



DASNY

ANDREW M. CUOMO
Governor

ALFONSO L. CARNEY, JR.
Chair

REUBEN R. MCDANIEL, III
Acting President & CEO

SECTION A

ALBANY (HEADQUARTERS): 515 Broadway, Albany, NY 12207 | 518-257-3000
NEW YORK CITY: One Penn Plaza, 52nd Floor, New York, NY 10119 | 212-273-5000
BUFFALO: 539 Franklin Street, Buffalo, NY 14202 | 716-884-9780
ROCHESTER: 3495 Winton Place, Building C, Suite 1, Rochester, NY 14623 | 585-461-8400

DORMITORY AUTHORITY STATE OF NEW YORK
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DASNY

<u>BID NO.:</u> 669	<u>PROJECT NAME & LOCATION:</u> Advanced Science Research Center 85 St. Nicholas Terrace New York, NY 10031
<u>Description:</u> Furnish, Deliver and Install Laser Curtains	
<u>Bid Open Location:</u> DASNY 515 Broadway, Albany, NY 12207	
<u>Bid Open Date:</u> March 23, 2020	<u>Contact:</u> Theresa Graffeo
<u>Bid Open Time:</u> 2:30 p.m.	

NOTICE TO BIDDERS

MAIL BIDS EARLY

Sealed bids will be received by DASNY at the above address for the items listed in the attached Bid Breakdown and Schedule. When submitting your bid you must:

1. Prepare your bid on the attached Bid Breakdown and Schedule. Return one signed original of the Bid Breakdown and Schedule
2. If your bid deviates from Specifications, explain such deviations or qualifications on your letterhead, setting forth therein such explanations, and attach them to the Bid Breakdown and Schedule.
3. Submission of a bid constitutes full knowledge and acceptance of all provisions of the Notice to Bidders, all information referenced in the Purchasing General Conditions, Supplemental and Detailed Specifications, the Bid Submission and any Supplemental General Requirements contained herein, as well as any addenda issued in relation to the Invitation for Bids.
4. Each bid shall bear on the outside of the envelope the name of the bidder, address, telephone number and designated as a bid for the following:

DASNY Bid No. 669
Bid Opening Date: 03/23/2020 @ 2:30PM
Return to:
DASNY
Attn: Purchasing Unit
515 Broadway
Albany, NY 12207-2964



Bid No.: 669

When a sealed bid is placed inside another delivery jacket, the bid delivery jacket must be clearly marked on the outside “**BID ENCLOSED**” and “**ATTENTION: PURCHASING UNIT**”. The Dormitory Authority will not be responsible for receipt of bids which do not comply with these instructions.

5. Mail bid responses early in order for them to be received before the time of the bid opening. **Late bids will be automatically rejected.** Individuals submitting bids in person or by private delivery services should allow sufficient time for processing through building security to assure that the bids are received prior to the deadline for submitting bids. All individuals who plan to attend bid openings will be required to present government-issued picture identification to building security officials and obtain a visitor’s pass prior to attending the bid opening.

6. In accordance with State Finance Law § 139-j and 139-k, this solicitation includes and imposes certain restrictions on communications between Dormitory Authority personnel and an Offerer during this procurement process. Designated contact for this solicitation is:
Theresa Graffeo, Purchasing Coordinator, at Dormitory Authority – State of New York, 515 Broadway, Albany, NY 12207, (518) 257-3583. Contacts made to other Dormitory Authority Personnel regarding this procurement may disqualify the Offerer and affect future procurements with governmental entities in the State of New York. Please refer to the Authority’s website www.dasny.org for Authority policy and procedures regarding this law, or the NYS office of General Services website www.ogs.ny.gov/BU/PC/ for more information about this law.



Bid No.: 669

If you are not submitting a bid it is requested that you complete and return the lower portion of this form

(Please check all that apply and provide comments in the space provided, if necessary)

- We are not Submitting a bid. We Request removal of our name from the mailing list.
- Location of the job site. Commodity is not carried by our company.
- Scope is too large.

Other/Additional Explanation: _____

NAME OF BIDDER: _____

ADDRESS _____

:

Street
Telephone

City

State

Zip

Signature of Bidder

Official Title

CLAUSES PURSUANT TO THE OMNIBUS PROCUREMENT ACT OF 1992

It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority and woman-owned business enterprises as bidders, subcontractors and suppliers on its procurement contracts.

Information on the availability of New York subcontractors and supplies is available from:

Empire State Development
Small Business Division
30 South Pearl Street, 7th Floor
Albany, NY 12207
Phone: (800) 782-8369

A directory of minority and woman-owned business enterprises is available from:

Empire State Development
Division of Minority and Women Business Development
30 South Pearl Street
Albany, NY 12207
Phone: (518) 292-5250

Online Directory: <https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp>

DASNY maintains a directory of minority and women-owned business enterprises:
<http://www.dasny.org/construc/mwsberreg/index.php>

The contractor acknowledges notice that New York State may seek to obtain offset credits from foreign countries as a result of this contract and agrees to cooperate with the State in these efforts.

DASNY encourages the use of recycled Materials in the manufacturing process. To that end, the recycled product must meet the same codes, specifications and standards the non-recycled materials do, including requirements for cost, installation, aesthetics, availability and maintenance.

The Omnibus Procurement Act of 1992 and § 2879 of the NYS Public Authorities Law require that by signing this bid, contractors certify that whenever the total bid amount is greater than \$1 million:

1. The contractor has made reasonable efforts to encourage the participation of New York State Business Enterprises as suppliers and Subcontractors on this project, and has retained the documentation of these efforts to be provided upon request to the State. If the contractor determines that NYS business enterprises are not available to participate on the contract as subcontractors or suppliers, the contractor shall provide a statement indicating the method by which such determination was made. If the contractor does not intend to use subcontractors, contractor shall provide a statement verifying such;
2. The contractor has complied with the Federal Equal Opportunity Act of 1972 (PL 92-261), as amended;
3. The contractor agrees to make reasonable efforts to provide notification to New York State residents of employment opportunities on this project through listing any such positions with the Job Service Division of the New York State Department of Labor, or providing such notification in such manner as is consistent with existing collective bargaining contracts or agreements. The contractor agrees to document these efforts and to provide said documentation to the State upon request;

DASNY is required by law to notify the NYS Department of Economic Development of any procurement contract for one million dollars or more that is to be awarded to an out-of-state vendor. This notice must be done simultaneous to the notification of award provided to the vendor. A purchase order or contract cannot be issued until fifteen (15) days after such notification is provided.



DASNY

GENERAL SPECIFICATIONS

- (1) The enclosed Purchasing General Conditions are hereby incorporated by reference. Submission of a bid response shall constitute acceptance of such conditions. Any exceptions/clarifications/qualifications to these conditions or other specifications and/or requirements contained herein must be clearly stated in the bid response and, depending upon the nature of such, may be grounds for rejection of your bid.
- (2) Bids must be submitted in the bidder's full legal name, or the bidder's full legal name plus a registered assumed name, if any.
- (3) All NYS bidders are required to be registered to do business with the NYS Department of State or their local County Clerk, whichever is applicable.
- (4) All out-of-state bidders will be required to provide proof of registration to do business in their state. All out-of-state bidders that "do business in New York State" **MUST BE REGISTERED WITH THE NYS DEPARTMENT OF STATE**. Please contact the NYS Department of State at (518) 473-2492. Information is available at the DOS website: www.dos.ny.gov
- (5) DASNY is required by law to notify the Empire State Development of any procurement contract for one million dollars or more that is to be awarded to an out-of-state vendor. This notice must be done simultaneous to the notification of award provided to the vendor. A purchase order or contract cannot be issued until fifteen (15) days after such notification is provided.
- (6) Empire State Development is required by law to identify states and other jurisdictions that impose preferences or other penalties against New York bidders. DASNY is precluded from soliciting bids or entering into procurement contracts with companies that have their principal place of business located in one of the listed jurisdictions, unless the procurement is for a product that is substantially manufactured in New York State or the services are to be performed in New York State. Currently, this list of jurisdictions includes the states of Alaska, Hawaii, Louisiana, South Carolina, West Virginia and Wyoming.
- (7) Unless otherwise indicated, any reference to brands or model numbers is intended to establish a standard. Items of all manufacturers will be considered, provided the item is determined to meet or exceed the required specification. DASNY's decision as to whether a substitute item meets specification will be final. Your attention is directed to Article II-7, Page 5 of the General Conditions. In order to evaluate substitute items, detailed specifications must be submitted for any product that is other than the one(s) specified in the bid.



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GENERAL SPECIFICATIONS CONTINUED

- (8) Unless otherwise noted, guarantee on all items is to be one year as detailed in Article XVI of the General Conditions
- (9) All upholstered furniture and drapery panels and lining must meet strict flammability requirements. Standards applicable to this bid, if any, will be delineated in the Detailed Specifications.
- (10) LABOR/TRADES - Any labor, materials or means whose employment, or utilization during the course of this contract, shall not in any way cause or result in strike, work stoppages, delays, suspension of work; or similar troubles by workers employed by this contractor or his subcontractors, or by any of the trades working in or about the buildings and premises where work is being performed. Any violation by the contractor of this requirement may in the sole judgment of DASNY be considered as proper and sufficient cause for declaring the contractor to be in default, and for the owner to take action against him as set forth in the Purchasing General Conditions, Article VIII, "Termination", or such other action as DASNY may deem proper.
- (11) Bid results are available on the DASNY website (www.DASNY.org). Bid results will not be given over the phone.
- (12) If you are a NYS Certified Minority or Women Owned Business, please include a copy of your certification with the bid.



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SUPPLEMENTAL SPECIFICATIONS

The following items are attached for informational purposes. Referenced documents need not be returned with the proposal. These documents are only applicable to the successful bidder and the ensuing procurement contract. Documents are only applicable to the successful bidder and the ensuing procurement contract. Documents applicable to the procurement that will result from this Invitation for Bids are designated by a check box (☒). Unless otherwise indicated, the referenced documents are located at the end of this Invitation for Bids.

