the same but is now listed within item D itself rather than as a subordinate item under D
6. Section 27 05 28.29, Hangars and Supports for Communications Systems

- b. In PART 3 – EXECUTION ADD Red network fiber cabling as a group cabling category (added in 3.01 as item J).
7. Section 27 06 28.33, Conduits and Backboxes for Communications Systems
- c. REVISE this section as shown on the attached reissued section.
8. Section 27 11 00, Communications Equipment Room Fittings
- d. In subsection 2.93, the part number for the modular freestanding cabinets remains the same but is now listed within item D itself rather than as a subordinate item under D.
9. Section 27 13 00, Communications Backbone Cabling
- e. ADD “XG Laser Optimized” to item A.3 in subsection 1.02, SUMMARY.
  - f. In subsection 1.07, ADD AMP Netconnect Certification as a qualification for the cabling installer.
  - g. In Section 2, ADD “approved alternate” as a manufacturer for UTP cable hardware.
  - h. In Section 2, DELETE all references to patch panels for the copper backbone cable.
  - i. REVISE the optical fiber cable described in subsection 2.05 to be “Single mode, 8.3/125 micrometer, strand count per Plans, fiber, nonconductive, indoor/outdoor, optical fiber cable with a maximum attenuation of 0.5 dB/km at 1310 nm and 0.5 dB/km at 1550 nm.”
10. Specification 27 15 00
- a. REVISE this section as shown on the attached reissued section.
11. Section 28 16 00
- a. REVISE Part 2.02 Door Switches , subsection 'B' to read: "Sentrol #2418T"
  - b. REVISE Part 2.04 UPS, subsection A.5 to read: "...10/100 Base T Ethernet, Dry relay contact for Low Battery and separate contact for AC Power Fail"
12. Section 28 23 00
- a. REVISE Part 1.08 Maintenance to read: "..... twenty-four (24) hours by the video surveillance system....."
13. Section 28 32 25

- a. REVISE Part 2.02 Emergency Ring Down Phone Stations, subsection A.3.h to read: "Paint Color: White"
- b. REVISE Part 2.02 Emergency Ring Down Phone Stations, subsection A.3.i to read: "\_Lettering Color: Red "
- c. REVISE Part 2.02 Emergency Ring Down Phone Stations, subsection A.3.n to read: "Product Designation: WEBS-MT/R"

## **DRAWINGS**

1. Sheet A1.11 Fire and Life Safety Plan – Level 1
  - a. Janitor Closet 1225 is no longer rated 1hr.
2. Sheet A2.11 Floor Plan – Level 1 – BSF North
  - a. Delete fire extinguisher cabinet between doors 1246A & 1248.
  - b. Delete fire extinguisher cabinet between doors 1236 & 1246
3. Sheet A2.13 Floor Plan – Level 1 - CSF
  - a. Change wall surrounding Open Work Area 1729 to 0.1.FH, acoustical insulation where indicated.
  - b. South wall of Stair 5 furred to top of beam at gridline C5.2.
4. Sheet A2.22 Floor Plan – Level 2 – BSF South
  - a. Adjust south partition at room 2019, gridline B11 between gridlines BE.6 and BE.8 as indicated in RFI 296 Response.
  - b. Delete east partition at Environmental Warm Room, gridline BC at B9, similar to Environmental Warm Room, gridline BC at B4.
  - c. West wall at BSF Entry 2100, gridline BE between B9 & B10 revised to wall type 0.1.CH.
5. Sheet A2.23 Floor Plan – Level 2 - CSF
  - a. Change wall surrounding Open Work Area 1729 to 0.1.FH, acoustical insulation where indicated.
  - b. Reverse door swing at door 2527 and move wall south 3'-4" adjacent walls to remain.
  - c. Reverse door swing at door 2709 and move wall north 3'-4" adjacent walls to remain.
6. Sheet A2.41 Opening Schedule – BSF
  - a. Door 1122, door closer required.

- b. Door 1225, door closer required.
- c. Door 1250, door closer required.
- d. Door 2202, door closer required.
- e. Door 2204, revised to painted hollow metal door frame.
- f. Door 2206, revised to painted hollow metal door frame.
- g. Door 2126, door closer required.

7. Sheet A2.42 Opening Schedule – CSF

- a. Door 2S05, BMS, keyed cylinder, and door pull on Limited Area side required.
- b. Door 1529, door closer required.
- c. Door 1702, door closer required.
- d. Door 1803, revised to painted hollow metal door frame.
- e. Door 1805, revised to painted hollow metal door frame.
- f. Door 1810, removable mullion added.
- g. Door 1811, removable mullion added.
- h. Door 2717, door closer required.
- i. Door 2725, door closer required.
- j. Door 2805, door closer required.

