



**Facilities & Operations
Modernization Project Office
Building 134C
P.O. Box 5000
Upton, NY 11973-5000**

Date: May 20, 2010

**ADDENDUM NO. 4
to
SPECIFICATIONS AND DRAWINGS
to
Interdisciplinary Science Building - Phase I
Bldg 734**

GENERAL: This Addendum is to amend Drawings and Specifications dated April 9, 2010 issued with the Bid Documents.

Material, work, and workmanship, except where specified otherwise in this Addendum, shall conform to all requirements of Contract Documents and become a part thereof.

ESH&Q

Risk Level A3-minor

Addendum 4

Activity No. 74905/65148

Project No. 11733

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CLARIFICATIONS:

1. The (2) "45 Gallon Flammable Cabinets" shown in corridor C-30 on drawing QL-102B.1 are to be contractor furnished & contractor installed. The specification for these cabinets has been added to spec section 12 35 53 Laboratory casework and other furnishings, part 2.1.A.2.
2. Drawing C-200, General note #6 indicates that there is work outside of the limits of contract (LOC). Note #6 be modified to read as follows: Contractor shall work with owner to schedule road closure. Contractor shall provide a construction plan showing the location of temporary barriers and a statement identifying the dates when the road will be closed.
3. For maximum efficiency and operation of the storm sewer and erosion control systems(s), the Rochester St. crossing, downstream to the CFN basin, and the CFN basin enlargement should be constructed in early phases prior to the addition of significant amounts of new impervious surface, trailers, materials, and vehicles within the ISB area.
4. All moveable lab furniture (MB) and (MT) shall be excluded from the base bid and included in Alternate #4.
5. Plenum cable (where required) without conduit may be used above accessible ceiling for the Fire Alarm System. Cable shall be in accordance with contract specifications and shall be red in color.
6. Detail 11/E-503 and 12/E-503 shall be 1" conduit to cable tray for voice-data outlets and 1" conduit to accessible ceilings for surface raceway
7. Drawing T-601 / Spec 270532 – Spec and riser mention about site cabling for the telecommunication system to Building 515. Site cabling is in project scope. Terminations in building 515 are not in project scope however all work in building 515 shall be coordinated with BNL. See new telecommunications site drawing TS-101 for additional information.
8. The size of the conduit and wire for the ATS control wiring can be found on detail 1/E-501 key note #10. This note states to provide 8#12 control wires in minimum 1" c from each ATS to generator.
9. Reference Drawing ES-102 for site lighting conduit sizes. Concrete encasement is required and depth shall be 30" minimum.
10. BNL is responsible for the CCTV system.

11. Drawing E-401 and E-502 indicate IRGB in the service corridors C02 and C23, and IRTS in the labs. Refer to detail 9/E-401 for IRGB and IRTS requirements in the service corridors and labs.
12. Drawing EP-100 – For symbol that is ‘LGB’ inside of a rectangle in B05, refer to detail 9/E-401.
13. Fixture schedule has been updated to include the shower type fixture.
14. Drawing EL-101 – Elevator and pump rooms (196 & 197) both show type ‘FD’ fixtures that has been used in both areas but the symbol is shown differently in the elevator than in the two pump rooms. Both fixtures are Type FD but with different mounting configurations. The pump room is ceiling mounted and the elevator pit is wall mounted.
15. Drawing EL-102A – Fixture type in open office #252 – This is an open office area. Fixture Type is correct, symbol will be coordinated.
16. Drawing EL-102A – The fixture types in Room 229 should be Type FD.
17. Drawing EL-102A – In stair #3 and in front of seminar room 201, type ‘A’ fixtures should be provided. Fixture symbols in front of seminar room will be coordinated.
18. Y-701 – Door 123A is listed as being laser control unit interlocked with door 123B. This door is not a security door however is locked and unlocked via the laser entry control system. Door will have electric lock and door contact.
19. Y-701.1 – Doors 184A, 184B, and 235 are listed as having the laser interlock. Controller is specified in section 26 70 00. G.C. is responsible for providing this system and any interface with the security system.
20. Spec 05120 Section 1.2.B.2.b calls for the structural steel erector to be an AISC Certified Erector. This provision cannot be waived.
21. Sections 3&4/A-310 at the Cleanroom Mech. Level shows an edge angle that refers to the structural drawings, however when you reference S-102A and 2/S-310, no edge angle is indicated. Refer to detail C/S311 for size.
22. Elevator shafts EL-01 and EL-02 are not required to be naturally nor mechanically vented. No vent is needed for elevator serving 3 stories. Please refer to NYSBC section 3004.
23. Plan PP-103A, vacuum Equipment notes to see detail 1/P-621. Reference has been revised to be detail 3 on PP-501.