- Purchasing General Conditions** – The DASNY Purchasing General Conditions contains terms and conditions of purchases made by DASNY. It is recommended that this document be reviewed fully.
- M/WBE Utilization Plan and Request for Waiver** - Minority and Women-Owned Business Enterprise (M/WBE) goals for this project are 0% and 0%, respectively. The successful bidder shall be required to complete a Utilization Plan or Request for Waiver, to be approved by DASNY’s Opportunity Programs Group. Reference Purchasing General Conditions, Article XIX, Affirmative Action for Contracts Mr. Michael Clay, DASNY Opportunity Programs Group at (518) 257-3464, is available to assist all bidders in attaining these goals. *Reference the enclosed “Good Faith Efforts Guidelines”.*
- Supplemental General Requirements** – Attached (if applicable) are the Supplemental General Requirements (SGRs) which provide important logistical information and additional conditions which govern this procurement. Please read these SGRs carefully.
- Form of DASNY Contract** – The procurement resulting from the Invitation for Bids will be executed through a DASNY purchase order and a related contract. The contract executed with the successful bidder will be in the same substantial form as the attached “Form of Contract”. Note that this Invitation for Bids and any response to such will be annexed as binding terms of the purchase agreement.
- Certificate of Insurance** (*sample enclosed*) – The successful bidder will be required to provide a Certificate of Insurance pursuant to Article XIV of the enclosed Purchasing General Conditions. The certificate shall name DASNY and other designated parties as additional insureds.

SUPPLEMENTAL SPECIFICATIONS CONTINUED

- Worker’s Compensation / Disability Insurance** – The successful proposer will be required to provide specific documentation with respect to Worker’s Compensation and Disability Insurance pursuant to Article XIV of the enclosed Purchasing General Conditions. Requirements are detailed in the enclosed “Workers’ Compensation and Disability Benefits Requirements” document.
- Prevailing Wage Schedule** – NYS Labor Law requires all wages paid by contractors and subcontractors on public work projects be paid at the prevailing wage rates. Enclosed is the current rate schedule for the appropriate county. Contractors and Subcontractors are responsible for obtaining current rates throughout the course of the project. The NYS Department of Labor (NYS DOL) updates these rates on July 1st of each year. Current rates can be obtained on the NYS DOL website (www.labor.state.ny.us) or by fax at (518) 485-1870. Note that an executed Contractor and Subcontractor Certification and certified payrolls, which include the hours and days worked by each workman, laborer or mechanic, the occupation at which he worked, the hourly wage rate paid and the supplements paid or provided, must be submitted with each and every payment requisition. **DASNY will not process an invoice without this information.** Forms are available on the DASNY website:
<http://www.dasny.org/construc/forms2/vendors.php>
- Labor and Material Payment Bond** – The successful bidder must be prepared to provide surety bonds prior to award in accordance with Article XIV of the DASNY Purchasing General Conditions. The costs of these bonds are to be separately stated in the total bid price as indicated on the Bid Breakdown and Schedule.
- Performance Bond** – The Successful bidder must be prepared to provide surety bonds prior to award in accordance with Article XIV of DASNY Purchasing General Conditions. The costs of these bonds are to be separately stated in the total bid price as indicated on the Bid Breakdown and Schedule.
- Standard Vendor Responsibility Questionnaire (SVRQ)** – The successful proposer, in accordance with Article XXII of DASNY Purchasing General Conditions, will be required to complete the enclosed SVRQ. The award of a contract will be subject to a review of the information contained in these forms.



SUPPLEMENTAL SPECIFICATIONS CONTINUED

- NYS Uniform Contracting Questionnaire (UCQ)** – The successful proposer will be required to complete the enclosed UCQ. The award of a contract will be subject to a review of the information contained in these forms.

- DASNY Contractor and Consultant Questionnaire (CCQ)** – The successful proposer will be required to complete the enclosed CCQ. The award of a contract will be subject to a review of the information contained in these



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SUPPLEMENTAL GENERAL REQUIREMENTS

Requests for Information:

All questions pertaining to Bid No. 669 – Furnish, Deliver and Install Laser Curtains are due no later than 4:00 p.m. on March 11, 2020 to tgraffeo@dasny.org. RFI Responses will be posted via Addenda to DASNY's Website in the Attachments Section of the Bid Opportunity Page for Bid No. 669.

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SCOPE OF WORK

Furnish and install new Laser Curtains as specified per the bid documents and as follows:

Furnish and Install Items:

- 1) Furnish and installation of new heavy-duty Laser track with supports fastened to structure above.
- 2) C-15 Certificates and tags for each room.
- 3) Shop drawings of all rooms with curtains.
- 4) 8 Window Covers at 25.5" x 31.25"
- 5) 8 Window Covers at 25.5" x 48.5"

Furnish ONLY items: (installation by General Contractors Electrician):

- 1) 6 of Entry Guard Control Panels
- 2) 13 of Entry Guard illuminated dual status signs
- 3) 21 of Entry Guard magnetic safety interlocks
- 4) 21 of Entry Guard dual interlock receptacles
- 5) 42 of Entry Guard interlock connector plugs
- 6) 21 of Entry Guard emergency stop switches



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Detailed Specifications

SECTION 11 5363 – LASER SAFETY EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Laser safety curtain, track, hardware, and accessories.
 - 2. Laser safety entry control system.

1.2 RELATED SECTIONS

- A. Section 05 5000 METAL FABRICATIONS - for structural support of laser curtain track and assembly not specified in this section.

1.3 REFERENCE STANDARDS

- A. Comply with the following applicable standards and requirements:
 - 1. NFPA 701-2010 – Fire tests for flame propagation of textiles and films.
 - 2. ASTM E84 Flame Spread and Smoke Developed Fire Testing.
 - 3. ANSI Z136.1-2007 American National Standard for Safe Use of Lasers.
 - 4. ANSI Z136.7-2008 American National Standard for Testing and Labeling of Laser Protective Equipment.
 - 5. International Electro-technical Commission (IEC) SS-60825-4 and BS EN12254:2010
 - 6. All applicable Federal, State and Municipal codes, laws and regulations regarding Flammability and smoke generation of interior finishes.

1.4 SUBMITTALS

- A. Product Data:
 - 1. For laser safety curtain and track. Include data on physical characteristics, durability, fade resistance, and performance and flame-resistance characteristics.
 - 2. For laser entry control system: Include product data and electrical requirements.
- B. Shop Drawings: Indicate locations, dimensions, and mounting details for laser curtain track and entry control system.
 - 1. For laser curtain and track, include plans, elevations, dimensions, details, and installation instructions.
 - 2. For entry control system, submit plans, elevations of system components mounted to wall or curtain, details, wiring and control diagrams, and design and testing data.
- C. Samples: Submit sample for each curtain and component specified, including the following:
 - 1. Laser safety curtain, 12 x 12 inch square
 - 2. Laser safety track, 12 inches long
 - 3. Valance assembly, 12 inches long
 - 4. Window blocking material, complete with hook and loop attachment, 12 inch square
- D. Certificates:
 - 1. Submit manufacturer's documentation indicating laser safety curtain complies with specified requirements.
 - 2. Submit Certificate of Fitness for New York City Fire Department (FDNY) Flame Retardant Treatment (C-15), certifying materials of this section are flame retardant or inherently flame resistant.

- E. Maintenance Data: Include operation and maintenance information for laser curtains and laser entry control system in the operation and maintenance manual.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Installers shall have minimum five years of documented experience for installation of products of this Section.
 - 1. Laser Entry Control System: Installers shall be approved by system manufacturer.
- B. Single Source: Provide laser safety curtains, laser entry control system and track assemblies by a single manufacturer. Laser entry control system shall be fully integrated into laser safety curtains.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install laser curtains and laser entry control system until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Laser Safety Curtains shall be tested to show compliance with the following performance requirements.
- B. Fire Test Response Characteristics:
 - 1. Surface-Burning Characteristics: Comply with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - a. Flame-Spread: 25 or less (Class A)
 - b. Smoke-Developed Index: 450 or less
 - 2. Meet requirements of State of California test and in accordance with NFPA Standard No. 701-2010, test methods 1 and 2.
- C. No part of curtain or track shall release toxic fumes following laser exposure.

2.2 MANUFACTURERS

- A. Integrated System: Curtains, tracks, and laser entry control system shall be provided by a single source.
- B. Basis of Design: Flex-Guard Laser Safety Curtains and Tracks and Entry-Guard Laser Entry Safety Interlock System: Kentek; www.kentek-laser.com.
- C. Provide the named manufacturer and products or equal product and system from one of the following:
 - 1. Beamstop'r Laser Barriers, Inc.: www.beamstopr.com.
 - 2. Rockwell Laser Industries, Inc.: www.rli.com.

2.3 LASER SAFETY CURTAIN AND TRACK

- A. Steel Track: Roll-formed steel, 16 gauge; nominal 1-1/2 inches wide by 1-1/4 inch high.
1. Track: Straight and curved.
 2. Finish: Baked enamel, acrylic, or epoxy; matte black.
 3. End Stop: Removable with carrier hook.
 4. Curtain Carriers: Two nylon rollers and nylon axle with chrome-plated steel hook
 5. Wall Termination: Provide vertical track attachment at walls.
 6. Track Accessories: Fabricate splices, corners, end caps, connectors, end stops, coupling and joining sleeves, wall flanges, brackets, ceiling clips, and other accessories from same material and with same finish as track.
- B. Laser Safety Curtain Fabric:
1. Fabric: 0.044 inch thick flame retardant, non-fraying and chemical resistant flexible fabric; lock-stitched and with critical seams double-stitched.
 2. Barrier Threshold Limit: 250 watts/cm² for 100 seconds.
 3. One-inch black, hook and loop fasteners where applicable.
 4. 0.020 inch dusted vinyl pocket-style window for signage or equipment documentation.
 5. Color: Matte black.
- C. Laser Safety Curtain Fabrication:
1. Curtains shall conform to ANSI Z136.1 "Safe Use of Lasers".
 2. Curtain Size: Curtains shall be fabricated at least 10 percent wider than track length and long enough to overlap finished floor minimum 2 inches. Bottom of curtain shall be weighted.
 3. Seams: All seams shall lay flat, free of creasing, gathering, or wrinkles. Seam ends shall be back-stitched. Critical seams shall be double-stitched and back-stitched.
 - a. Overlap vertical seams between panels and provide with 1 inch wide minimum hook and loop strips to facilitate light-tight overlaps.
 4. Hems: Sew all hems French style with no visible raw edges. Crooked or selvaged edges in lieu of side or bottom hems are prohibited.
 - a. Top Hem: Shall have heavy gauge fabric reinforcing strip inserted.
 - b. Bottom Hem: Shall have weights sewn in.
 5. Grommets: Non-reflective #1 Black steel, 12 inches on center maximum at top hem.
 6. Edges: Provide overlapping hook and loop strips, 1 inch wide minimum, sealing at outside vertical edges of curtain at panel to panel and panel to wall (at vertical track).
 7. Provide stay-put type fasteners as required.
 8. Custom Valance: Fabricated using laser safety fabric and suspended from ceiling using miscellaneous steel framing; seals top of curtain for light-tight closure to contain laser beams.
 - a. Valances shall be same material as curtains with sewn-on hook and loop strips for mounting.
 - b. Valance Height: 12 inches
 9. Exposed Fasteners: Manufacturer's standard.
- D. Curtain Carriers: Two nylon rollers and nylon axle with chrome-plated steel or aluminum hook.
- E. Fasteners: Per laser safety curtain track manufacturer.
- F. Accessories: Provide the following accessories:
1. By-Pass Entrances: Provide by-pass roller assembly at top of curtain panel to overlap 9 inches minimum on single track closure. By-pass roller assembly shall be offset to accommodate valances.