8. Sheet A2.43 Opening Schedule – Lobby

- a. Door 1006, door closer required.
- b. Door 1012, revised to painted hollow metal door frame.
- c. Door 1013, revised to painted hollow metal door frame.
- d. Door 1014, revised to painted hollow metal door frame.
- e. Door 1015, revised to painted hollow metal door frame.
- f. Door 2015, revised to painted hollow metal door frame.
- g. Door 2016, revised to painted hollow metal door frame.

9. Sheet A2.51 Room Finish Schedule – BSF

- a. Delete room 1120 and room 2128.

10. Sheet A2.63 Finish Plan – Level 1 – CSF

- a. Revise perforated floor tile layout as indicated on attached ASK-A2.63R1.

11. Sheet A3.21 Detailed Plans – Level 2 - BSF

- a. Bio-safety Cabinet EQ-50B located at south wall of room 2240 at gridline B3 between gridline BC and BB.7.

12. Sheet A3.22 Detailed Plans – Level 2 - BSF

- a. Complete perimeter casework at south wall of General Microbiology 3 Room 2217, similar to perimeter casework at north wall of General Microbiology 2 Room 2215.

13. Sheet A4.13 Ceiling Plan – Level 1 – CSF

- a. Ceiling at Showcase Lab 1508 raised to +12'-0" AFF.
- b. Revise return air grill layout as indicated on attached ASK-A4.13R1

14. Sheet A7.13 Bridge Details

- a. Revise Detail 1 Section – Guardrail at Bridge as indicated on attached ASK-A7.13R1.

15. Sheet A8.15 Exterior Column Details

- a. Detail 4 as indicated in RFI 296 Response.
- b. Detail 15, typical at columns w/ cross bracing, revised as indicated on attached ASK-A8.15R1

16. Sheet A9.04 Interior Elevations

- a. Revise interior elevation as indicated on attached ASK-A9.04R1.

17. Sheet S2.11 Foundation Plan – Level 1 – BSF North

- a. Add foundation mat for proposed 6,000 gallon Liquid Nitrogen storage tank immediately north of line B1 near Loading. Partial Plan provided and attached as sketch SSK-24, dated 11/12/08. Section cut at foundation mat added to plan referencing new detail 6/S5.03, and attached as sketch SSK-25, dated 11/12/08.

18. Sheet S5.03 Loading Dock Details

- a. New detail 6/S5.03 added for new foundation mat at LN storage tank, and attached as sketch SSK-25, dated 11/12/08.

19. Sheets E0.11, E0.25 Electrical panel schedules

Panel schedules have been updated!

20. E1.11 First floor key plan

Name on panel changed from SLP-1A2C to SLP-1A1C

21. E2.13 First floor power plan

- a. Receptacles in showcase lab moved and one receptacle added.

22. E2.13M First floor mechanical power plan

- a. Disconnect in shelled computer space (1811) changed to shunt trip fused switch disconnects, note added.

23. E2.23M Second floor mechanical power plan

- a. Disconnect in Sec Computer room (2527, 2709) changed to shunt trip fused switch disconnect, note added.

24. E3.25 Second floor mechanical power plan

- a. Disconnect in Sec Computer rooms (2527) changed to shunt trip fused circuit

breaker, note changed.

