center for science & medicine
new york, ny

project team

architect / structural engineer: SOM

mep engineer: Jaros Baum & Bolles

civil engineer: Langan Engineering

lighting consultant: SBLD Studio

general contractor: Bovis Lend Lease

statistics

location: manhattan's upper east side

levels: 11 stories above, 2 stories below grade

size: 443, 291 sq ft

construction dates: april 2008 – july 2011

delivery method: design-bid-build

project phase: 50% design development

architecture

4-story atrium rises from Madison Avenue entrance

6 floors of wet lab research space;1 ½ floors of clinical trial area

green roof & rooftop terrace

facade comprised of brick-faced precast concrete & vertical window walls

a 40-story residential tower will rise on the site adjacent to the lab building

project is striving for LEED certification (gold)

all trades are coordinating with 4-D design techniques (BIM)

structural

structural steel framing with composite metal deck / nwc topping

reinforced concrete spread footings at a maximum depth of 49'-0" below grade

typical floor heights are 15' above grade & 24' below grade

typical beams range from W18 to W30 in size, spaced is 10'-6" on center

typical columns range from W14 to W24 sections, spaced in 21'-0" bays

lateral resistance provided by a combination of braced and moment resisting structural steel frames

floor systems designed to meet stringent vibration criteria in laboratories / imaging rooms (2,000 micro-inches/sec)

mechanical

laboratories, vivariums, and imaging spaces designed to use "once through" supply and exhaust systems, 100% outdoor air (12 systems total)

atrium, conference, and amenity spaces designed to use supply and return systems (3 systems total)

much of CSM's complex mechanical equipment will be located in the adjacent residential tower below a height of 160 ft, minimizing the need for additional height and/or excavation

remaining equipment to be housed in CSM's 11th flr penthouse

lighting/electrical

power distributed by three 5 kV feeders

277/480 V, 3 phase, 4 wire system stepping down to 120/208 V for receptacles and incandescent lighting

laboratory floors will be served by an enclosed plug-in busway system, with a minimum of 3 takeoff positions per floor, run vertically through building

lighting fixtures are fluorescent, high intensity discharge lamps (277V) and incandescent lamps (120 V)

an on-site emergency generator plant utilizing two 1,200 kW diesel engine-generator sets will be provided