2. Interlocked Panels: All laser safety curtain panels shall be equipped with panel-to-panel or wall-to-panel low voltage connections that shall be coordinated with the laser entry control system, and can interface with the interlock feature of the laser. Laser will be shut off and will not operate if curtains are not properly closed. 24" lead wire will be accessible from end panel (typically at wall).
 - a. Panel to Panel Interlock: Curtain Panels terminate with rigid metal closure piece and handle, which will latch into receiving rigid metal closure piece and handle at adjoining curtain panel. Assembly shall include interlock, wire, and latching posts.
 - 1) Basis of Design: Flex-Guard, SLC-Door with Interlock Curtain-To-Curtain
 - b. Panel to Wall Interlock: Curtain Panel terminates with rigid metal closure piece and handle which latch into metal channel secured to wall. Assembly shall include interlock, wire, and latching posts.
 - 1) Basis of Design: Flex-Guard, SLC-Door with Interlock Wall-To-Curtain
 - c. Coordinate heights of rigid closure pieces with floor to ceiling height. Note curtain fabric is longer to ensure light tight condition at floor; closure pieces will need to be accurately sized

2.4 LASER ENTRY CONTROL SYSTEM

- A. Laser Entry Control System: Integrated system to control entry to and egress from laser operation areas and laser emission to areas where there is accessible or exposed laser energy, meeting requirements of ANSI Z136.1.
- B. Laser Safety Access Component Schedule:
 1. See Part 4 at the end of this specification section.
- C. System Components:
 1. Control Module:
 - a. Wall-mounted, painted metal enclosure with front-mounted controls, housing microprocessor controller.
 - b. Program control modules to control multiple laser operation areas, in separated zones, as indicated on the Drawings.
 - c. Front panel controls include the following:
 - 1) Key lock.
 - 2) System power key switch.
 - 3) Start, Stop, Exit, and Emergency Stop buttons.
 - 4) System status indicators including, but not limited to, Power On, Entryway/Doors Closed, and Interlock/Maglock On.
 - d. Basis of Design: ETG-CP Entry Guard
 - e. Location: As indicated on the Drawings and/or Laser Safety Component Schedule
 2. Safety Interlocks (SLC):
 - a. Basis of Design: ETG-INLK Entry-Guard.
 - b. Location: As indicated on the Drawings and/or Laser Safety Component Schedule
 3. Dual Interlock Receptacle:
 - a. Basis of Design: ETG-X1 Entry-Guard.
 - b. Location: As required for a complete installation

4. Interlock Connector Plug:
 - a. Basis of Design: ETG-X2 Entry-Guard.
 - b. Locations: As required for a complete installation
5. Entry Keypads:
 - a. System shall be programmable to allow access to or egress from laser operation area without the shutdown of laser with the entry of passcode or keycard to Entry Keypad.
 - b. Basis of Design: ETG-KP
 - c. Location: As indicated on the Drawings and/or Laser Safety Component Schedule
6. Electromagnetic Lock (Mag-Lock):
 - a. Basis of Design: ETG-ML (single doors); ETG-ML-2 (multiple doors)
 - b. Location: As indicated on the Drawings and/or Laser Safety Component Schedule
7. Emergency stop buttons:
 - a. Basis of Design: ETG-ES-F Entry Guard
 - b. Location: As indicated on the Drawings and/or Laser Safety Component Schedule
8. Illuminated Laser Safety Sign/ Status Sign:
 - a. Metal, lighted sign box with translucent plastic laser status signs; back-mounted or edge-mounted as required.
 - b. Two-way and two color to indicate Safe - No Laser Hazard and Danger - Laser Radiation.
 - c. Basis of Design: ETG-DLS-2 Entry-Guard.
 - d. Locations: As indicated on the Drawings and/or Laser Safety Component Schedule
9. Emergency Access Switch
 - a. Basis of Design: ETG-EA-FC with cover
 - b. Locations: As indicated on the Drawings and/or Laser Safety Component Schedule
10. Circuitry: Manufacturer's standard.
11. Accessories: Manufacturer's standard.

D. System Operation and Controls:

1. Emergency stop and external emergency access controls.
2. Isolated, normally open, relay closures for control of laser interlocks and shutters.
3. Isolated, normally open/normally closed, auxiliary laser interlock relays.
4. Isolated, magnetic, door latch relay.
5. Universal interface to entry key cards or dedicated key pads.
6. Automated, illuminated laser safety sign control.
7. Audible indicator for interlock timeout and exit delay (defeatable).
8. Adjustable exit delay; 5 to 90 seconds.
9. Automatic shutdown of lasers and unlocking of doors by building fire or evacuation alarm.
10. Automatic shutdown of lasers when access parameters are violated.
11. Optically isolated external inputs.
12. Two, automatic, warning sign modes.
13. Easy remote of system Enable and Exit Request controls.
14. External computer/access controller monitor interface.
15. Full function diagnostic indicators.
16. Built-in, low voltage power supply.

2.5 LASER WINDOW BLOCKING

1. Provide window blocking panels as indicated on the Drawings. Blocking panels shall be fabricated from same material as laser safety curtain.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Laser Safety Curtains and Track:
 - 1. Install tracks level and plumb, according to manufacturer's written instructions. Tracks shall be secured to structural supports as indicated on the Drawings. Brace as necessary.
 - 2. Provide track fabricated from one continuous length, up to 16 feet.
 - 3. Track Accessories: Install splices, corners, end caps, connectors, end stops, coupling and joining sleeves, and other accessories as required for a secure and operational installation.
 - 4. Curtain Carriers: Provide enough curtain carriers for 6 inch spacing along full length of curtain plus an additional carrier.
 - 5. Install curtain panels plumb, level, and true to height as indicated on the Drawings.
 - 6. Where curtain abuts wall, secure hook and loop strip to the wall for light-tight curtain connection.
 - 7. Secure hook and loop strip valance to outside of track surface for light-tight closure of curtain panels to ceiling.

- B. Laser Entry Control System:
 - 1. All components to be installed as required and where indicated on the Drawings and/or Laser Safety Component Schedule.
 - 2. System to be fully integrated with laser safety curtains and track, laser equipment, and connected per Owner's requirements.

- C. Laser Window Blocking:
 - 1. Laser window blocking to be cut to sizes as indicated on the Drawings.
 - 2. Secure window blocking to face of glazing with hook and loop strips.
 - 3. Ensure window blocking is covers entire window and is light-tight.

3.2 CLEANING AND ADJUSTING

- A. All cleaning and adjusting shall be in accordance with manufacturer's maintenance procedures.
- B. All repairs shall be conducted by an installer approved by laser safety manufacturer.
- C. Repair or remove and replace defective work. Repairs shall be indistinguishable from undamaged curtain and track.

3.3 TRAINING

- A. Manufacturer shall provide a half-day demonstration and training for lab users.

PART 4 - SCHEDULE

Laser Safety Access Control Components Schedule							
Lab / Laser Safety Zone	Door / Table ID	Laser Safety Components	Lab / Laser Safety Zone	Door / Table ID	Laser Safety Components		
22110 Zone 1	Entry Vestibule to 22110C	Entry Keypad	22210 Zone 5	Entry Vestibule to 22210P	Entry Keypad		
		Mag Lock			Mag Lock		
		Laser In-Use Status Light			Laser In-Use Status Light		
		Emergency Access Switch (for Zone)			Emergency Access Switch (for Zone)		
	C	Control Module		P	Control Module		
		SLC - Curtain to Wall Opening Request for Entry Button (at curtain opening)			SLC - Curtain to Curtain Opening Request for Entry Button (at curtain opening)		
B	SLC - Curtain to Curtain Opening Request for Entry Button (at curtain opening) Request to Exit Button (at curtain opening) Emergency Stop Switch	N	Request for Entry Button (at curtain opening) Request to Exit Button (at curtain opening) Emergency Stop Switch				
	A		SLC - Curtain to Wall Opening Request for Entry Button (at curtain opening) Request to Exit Button (at curtain opening) Emergency Stop Switch Request for Exit Button (to LER)	22210 Zone 6	Entry Vestibule to 22210 Lab	Entry Keypad Mag Lock Laser In-Use Status Light Emergency Access Switch (for Zone)	
			LER to 22110A		Mag Lock Request for Entry Keypad Laser In-Use Status Light	S	Control Module SLC - Curtain to Wall Opening Request for Entry Button (at curtain opening) Request to Exit Button (at curtain opening)
22110 Zone 2		Entry Vestibule to 22110F			Entry Keypad Mag Lock Laser In-Use Status Light Emergency Access Switch (for Zone)		R
	F				Control Module SLC - Curtain to Wall Opening Request for Entry Button (at curtain opening)		
			E		SLC - Curtain to Curtain Opening Request for Entry Button (at curtain opening) Request to Exit Button (at curtain opening) Emergency Stop Switch	LER to 22210 Lab	
D	SLC - Curtain to Wall Opening Request for Entry Button (at curtain opening) Request to Exit Button (at curtain opening) Emergency Stop Switch Request for Exit Button (to LER)				22220 / 22221 Zone 7		
	LER to 22110D	Mag Lock Request for Entry Keypad Laser In-Use Status Light	W	Control Module SLC - Curtain to Wall Opening Request for Entry Button (at curtain opening) Request to Exit Button (at curtain opening) Request for Exit Button (to 22221 Photonics) Laser In-Use Status Light			
		22120 Zone 3		Entry Vestibule to 22120H		Entry Keypad Mag Lock Laser In-Use Status Light Emergency Access Switch (for Zone)	V
H	Control Module SLC - Curtain to Wall Opening Request for Entry Button (at curtain opening)				U	SLC - Curtain to Wall Opening Request for Entry Button (at curtain opening) Request to Exit Button (at curtain opening) Emergency Stop Switch Request for Exit Button (to 22220 Photonics) Laser In-Use Status Light	
	G		SLC - Curtain to Wall Opening Request for Entry Button (at curtain opening) Request to Exit Button (at curtain opening) Emergency Stop Switch Request for Exit Button (to 22121 Nano Support)			T	
22121 Nano Support to 22120G		Mag Lock Request for Entry Keypad Laser In-Use Status Light	LER to 22221T				
	22130 Zone 4	Entry Vestibule to 22130		Entry Keypad Mag Lock Laser In-Use Status Light Emergency Access Switch (for Zone)	J K L M		Control Module Request for Exit Button (to 22121 Nano Support)
LER to 22130				Mag Lock Request for Entry Keypad Laser In-Use Status Light			