25. E3.26 Second floor mechanical power plan
  - a. Disconnect in Sec Computer rooms (2709) changed to shunt trip fused circuit breaker disconnect, note changed.
26. E3.ALT Server room rack layout 1<sup>st</sup> and 2<sup>nd</sup> floor enlarged plans
  - a. Disconnect in Sec Computer rooms (2527, 2709) changed to shunt trip fused breaker disconnects, note changed.
  - b. Conduits routed overhead in 1811, per Battelle review comment.
27. Sheets E4.13, E4.23 Electrical Lighting Level 1 & 2
  - a. ADD dimmable type light fixtures A2D and A4D per client request in Research and development labs, room #s 1515, 1517, 1610, 1611, 1715, 1717, 1802, 2511, 2517, 2519, 2539, 2739. Fixtures controlled via local wall mount dimmers.
28. Sheet E4.13 Electrical Lighting Level 1
  - a. ADD (2) type A20 light fixture to light added display niches along south wall of entrance lobby per client request.
29. E6.01 Standby riser diagram
  - a. STHK transformer changed from 112.5KVA to 150KVA transformer.
  - b. ATS-1 changed from 100A ATS to 150A ATS.
  - c. Feeder from ATS-1 changed to 150A feeder from 100A.
  - d. Feeder from ELPH-1A to ELPH-1C changed from 100A to 150A feeder.
30. E6.03 Normal power (CSF) riser diagram
  - a. Feeder from ELPH-1A to ELPH-1C changed from 60A to 150A feeder.
  - b. Min. dimensions for Pullbox changed to 16"L x 6"W x 6"D.
31. E6.06 Electrical One-line diagrams (BSF)
  - a. Chiller changed name from CH-1 to CH-2.
  - b. MPH-1A changed name to MPH-1A1
32. Sheets E7.02 Electrical enlarged plans
  - a. Electrical connections to BMS systems changed from normal power feeds to emergency power feeds. New circuits assigned.
  - b. FATC panels got assigned circuits.
33. Sheets E7.03 Electrical enlarged plans
  - a. Electrical connections to BMS systems changed from normal power feeds to emergency power feeds. New circuits assigned.
  - b. FATC panels got assigned circuits.

34. Sheets E7.05 Electrical enlarged plans
- a. Electrical connections to BMS systems changed from normal power feeds to emergency power feeds. New circuits assigned.
35. Sheet L3.03 Irrigation Schedule and Details
- a. 1-1/2" Remote control irrigation valve was upgraded to one with a scrubber due to filtration concerns.
  - b. A 2" irrigation disc filter was added to the point of connection due filtration concerns.
36. Sheet T1.00 - Tech Site Plan
- a. ADD: Wireless network devices are mounted to poles in the parking lot at three locations. (The units require 73 W of power and can accept voltages from 100 to 480 VAC. Each unit requires 4 strands of single mode fiber that go back to a network closet in the building and terminate on LC type connectors.) Note 5 is added to these locations.
  - b. ADD: Exit alarms to emergency egress doors from VTR are added. (The recommended product is Detex Corp. part# EAX-500 Exit Alarm.)
37. Sheet T1.01 - Overall Tech Site Plan
- a. ADD: "Plenum rated" is added to Note #1.
38. Sheet T1.22 – Tech Pathways Plan Level 2 BSF South
- a. See attached updated T 5.13

39. Sheet T2.11 – Tech Cabling Plan Level 1 BSF North

- a. ADD: Add to the General note: In BSF lab areas the CI outlets shown on the end of the islands will be in the ceiling panels provided by Hamilton.
- b. ADD to General Note: All perimeter casework requires C1 outlets. C1 outlets will need to be routed in Wiremold 4000 series raceway with "FiberReady" fittings.
- c. REVISE: C1 outlets should be located diagonal from the room entry typical all floors both BSF and CSF. This includes open and closed offices.

40. Sheet T2.12 -- Tech Cabling Plan Level 1 BSF South

- a. ADD: Add to the General note: In BSF lab areas the CI outlets shown on the end of the islands will be in the ceiling panels provided by Hamilton. These plans should coordinate with the Hamilton drawings on this concept.
- b. ADD to General Note: All perimeter casework requires C1 outlets. C1 outlets will need to be routed in Wiremold 4000 series raceway with "FiberReady" fittings.
- c. REVISE: C1 outlets should be located diagonal from the room entry typical all floors both BSF and CSF. This includes open and closed offices.
- d. REVISE: Eliminate C1 outlets in central plant and engineer shop.

41. Sheet T2.13 - Tech Cabling Plan Level 1 BSF North

- a. ADD: Locate a Cat5 Ethernet connection at LEED educational display.
- b. Locate a Cat5 Ethernet connection at coffee cart area in lieu of C1 outlet.
- c. Coordinate with KMD regarding heights and quantities of counters for the 3 phones at the lobby area. Current architectural plan seems to be correct.

42. Sheet T2.13 - Tech Cabling Plan Level 1 CSF

- a. ADD: A data outlet is added to each side of the column located in Showcase Laboratory 1508.
- b. ADD: Add to the General note: In BSF lab areas the CI outlets shown on the end of the islands will be in the ceiling panels provided by Hamilton. These plans should coordinate with the Hamilton drawings on this concept.
- c. ADD to General Note: All perimeter casework requires C1 outlets. C1 outlets will need to be routed in Wiremold 4000 series raceway with "FiberReady" fittings.
- d. REVISE: C1 outlets should be located diagonal from the room entry typical all floors both BSF and CSF. This includes open and closed offices.
- e. REVISE: Move WAP in 1508 West from the existing wall and position/center between the two walls.