24. Plan PP-101B.1 detail 1 notes "Alternate 2", this should read Alternate 1.
Plan PP-101B detail 2 notes "Alternate 3", this should read Alternate 2
25. Drawing PP-401A3 there is piping shown in Pump Room 196 on lower left corner of plan. Pipes were erroneously copied and should have been deleted. They can be ignored.
26. All Specialty Gas symbols and abbreviations are identified in Specification Section 22 63 13.
27. Refer to Specification section 11 53 00 for the gas cabinets and Specification Section 22 63 13 for the panel mounted manifolds.
28. Specification Section 22 63 21, Part 2.9 – Phase Separators: A phase separator is not required.
29. Section 22 63 21, Liquid Piping Nitrogen System. The LN2 piping design is partially a performance design where the LN2 vendor has to design the final layout. The contract documents provide the layout and routing for the bulk tank, filling station and LN2 piping and does not show every valve, safety relief valve, flexible connection and other accessories. Shop drawings are required from successful contractor.
30. Section 22 63 21, Part 2.1 3. Lists only one suitable manufacturer for the Piping system and components. Substitutions would be considered, follow section 01 25 13 Product Substitutions.
31. Sections 1/S-303 and 2/S-303 :cantilevered walls at the ULV Chamber
It is not the design intent that the cantilevered basement walls should be fully backfilled prior to constructing the ULV chamber walls. The design intent is to maintain a minimum isolation joint width of 2 inches along the full height of the wall. The footprint and location of the ULV chamber are fixed and will not change. The ULV chamber dimensions are fixed. How to ensure that the 2” minimum isolation gap is maintained along gridline B after the wall deflects is a function of the contractor’s means and methods. The length of the pump room may be adjusted to maintain the current location of the walls along 5.1 and 7.9 and the 2” isolation gap. With these adjustments, the ULV chamber can be constructed concurrently with or prior to the construction of the cantilevered basement walls. This is acceptable provided that any misalignments do not reduce the footprints of the inertia masses and the ULV chamber or the minimum allowable isolation gap width. Conceptually, it is structurally acceptable to move the wall along gridline B outward. Additional review and approval would be

required by the A-E. A sketch will be required with the new proposed wall location for review and approval. The walls along gridlines 5.1 and 7.9 shall remain as currently dimensioned.

32. Sections 1/S-303 and 2/S-303 show a 27' high cantilevered concrete wall with no horizontal joints. It is structurally acceptable to place horizontal construction joints in the cantilevered basement walls.
33. Addendum #2 – Clarification #24 – mail slots shown on 8/I-201 are shown on the furniture alternate drawings ('IF' Series), mail slots shall be included as a part of the base bid.
34. All low Voltage Control devices are daisy chained together on a control link and wired back to the I/O modules of the relay panel via low voltage wiring. All devices are smart devices and addressable so the central system tells the device how to be controlled and the devices send a low voltage signal back to the panel for override purposes and occupancy detection. The relay panels are wired back to the fixtures via line voltage wiring to physically turn the lights ON/OFF. There is no physical low or line voltage wiring between the fixtures and the control devices (occupancy sensors, override switches, photocells). Electrical subcontractor to provide the plenum rated control wiring as recommended by system manufacturer.
35. Spec 260943 Section 1.3.A states "Lighting control equipment included in this section shall be furnished by section 25500 and installed by Div. 26" Spec 255000 does not mention or reference spec 260943. The specification section 25 50 00 shall be revised to reflect the following statements: Products Supplied, But Not Installed Under This Section
 1. Provide the Low Voltage Lighting Control System as described in section 26 09 43. Turn system components over to Division 26 for installation.
36. Reference Addendum 2: Sheet FX-640 is the correct sheet to be issued. Sheet PP-640 does not exist.
Drawing FX-640: Revised location of hose valves
37. Drawing T-601: provide 12 strand count single mode fiber from ISB Room 132 to ISB Room 231.
38. Drawing T-601: Provide 12 strand count for the multi-mode fiber from ISB Room 132 to ISB Room 231.