END OF SECTION

THE CITY UNIVERSITY OF NEW YORK

ASRC/CCNY SCIENCE RESEARCH CENTER

The City College of New York

New York, New York

Flad Architects

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AEI
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Crescent Associates

DASNY Project Number:
257110
Flad Project Number:
05432-82

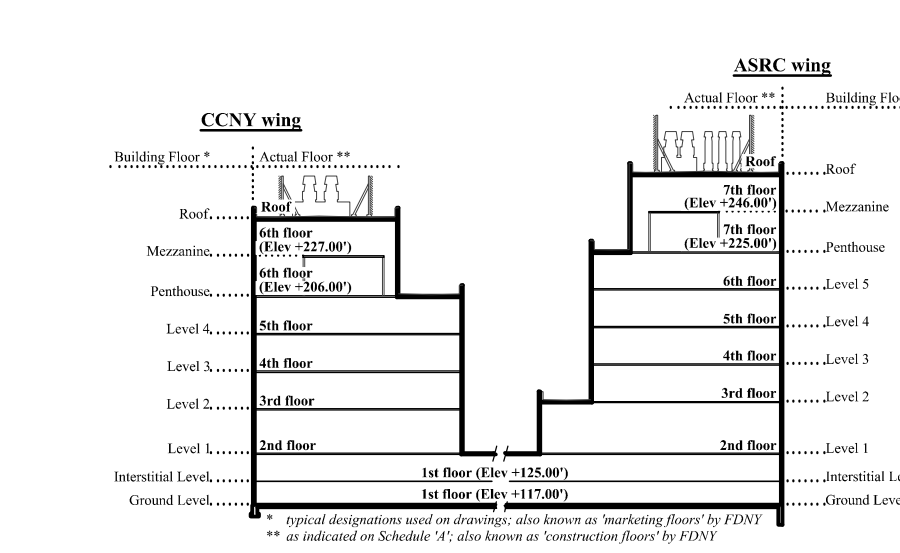
ASRC PHOTONICS LABORATORY RENOVATIONS

October 4th, 2019

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GN General					
GN-000	T 000.00	COVER SHEET, DRAWING LIST & PLOT PLAN	x	x	x
GN-001	G 001.00	PLOT PLAN & BUILDING NOTES	x		
GN-101	G 101.00	PARTIAL LIFE SAFETY PLAN - GROUND LEVEL	x		
GN-220	G 220.00	LIFE SAFETY PLAN - LEVEL 2	x		
DM Plans					
AD-221	DM 220.00	PARTIAL DEMOLITION FLOOR PLAN - LEVEL 2 - SOUTH	x		
AD-222	DM 221.00	PARTIAL DEMOLITION FLOOR PLAN - LEVEL 2 - NORTH	x		
DPL-221	DM 222.00	DEMOLITION PLAN SECOND LEVEL SOUTH	x		
DPL-222	DM 223.00	DEMOLITION PLAN SECOND LEVEL NORTH	x		
DM-018	DM 018.00	DEMOLITION PLAN 1ST LEVEL (+125.00) INTERSTITIAL AREA 4	x		
DM-221	DM 224.00	DEMOLITION PLAN SECOND LEVEL SOUTH	x		
DM-222	DM 225.00	DEMOLITION PLAN SECOND LEVEL NORTH	x		
A Plans					
AE-014	A 014.00	PARTIAL LABORATORY PLAN - GROUND LEVEL	x		
AE-221	A 221.00	PARTIAL LABORATORY FLOOR PLAN - LEVEL 2 - SOUTH	x	x	
AE-222	A 222.00	PARTIAL LABORATORY FLOOR PLAN - LEVEL 2 - NORTH	x	x	
AB-221	A 321.00	PARTIAL REFLECTED CEILING PLAN - LEVEL 2 - SOUTH	x	x	
AB-222	A 322.00	PARTIAL REFLECTED CEILING PLAN - LEVEL 2 - NORTH	x	x	
AE-600	A 600.00	EQUIPMENT LIST	x		
AE-850	A 850.00	INTERIOR ELEVATIONS	x	x	
AE-900	A 900.00	SCHEDULES AND DETAILS	x	x	
AE-901	A 901.00	DETAILS	x	x	
AE-902	A 901.00	DETAILS	x		
P Plans					
PL-000	P 000.00	PLUMBING SYMBOLS AND ABBREVIATIONS	x		
PL-014	P 014.00	FLOOR PLAN GROUND LEVEL (+117.00) AREA 4	x		
PL-018	P 018.00	FLOOR PLAN 1ST LEVEL (+125.00) INTERSTITIAL AREA 4	x		
PL-221	P 221.00	FLOOR PLAN SECOND LEVEL SOUTH	x		
PL-222	P 222.00	FLOOR PLAN SECOND LEVEL NORTH	x		
M Plans					
M-000	M 000.00	MECHANICAL SYMBOLS AND ABBREVIATIONS	x		
M-014	M 014.00	FLOOR PLAN GROUND LEVEL (+117.00) AREA 4	x		
M-018	M 018.00	FLOOR PLAN 1ST LEVEL (+125.00) INTERSTITIAL AREA 4	x		
M-221	M 221.00	FLOOR PLAN SECOND LEVEL SOUTH	x		
M-222	M 222.00	FLOOR PLAN SECOND LEVEL NORTH	x		
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M-400	M 400.00	PARTIAL FLOOR PLAN SHAFT AND EXHAUST RISER	x		
M-500	M 500.00	MECHANICAL SCHEDULES	x		
M-600	M 600.00	MECHANICAL LAB CONTROL DIAGRAMS	x		
E Plans					
E-000		ELECTRICAL SYMBOLS AND ABBREVIATIONS	x		
E-400		ELECTRICAL PANEL SCHEDULES	x		
E-401		ELECTRICAL PANEL SCHEDULES	x		
E-402		ELECTRICAL PANEL SCHEDULES	x		

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EL (Lighting) Plans						
DEL-014		DEMOLITION PLAN LIGHTING GROUND LEVEL (+117.00) AREA 4	x			
DEL-221		DEMOLITION PLAN LIGHTING SECOND LEVEL SOUTH	x			
DEL-222		DEMOLITION PLAN LIGHTING SECOND LEVEL NORTH	x			
EL-014		FLOOR PLAN LIGHTING GROUND LEVEL (+117.00) AREA 4	x			
EL-221		FLOOR PLAN LIGHTING SECOND LEVEL SOUTH	x			
EL-222		FLOOR PLAN LIGHTING SECOND LEVEL NORTH	x			
EP (Power) Plans						
DEP-014		DEMOLITION PLAN POWER GROUND LEVEL (+117.00) AREA 4	x			
DEP-221		DEMOLITION PLAN POWER SECOND LEVEL SOUTH	x			
DEP-222		DEMOLITION PLAN POWER SECOND LEVEL NORTH	x			
EP-014		FLOOR PLAN POWER GROUND LEVEL (+117.00) AREA 4	x			
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FA Plans						
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DEF-221	DM 221.00	DEMOLITION PLAN FIRE ALARM SECOND LEVEL SOUTH	x			
DEF-222	DM 222.00	DEMOLITION PLAN FIRE ALARM SECOND LEVEL NORTH	x			
EF-014	FA 014.00	FLOOR PLAN FIRE ALARM GROUND LEVEL (+117.00) AREA 4	x			
EF-221	FA 221.00	FLOOR PLAN FIRE ALARM SECOND LEVEL SOUTH	x			
EF-222	FA 222.00	FLOOR PLAN FIRE ALARM SECOND LEVEL NORTH	x			
FA-515	FA 515.00	ELECTRICAL MODIFICATION TO EXISTING PRE-ACTION SYSTEM PARTIAL LABORATORY PLAN GROUND LEVEL	x			
SP Plans						
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FX-002	SP 002.00	SPRINKLER NOTES AND SPECIFICATIONS	x			
FX-003	SP 003.00	FLOOD INSURANCE RATE MAP 3604970079G	x			
FX-004	SP 004.00	FLOOD INSURANCE RATE MAP 3604970079F	x			
FX-014	SP 014.00	SPRINKLER PARTIAL LABORATORY PLAN GROUND LEVEL	x			
FX-100	SP 100.00	SPRINKLER DEMOLITION PARTIAL REFLECTED CEILING PLAN LEVEL-2 SOUTH	x			
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FX-400	SP 400.00	SPRINKLER RISER DIAGRAM	x			
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FX-501	SP 501.00	SPRINKLER SCHEDULES & DETAILS	x			



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2	10/04/19	ADDENDUM 02
1	06/11/19	ADDENDUM 01
0	05/06/19	CONSTRUCTION DOCUMENTS

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2	10/04/19	ADDENDUM 02
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0	05/06/19	CONSTRUCTION DOCUMENTS

Project Title

 DASNY Project Number - 257110

The City University of New York

ASRC Photonics Lab Renovations

The City College of New York
 85 St Nicholas Terrace
 New York, NY 10027

DASNY #
 257110

Scale
 N/A

Company Drawn By
 Flad Architects

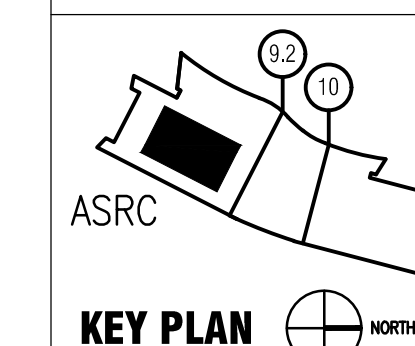
Project Phase
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Date
 06/11/2019
 Drawn By
 KS