- f. ADD: Add WAP into Room 1716 Northwest Corner.

43. Sheet T2.21 – Tech Cabling Plan Level 2 BSF North

- a. ADD: Add to the General note: In BSF lab areas the CI outlets shown on the end of the islands will be in the ceiling panels provided by Hamilton. These plans should coordinate with the Hamilton drawings on this concept.
- b. ADD to General Note: All perimeter casework requires C1 outlets. C1 outlets will need to be routed in Wiremold 4000 series raceway with "FiberReady" fittings.
- c. REVISE: C1 outlets should be located diagonal from the room entry typical all floors both BSF and CSF. This includes open and closed offices.

44. Sheet T2.22 – Tech Cabling Plan Level 2 BSF South

- a. ADD: Add to the General note: In BSF lab areas the CI outlets shown on the end of the islands will be in the ceiling panels provided by Hamilton. These plans should coordinate with the Hamilton drawings on this concept.
- b. ADD to General Note: All perimeter casework requires C1 outlets. C1 outlets will need to be routed in Wiremold 4000 series raceway with "FiberReady" fittings.
- c. REVISE: C1 outlets should be located diagonal from the room entry typical all floors both BSF and CSF. This includes open and closed offices.

45. Sheet T2.23 - Tech Cabling Plan Level 2

- a. ADD: Add to the General note: In BSF lab areas the CI outlets shown on the end of the islands will be in the ceiling panels provided by Hamilton. These plans should coordinate with the Hamilton drawings on this concept.
- b. ADD to General Note: All perimeter casework requires C1 outlets. C1 outlets will need to be routed in Wiremold 4000 series raceway with "FiberReady" fittings.
- c. REVISE: C1 outlets should be located diagonal from the room entry typical all floors both BSF and CSF. This includes open and closed offices.
- d. DELETE: No C1S outlet in 2527 and 2709.

46. Sheet T3.11 Tech System Plan - Level 1 BSF North.

- a. ADD door contact connections to exterior doors as shown on attached reissued sheet T3.11.

47. Sheet T3.12- Tech System Plan Level 2 BSF South

- a. ADD door contact connections on exterior and interior doors as shown on attached reissued sheet T3.12.
- b. REVISE location of card reader for door 1101 as shown on attached reissued sheet T3.12.

48. Sheet T3.13 Tech System Plan - Level 1 CSF.

- a. ADD door contacts to vestibule doors as sheet as shown on attached reissued sheet T3.13.

49. Sheet T3.21 Tech System Plan - Level 2 BSF North

- a. REVISE location of card reader for door 2222 as shown on attached reissued sheet T3.21.
- b. REVISE: Door 2222 relocate card reader to latch side of door.

50. Sheet T3.22 Tech System Plan - Level 2 BSF South.

- a. REVISE location of card reader for door 2100 as shown on attached reissued sheet T3.22. Card reader should be on entry side of door 2100 to BSF.

51. Sheet T3.23 Tech System Plan - Level 2 CSF North.

- a. ADD door contacts to stairway and corridor doors as sheet as shown on attached reissued sheet T3.23.

52. Sheet T4.01 – Tech Cabling Copper and Fiber Riser Diagram

- a. ADD: Add 48 Category 5E copper cables from IDF 2203 to cabinet in LSB 2208..

53. Sheet T4.03 Tech System - Electronic Security Riser Diagram

- a. REVISE connections for the Intrusion Detection System as shown on attached reissued sheet T4.03.
- b. ADD camera control conductors for outdoor cameras as shown on attached reissued sheet T4.03.
- c. ADD: A buzzer alerting occupants of a failure to prox out of the space should be installed just inside the door and should sound when the door is opened without a valid badge read on the out reader.
- d. REVISE Detail 4A: Owner to terminate on SMUX contacts only. Contractor to install and label all cable and components.
- e. REVISE: Detail 1: Fixed camera requires media converter. (This is correct on detail 1 sheet T4.05 but requires revision here.)

- f. REVISE: Detail 1: PTZ camera requires pair of conductors from media converter to camera for PTZ control.
- g. REVISE: Detail 4: Balanced magnetic switch does not require 12V power.

54. Sheet T4.05 Tech System - Electronic Security Riser Diagram

- a. DELETE entire sheet.