Flad Project Number
 05432-82
 Checked By
 DH

Sheet Title
Cover Sheet & Drawing List

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 DOB ESCAN



BY:

Rev	Date	Description of Issue
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0	05/06/19	CONSTRUCTION DOCUMENTS

Project Title



ASRC
Photonics Lab
Renovations

The City College of New York

85 St Nicholas Terrace
 New York, NY 10027

DASH #
 257110

Scale
 1/4" = 1'-0"

Company Drawn By
 Flad Architects

Project Phase
 CONSTRUCTION DOCUMENTS

Date
 05/06/2019
 Flad Project Number
 05432-82
 Sheet Title
 Partial Laboratory Floor Plan
 Level 2 - South

Drawn By
 KS
 Checked By
 DH

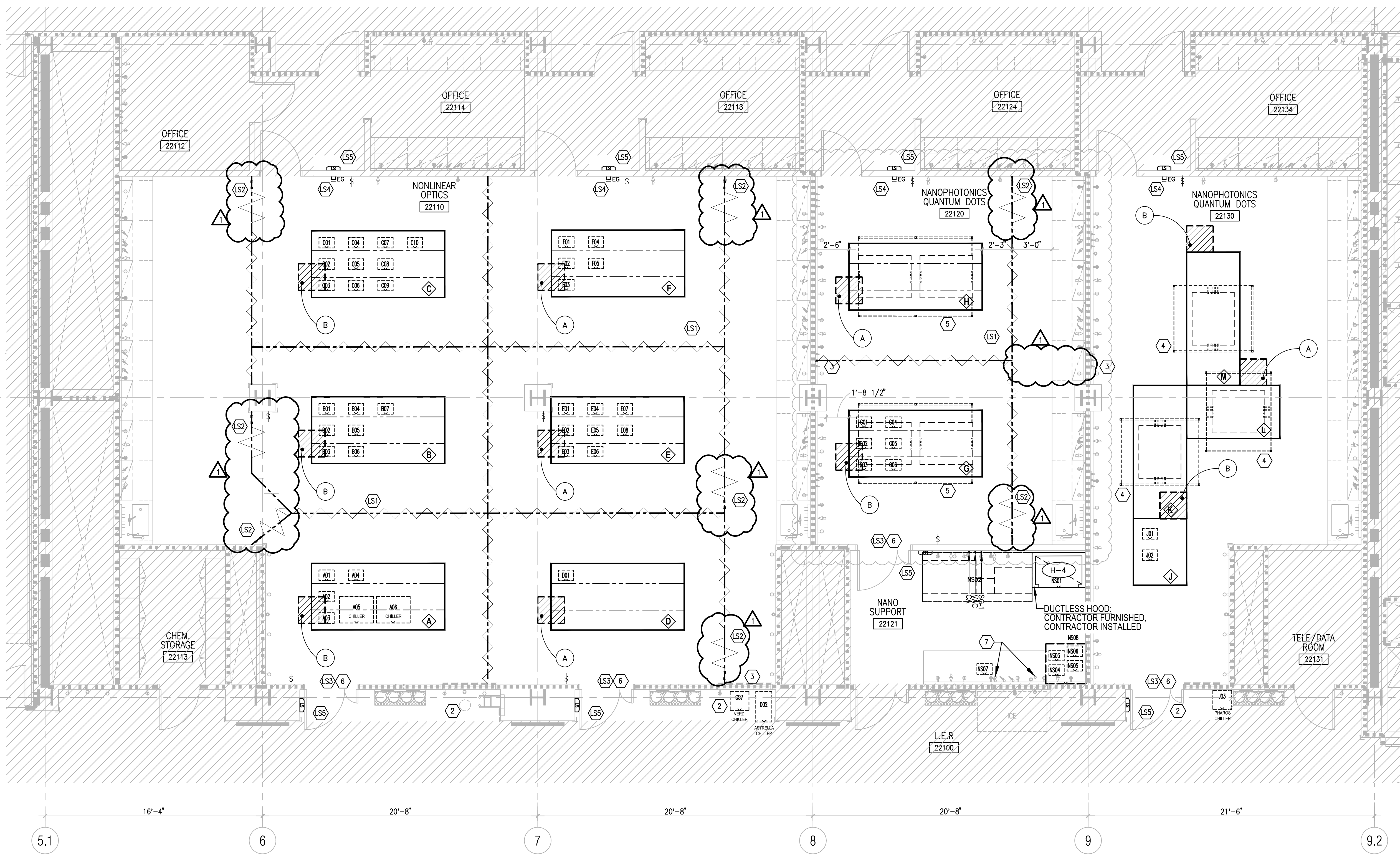
Sheet Number
 AE-221

NYC DOB Sheet Number
A-221.00

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Application No.

DOB BSCAM



1 LABORATORY PLAN - LEVEL 2 - SOUTH
 1/4" = 1'-0"

GENERAL NOTES

- NOTES:**
- ALL LABORATORY CASEWORK IS "EXISTING TO REMAIN" U.O.N.
 - LASER AIR TABLES "A" THROUGH "W" PROVIDED BY OWNER.
 - EXISTING "LASER IN USE" ILLUMINATED SIGNS IN L.E.R. TO BE REMOVED AND REPLACED WITH NEW DUAL-STATUS ILLUMINATED SIGN. INSTALL NEW SIGN AT EXISTING SIGN LOCATION TO REUSE EXISTING JUNCTION BOX AND WIRING.
 - NEW DUAL-STATUS ILLUMINATED SIGN IN OFFICE VESTIBULES WILL BE INSTALLED AT JUNCTION BOX PROVIDED DURING CONSTRUCTION BULLETIN 2.
 - SEE RCP FOR LASER SAFETY CURTAIN LOCATION AND COORDINATION WITH SUSPENDED CEILING AND MECHANICAL SYSTEMS. LAB PLAN DIMENSIONS FOR REFERENCE ONLY.

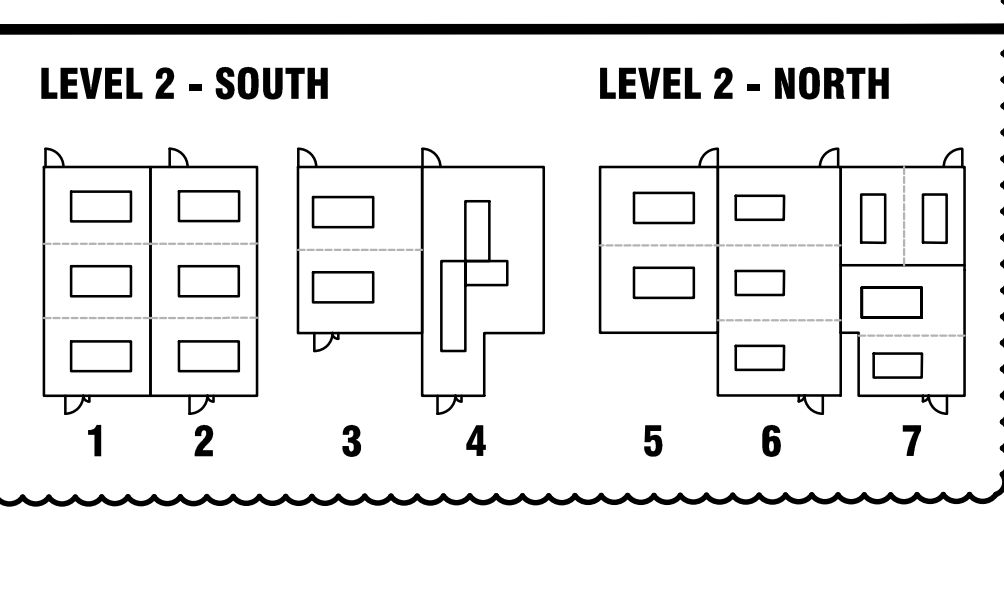
KEYNOTES

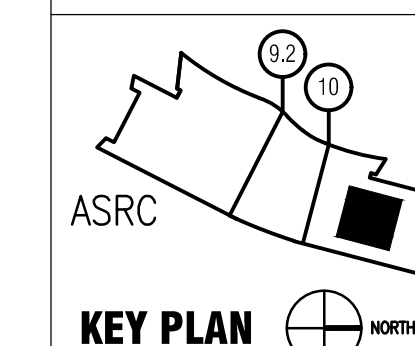
- PLAN KEYNOTES**
- NOT USED
 - SEE ELECTRICAL AND PLUMBING DRAWINGS FOR COORDINATION OF LOCAL CHILLERS.
 - PROVIDE 2" DIAMETER THROUGH-WALL CONDUIT FOR FUTURE FIBER OPTIC CABLE. SEE DETAIL 8/AE-900.
 - SUSPENDED OVERHEAD SHELVING TYPE "A". SEE DETAIL 1/AE-902.
 - SUSPENDED OVERHEAD SHELVING TYPE "B". SEE DETAIL 2/AE-902.
 - PROVIDE ASTRAGAL SEAL TO EXISTING DOOR PANELS.
 - PROVIDE GRONMET FOR EACH WORKSTATION, 2" DIAMETER.
- LASER SAFETY KEYNOTES**
- CEILING MOUNTED LASER SAFETY CURTAIN AND TRACK. SEE ELECTRICAL DRAWINGS FOR COORDINATION OF LASER SAFETY DEVICES (INCLUDING "LASER IN USE" ILLUMINATED SIGNAGE, CURTAIN POSITION SENSORS, AND AREA CONTROL MODULE).
 - REQUEST FOR ENTRY/EXIT - PROVIDE CONTROL AT BOTH SIDES OF CURTAIN OPENING
 - REPAIR / INSTALL LASER SAFETY WINDOW BLOCK / CURTAIN ON L.E.R. DOOR GLAZING
 - LASER EQUIPMENT CONTROL MODULE AND DISCONNECT
 - "LASER IN USE" ILLUMINATED STATUS SIGNAGE CONNECTED TO EXISTING ELECTRICAL BOX (SEE ELECTRICAL DRAWINGS)
 - TAILOR CURTAIN TO MATCH PROFILE OF EXISTING LAB CASEWORK NECESSARY TO PROVIDE LIGHT BLOCKING CURTAIN INSTALLATION WHEN PAIRED WITH APPROVED CLOSURE (ie VELCRO). INSTALL CONTINUOUS CLOSURE AT FULL VERTICAL PROFILE ENGAGED BY CURTAIN. INSTALL LASER RATED WINDOW BLOCKING ON GLAZED WALL CABINET DOORS WITHIN THE VERTICAL PLANE OF THE LASER CURTAIN AND TRACK.

LEGENDS

- LASER SAFETY CURTAIN AND CURTAIN TRACK
 - LASER SAFETY SHADE / WINDOW BLOCK
 - DUAL-STATUS ILLUMINATED LASER SAFETY SIGN
 - "ENTRY GUARD" CONTROL MODULE AND EMERGENCY EQUIPMENT SHUT-OFF
 - CONTROL FOR INDIVIDUAL LASER WORKSTATION LIGHTING. (SUGGESTED LOCATION, SEE ELECTRICAL DRAWINGS)
 - OPTICAL TABLE (NIC)
 - PHOTONICS EQUIPMENT TAG. SEE EQUIPMENT SCHEDULE.
 - SERVICE PANEL - SEE SCHEDULE ON SHEET AE-900
- LINE TYPE LEGEND**
- NEW WORK
 - EXISTING TO REMAIN
 - EXISTING TO BE REMOVED
 - NOT IN SCOPE

LASER SAFETY ZONES

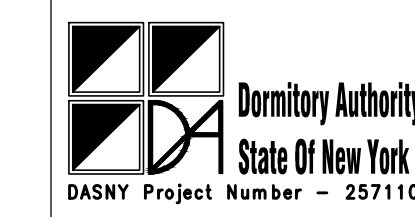




BY:

Rev	Date	Description of Issue
0	05/06/19	CONSTRUCTION DOCUMENTS

Project Title



ASRC
Photonics Lab
Renovations

The City College of New York

85 St Nicholas Terrace
 New York, NY 10027

DASH #
 257110

Scale
 1/4" = 1'-0"

Company Drawn By
 Flad Architects

Project Phase
 CONSTRUCTION DOCUMENTS

Date
 05/06/2019

Flad Project Number
 05432-82

Sheet Title
 Partial Laboratory Floor Plan
 Level 2 - North

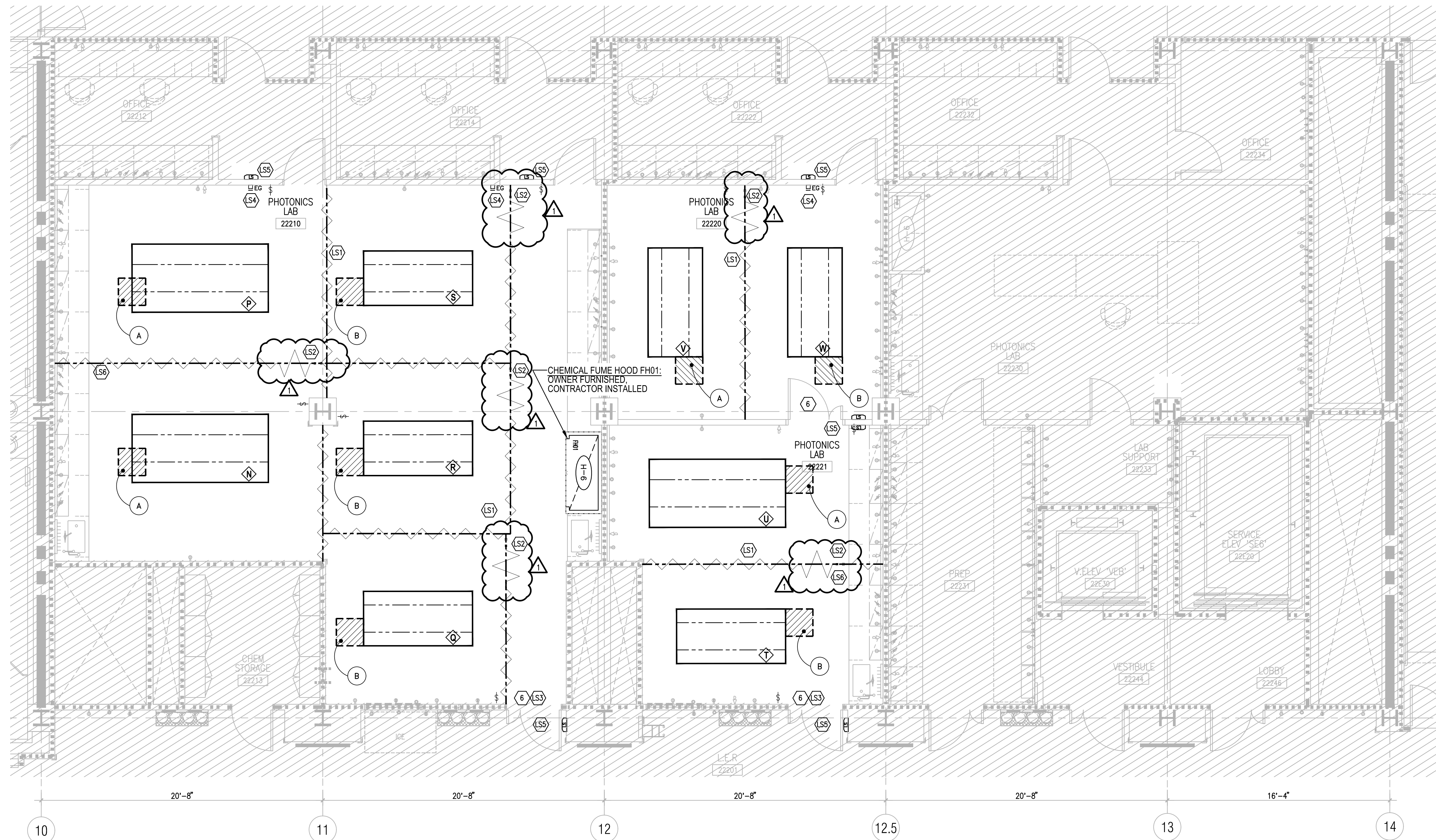
Sheet Number
 AE-222

NYC DOB Sheet Number
A-222.00

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Application No.

DOB BSCAN



1 LABORATORY PLAN - LEVEL 2 - NORTH
 1/4" = 1'-0"

GENERAL NOTES

- NOTES:**
- ALL LABORATORY CASEWORK IS "EXISTING TO REMAIN" U.O.N.
 - LASER AIR TABLES "A" THROUGH "W" PROVIDED BY OWNER.
 - EXISTING "LASER IN USE" ILLUMINATED SIGNS IN L.E.R. TO BE REMOVED AND REPLACED WITH NEW DUAL-STATUS ILLUMINATED SIGN. INSTALL NEW SIGN AT EXISTING SIGN LOCATION TO REUSE EXISTING JUNCTION BOX AND WIRING.
 - NEW DUAL-STATUS ILLUMINATED SIGN IN OFFICE VESTIBULES WILL BE INSTALLED AT JUNCTION BOX PROVIDED DURING CONSTRUCTION BULLETIN 2.
 - SEE RCP FOR LASER SAFETY CURTAIN LOCATION AND COORDINATION WITH SUSPENDED CEILING AND MECHANICAL SYSTEMS. LAB PLAN DIMENSIONS FOR REFERENCE ONLY.
 - SEE ELECTRICAL AND PLUMBING DRAWINGS FOR COORDINATION OF LOCAL CHILLERS.

KEYNOTES

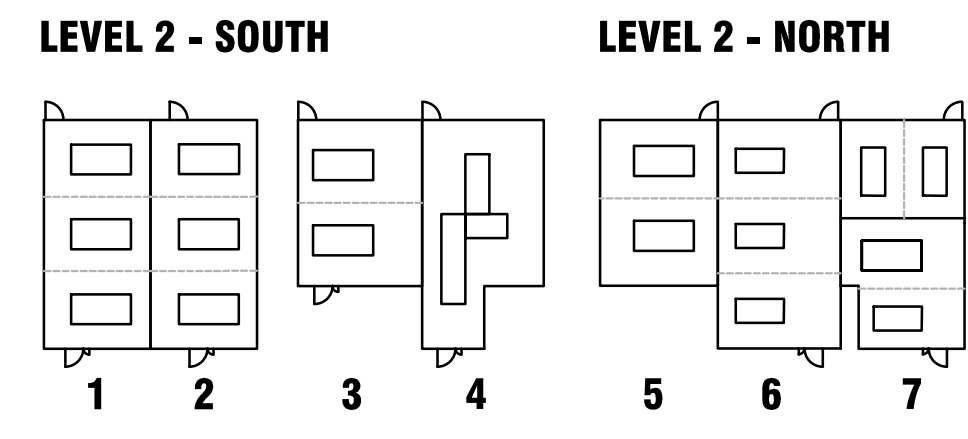
- PLAN KEYNOTES**
- NOT USED.
 - NOT USED.
 - PROVIDE 2" DIAMETER THROUGH-WALL CONDUIT FOR FUTURE FIBER OPTIC CABLE. SEE DETAIL 8/AE-900.
 - NOT USED.
 - NOT USED.
 - PROVIDE ASTRAGAL SEAL TO EXISTING DOOR PANELS

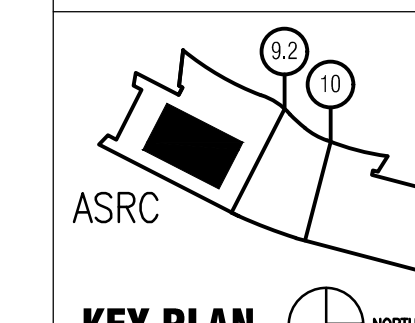
- LASER SAFETY KEYNOTES**
- (LS1) CEILING MOUNTED LASER SAFETY CURTAIN AND TRACK. SEE ELECTRICAL DRAWINGS FOR COORDINATION OF LASER SAFETY DEVICES (INCLUDING "LASER IN USE" ILLUMINATED SIGNAGE, CURTAIN POSITION SENSORS, AND AREA CONTROL MODULE).
 - (LS2) REQUEST FOR ENTRY/EXIT - PROVIDE CONTROL AT BOTH SIDES OF CURTAIN OPENING
 - (LS3) REPAIR / INSTALL LASER SAFETY WINDOW BLOCK / CURTAIN ON L.E.R. DOOR GLAZING
 - (LS4) LASER EQUIPMENT CONTROL MODULE AND DISCONNECT
 - (LS5) "LASER IN USE" ILLUMINATED STATUS SIGNAGE CONNECTED TO EXISTING ELECTRICAL BOX (SEE ELECTRICAL DRAWINGS)
 - (LS6) TAILOR CURTAIN TO MATCH PROFILE OF EXISTING LAB CASEWORK NECESSARY TO PROVIDE LIGHT BLOCKING CURTAIN INSTALLATION WHEN PAIRED WITH APPROVED CLOSURE (ie VELCRO). INSTALL CONTINUOUS CLOSURE AT FULL VERTICAL PROFILE ENGAGED BY CURTAIN. INSTALL LASER RATED WINDOW BLOCKING ON GLAZED WALL CABINET DOORS WITHIN THE VERTICAL PLANE OF THE LASER CURTAIN AND TRACK.