55. Sheet T5.01 – Tech Room 1325 Enlarged Plan

- a. ADD: Horizontal Wire Management on equipment rack detail. Label patch panels as either fiber or copper for distribution cables. Label riser fiber panel as Riser Fiber. Show 110 type rack mount copper riser cable termination panels with horizontal wire management on same rack equipped with copper distribution cable patch panels.

56. Sheet T5.02 - Tech Room 1203 Enlarged Plan

- a. ADD: Rack mount protected terminals on MDF equipment rack for 50 pair copper cables from PSL 301 and ISB II Computer Room. Terminals are to be equipped with 110 type punch down blocks.
- b. ADD: Horizontal Wire Management on equipment rack detail. Patch panels are to be labeled as either fiber or copper for distribution cables. Riser fiber panel to be labeled as Riser Fiber.
- c. ADD: 110 type rack mount copper riser cable termination panels with horizontal wire management on same rack equipped with copper distribution cable patch panels.
- d. ADD: Add Equipment tray for WAP injectors to rack.

57. Sheet T5.03 - Tech Room 1514 Enlarged Plan

- a. ADD: Horizontal Wire Management on equipment rack detail. Patch panels to be labeled as either fiber or copper for distribution cables. Riser fiber panel to be labeled as Riser Fiber.
- b. ADD: 110 type rack mount copper riser cable termination panels with horizontal wire management on same rack equipped with copper distribution cable patch panels.
- c. ADD: Add Equipment tray for WAP injectors to rack.

58. Sheet T5.04 - Tech Room 2325 Enlarged Plan

- a. ADD: Show Horizontal Wire Management on equipment rack detail. Patch panels to be labeled as either fiber or copper for distribution cables. Riser fiber panel to be labeled as Riser Fiber.
- b. ADD: 110 type rack mount copper riser cable termination panels with horizontal wire management on same rack equipped with copper distribution cable patch panels.
- c. ADD: Add Equipment tray for WAP injectors to rack.

59. Sheet T5.05 - Tech Room 2203 Enlarged Plan

- a. ADD: Show Horizontal Wire Management on equipment rack detail. Patch panels to be labeled as either fiber or copper for distribution cables. Riser fiber panel to be labeled as Riser Fiber.
- b. ADD: Show 110 type rack mount copper riser cable termination panels with horizontal wire management on same rack equipped with copper distribution cable patch panels.
- c. ADD: Add Equipment tray for WAP injectors to rack.

60. Sheet T5.06 - Tech Room 2801 Enlarged Plan

- a. ADD: Show Horizontal Wire Management on equipment rack detail. Patch panels to be labeled as either fiber or copper for distribution cables. Riser fiber panel to be labeled as Riser Fiber.
- b. ADD: Show 110 type rack mount copper riser cable termination panels with horizontal wire management on same rack equipped with copper distribution cable patch panels.
- c. ADD: Add Equipment tray for WAP injectors to rack.

61. Sheet T5.07 - Tech Room (Red) Secured 2723 Enlarged Plan

- a. ADD: Show Horizontal Wire Management on equipment rack detail. Patch panels to be labeled as either fiber for distribution cables or riser cable.
- b. ADD: Add Equipment tray for WAP injectors to rack.

62. Sheet T5.08 - Tech Room (Black) Secured 2721 Enlarged Plan

- a. ADD: Show Horizontal Wire Management on equipment rack detail. Patch panels to be labeled as either fiber or copper for distribution cables. Riser fiber panel to be labeled as Riser Fiber.
- b. ADD: Add Equipment tray for WAP injectors to rack.

63. Sheet T5.09 – Shelled Computing space 1811A Enlarged Plan

- a. ADD: Add new detail for a new communication cabinet that shall be equipped with vertical wire management and casters and shall be located on the shared wall with Growth Chamber 2B.
- b. Install 48 Category 5E copper cables from IDF 2203 to new cabinet in Lab 2208. Terminate on new copper Category 5E patch panels equipped with horizontal wire management mounted in the new cabinet. Cables shall have 4 ft service loop coiled in communication cabinet to allow movement of cabinet for service access to back of patch panels.

64. Sheet T5.13 – Lab Room 2737, 2729, 2727 Enlarged Plans

a. REVISION: Revision coming to add Enlarged plan for MCDL 2208 LAB.

65. Sheet T5.14 – Math Room 1316, ISB Comp Room Enlarged Plans

a. REVISE: Produce enlarged plans to show fiber and copper terminations from MDF to PSL 600, PSL 301, Math 1316, ISB II computer and telephone room.

END OF ADDENDUM L