LEGENDS

- LASER SAFETY CURTAIN AND CURTAIN TRACK
 - LASER SAFETY SHADE / WINDOW BLOCK
 - DUAL-STATUS ILLUMINATED LASER SAFETY SIGN
 - "ENTRY GUARD" CONTROL MODULE AND EMERGENCY EQUIPMENT SHUT-OFF
 - CONTROL FOR INDIVIDUAL LASER WORKSTATION LIGHTING. (SUGGESTED LOCATION, SEE ELECTRICAL DRAWINGS)
 - OPTICAL TABLE (NIC)
 - PHOTONICS EQUIPMENT TAG. SEE EQUIPMENT SCHEDULE.
 - SERVICE PANEL - SEE SCHEDULE ON SHEET AE-900
- LINE TYPE LEGEND**
- NEW WORK
 - EXISTING TO REMAIN
 - EXISTING TO BE REMOVED
 - NOT IN SCOPE

LASER SAFETY ZONES

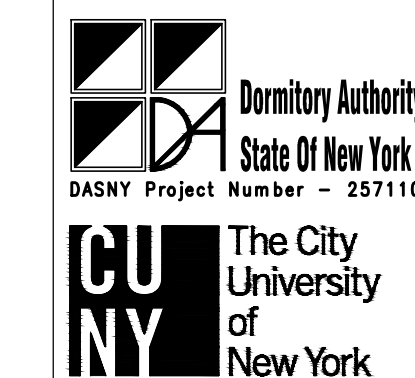




BY:

Rev	Date	Description of Issue
1	10/04/19	ADDENDUM 02
0	05/06/19	CONSTRUCTION DOCUMENTS

Project Title



**ASRC
 Photonics Lab
 Renovations**

**The City College
 of New York**

85 St Nicholas Terrace
 New York, NY 10027

DASNY #
 257110

Company Drawn By
 Flad Architects

Project Phase
 CONSTRUCTION DOCUMENTS

Date
 05/06/2019

Flad Project Number
 05432-82

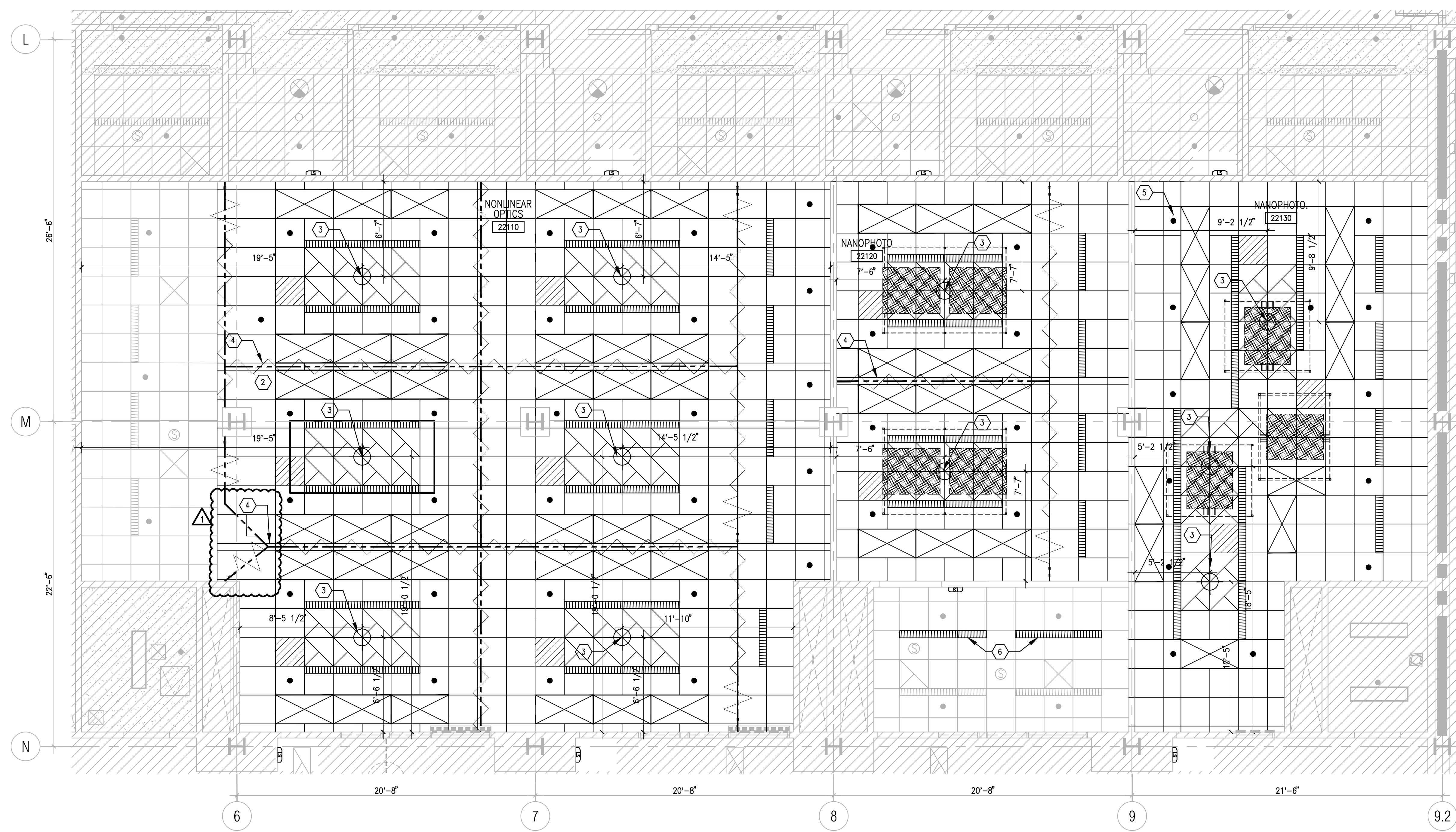
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**Partial Reflected Ceiling Plan
 Level 2 - South**

Sheet Number
AB-221

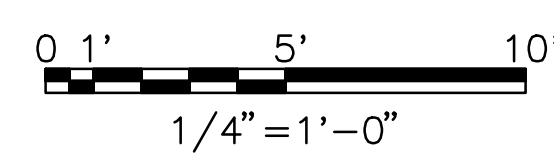
NYC DOB Sheet Number
A-321.00

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Application No.
 DOB BSCAN



1 REFLECTED CEILING PLAN - LEVEL 2 - SOUTH
 1/4" = 1'-0"



RCP NOTES

- ALL ACT LAY-IN CEILINGS TO BE ACT-2, 10'-0" AFF. U.N.O.
- REFER TO ELEC. & MECH. DRAWINGS FOR TYPE & QUANTITY OF FIXTURES & DEVICES AS WELL AS FOR DEVICES NOT DIMENSIONED.
- LIGHTS, SPRINKLER HEADS, SENSORS AND OTHER CEILING MOUNTED DEVICES TO BE CENTERED IN CEILING TILE U.N.O.
- VERIFY SIZE, LOCATION, & QUANTITY OF ACCESS PANELS WITH MECHANICAL CONTRACTOR AND CONFIRM LOCATION WITH ARCHITECT
- COORDINATE CEILING PENETRATION FOR LAB EQUIPMENT WITH MECHANICAL DRAWINGS
- MIDDLE GRID OR MIDDLE ACT TILE TO BE CENTERED ON ROOM DIMENSIONS, U.N.O.
- ALL EMERGENCY LIGHT LOCATIONS ARE INDICATED GRAPHICALLY. REFER TO ELECTRICAL PLANS FOR FIXTURE TYPE AND DIRECTION ACCORDING TO LIFE SAFETY DRAWINGS.
- REFER TO Q-SERIES FOR TASK LIGHTING LOCATIONS AT LAB CASEWORK. REFER TO ELEC. FOR CASEWORK TASK LIGHTING FIXTURE SPECS.
- ALL HEADERS NOT IDENTIFIED WITH HEIGHT AFF TO BE 8'-0" TO MATCH DOOR HEIGHT U.N.O.

KEYNOTES

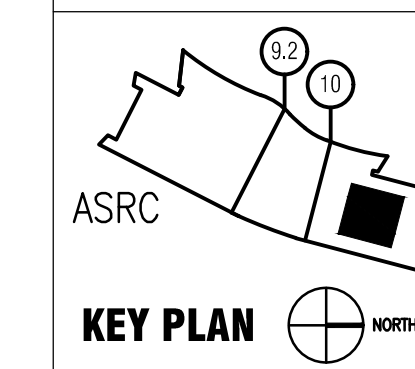
- POINT EXHAUST CONNECTION
- LASER SAFETY CURTAIN. SEE FLOOR PLANS FOR LASER SAFETY KEYNOTES, DETAILS 3 & 6/AE-901, AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- START POINT - START CEILING FROM THIS LOCATION. STOP WHEN REACHING A "CUT" TILE AND BEGIN FROM OTHER START POINT. ONCE MEETING IN MIDDLE, CUT TILE ACCORDING TO FIELD CONDITION.
- CUT TILE TO 6"
- CUT TILE V.I.F.
- RELOCATED LIGHT FIXTURES - SEE ELECTRICAL LIGHTING DRAWINGS.
- SUSPENDED OVERHEAD SHELVING TYPE "A". CENTERED WITHIN CEILING ARRANGEMENT (LIGHT FIXTURES AND DIFFUSERS) OVER LASER TABLE. SEE DETAIL 1/AE-902.
- SUSPENDED OVERHEAD SHELVING TYPE "B". CENTERED WITHIN CEILING ARRANGEMENT (LIGHT FIXTURES AND DIFFUSERS) OVER LASER TABLE. SEE DETAIL 2/AE-902.

LEGENDS

- | | | |
|---|---------------------------|---|
| ACT (ACOUSTICAL CEILING TILE) | CEILING DIFFUSER | EXIT LIGHT-CEILING MOUNTED (REFER TO ELEC.) |
| EXPOSED | CEILING DIFFUSER | EXIT LIGHT-WALL MOUNTED (REFER TO ELEC.) |
| SUSPENDED PERFORATED METAL SHELVING | AIR RETURN GRILL | OCCUPANCY SENSOR-CEILING MOUNTED |
| 1X4 FLUORESCENT LIGHT FIXTURE | ACCESS PANEL | SMOKE DETECTOR (REFER TO ELEC.) |
| 2X4 FLUORESCENT LIGHT FIXTURE | WALL ACCESS PANEL | SECURITY CAMERA |
| RECESSED LIGHT FIXTURE | LINEAR DIFFUSER | SPEAKER (AV) |
| SUSPENDED LIGHT FIXTURE | 2X2 CEILING SERVICE PANEL | CEILING MOUNT WIRELESS ACCESS DEVICE (REFER TO ELEC.) |
| DOWN LIGHT FIXTURE | 2X4 EXHAUST HOOD | CEILING CONTROL JOINT |
| LASER SAFETY CURTAIN. SEE KEYNOTE #2 | POINT EXHAUST | |
| LASER SAFETY SHADE | SAFETY SHOWER | |
| WALL MOUNTED, ILLUMINATED LASER SAFETY SIGN | UMBILICAL | |
| | SPRINKLER HEAD | |

LINE TYPE LEGEND

- NEW WORK
- EXISTING TO REMAIN
- EXISTING TO BE REMOVED
- NOT IN SCOPE



BY:

Rev	Date	Description of Issue
1	10/04/19	ADDENDUM 02
0	05/06/19	CONSTRUCTION DOCUMENTS

Dormitory Authority
 State Of New York
 DASNY Project Number - 257110

CUNY
 The City
 University
 of New York

**ASRC
 Photonics Lab
 Renovations**

**The City College
 of New York**
 85 St Nicholas Terrace
 New York, NY 10027

DASNY #
 257110

Scale
 1/4" = 1'-0"

Company Drawn By
 Flad Architects

Project Phase
 CONSTRUCTION DOCUMENTS

Date
 05/06/2019

Flad Project Number
 05432-82

Sheet Title
**Partial Reflected Ceiling Plan
 Level 2 - North**

Drawn By
 KS

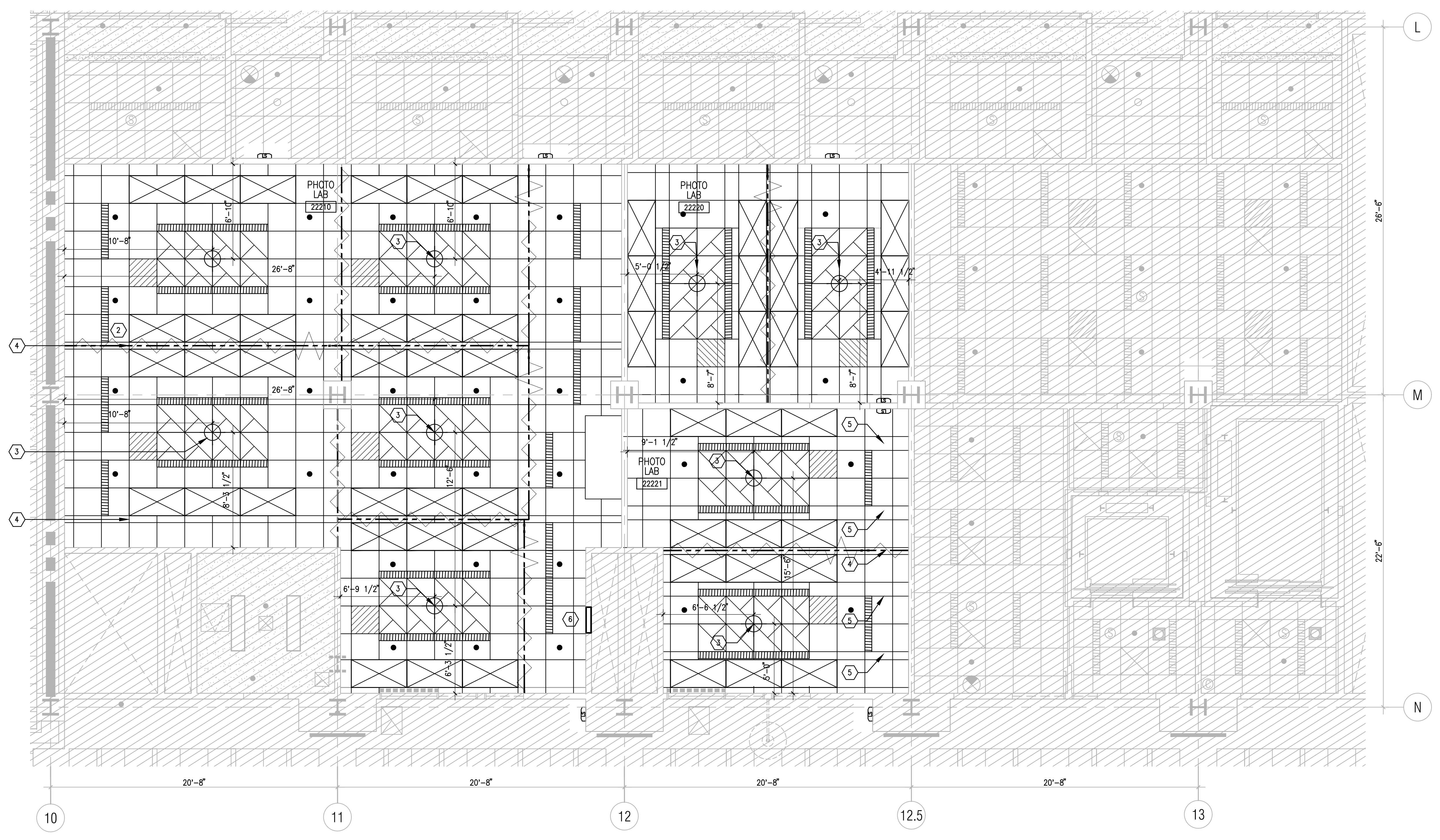
Checked By
 DH

Sheet Number
AB-222

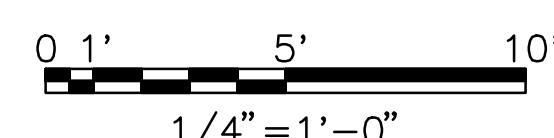
NYC DOB Sheet Number
A-322.00

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5 OF 10

Application No.
 DOB BSCAN



1 REFLECTED CEILING PLAN - LEVEL 2 - NORTH
 1/4" = 1'-0"



- RCP NOTES**
- ALL ACT LAY-IN CEILINGS TO BE ACT-2, 10'-0" AFF. U.N.O.
 - REFER TO ELEC. & MECH. DRAWINGS FOR TYPE & QUANTITY OF FIXTURES & DEVICES AS WELL AS FOR DEVICES NOT DIMENSIONED.
 - LIGHTS, SPRINKLER HEADS, SENSORS AND OTHER CEILING MOUNTED DEVICES TO BE CENTERED IN CEILING TILE U.N.O.
 - VERIFY SIZE, LOCATION, & QUANTITY OF ACCESS PANELS WITH MECHANICAL CONTRACTOR AND CONFIRM LOCATION WITH ARCHITECT
 - COORDINATE CEILING PENETRATION FOR LAB EQUIPMENT WITH MECHANICAL DRAWINGS
 - MIDDLE GRID OR MIDDLE ACT TILE TO BE CENTERED ON ROOM DIMENSIONS, U.N.O.
 - ALL EMERGENCY LIGHT LOCATIONS ARE INDICATED GRAPHICALLY. REFER TO ELECTRICAL PLANS FOR FIXTURE TYPE AND DIRECTION ACCORDING TO LIFE SAFETY DRAWINGS.
 - REFER TO Q-SERIES FOR TASK LIGHTING LOCATIONS AT LAB CASEWORK. REFER TO ELEC. FOR CASEWORK TASK LIGHTING FIXTURE SPECS.
 - ALL HEADERS NOT IDENTIFIED WITH HEIGHT AFF TO BE 8'-0" TO MATCH DOOR HEIGHT U.N.O.

- KEYNOTES**
- POINT EXHAUST CONNECTION
 - LASER SAFETY CURTAIN. SEE FLOOR PLANS FOR LASER SAFETY KEYNOTES, DETAILS 3 & 6/AE-901, AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 - START POINT - START CEILING FROM THIS LOCATION. STOP WHEN REACHING A "CUT" TILE AND BEGIN FROM OTHER START POINT. ONCE MEETING IN MIDDLE, CUT TILE ACCORDING TO FIELD CONDITION.
 - CUT TILE TO 6"
 - CUT TILE V.I.F.
 - 2 HOUR RATED SHAFTWALL AT FUME HOOD EXHAUST PENETRATION ABOVE CEILING - PARTITION TYPE PB, SEE SHEET AE-900.

- LEGENDS**
- | | |
|---|---|
| ACT (ACOUSTICAL CEILING TILE) | EXIT LIGHT-CEILING MOUNTED (REFER TO ELEC.) |
| RECESSED LIGHT FIXTURE | EXIT LIGHT-WALL MOUNTED (REFER TO ELEC.) |
| DOWN LIGHT FIXTURE | OCCUPANCY SENSOR-CEILING MOUNTED |
| LASER SAFETY CURTAIN, SEE KEYNOTE #2 | SMOKE DETECTOR (REFER TO ELEC.) |
| LASER SAFETY SHADE | SECURITY CAMERA |
| WALL MOUNTED, ILLUMINATED LASER SAFETY SIGN | SPEAKER (AV) |
| CEILING DIFFUSER | CEILING MOUNT WIRELESS ACCESS DEVICE (REFER TO ELEC.) |
| AIR RETURN GRILL | |
| 2X2 CEILING SERVICE PANEL | |
| 2X4 EXHAUST HOOD | |
| POINT EXHAUST | |
| SPRINKLER HEAD | |

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