**Gouverneur Healthcare Services**

227 Madison Street, New York, NY, 10002

**Alex Despotovich | Construction Management**

---

**Project Team**
- **Owner:** New York City Health and Hospitals Corporation
- **Client:** Dormitory Authority of the State of New York
- **Construction Manager:** Hunter Roberts Construction Group
- **General Contractor:** J. Petracelli Contracting, Inc.
- **Architect:** RMJM Hillier Architects
- **Landscape Architect:** EKLA
- **Structural Engineer:** Greenman-Pedersen, Inc.
- **MEP Engineer:** AKF Engineers

**Construction Project Background**
- **Scope of Work:**
  - Interior Demolition and Renovation of Existing Building
  - Modernization of the Existing Mechanical Infrastructure
  - New 109,000 SF Addition
- **Construction Challenges:**
  - Existing Facility Active During Construction
  - Schedule Phasing of Floor Turnovers
  - Site Logistics of New York City
  - Asbestos Removal through Existing Facility

**The Use of Building Information Modeling**
- **Analysis Background:**
  - Identify feasibility of implementing a 3D model for coordination of design and construction for new and existing building
  - Identify a more efficient method of performing punchlist through construction
- **Application of 3D Modeling:**
  - Feasible to utilize for the new building design and construction but not for the existing due to the project schedule phasing
- **Application of VELA Systems:**
  - Feasible to utilize VELA-equipped iPad’s for punchlist process
  - Estimated 2000 man hour savings
  - Overall System Cost of $25,000

**Material Staging and System Prefabrication**
- **Analysis Background:**
  - Utilize integrated, prefabricated MEP racks to reduce site congestion, construction costs, and construction schedule
- **Implementation of Prefabricated MEP Racks:**
  - Second, Third, Fourth, and Fifth Floors in Corridors of the New Building
- **Material Staging Plan:**
  - Maximize efficiency for manufacturing versus delivery versus installation
- **Schedule Savings:**
  - Overall Duration Savings of 200 Days
  - Cost Savings:
    - Overall Labor Cost Savings of $1,673,293

**Sustainable Green Roof Garden**
- **Analysis Background:**
  - Alternate design included a green roof garden on the sixth floor roof of the new building
  - Financial restriction prevented owner from moving forward with implementation of green roof design
- **Implementing a Green Roof Garden:**
  - Newly proposed green roof garden to utilize 7050 SF of roof
  - GroRoof Extensive Hybrid Modular Green Roof System
- **Project Impact of Green Roof Garden:**
  - Feasible to utilize proposed green roof garden system
  - Green Roof System Cost of $77,935
  - Annual Cost Savings of $3,746 per Year
  - Payback Period of 21 Years
  - Overall Cost Savings of $113,090

**General Building Information**
- **Occupant Type:** Healthcare Facility
- **Gross Building Area:** 438,000 SF Renovation and Addition
- **Total Floors:** 14 Including Mechanical Penthouse
- **Total Project Cost:** $207 Million
- **Dates of Construction:** January 2009—December 2013
- **Delivery Method:** Design-Bid-Build with CM Agency

**Schedule Re-Sequencing and Tenant Occupancy**
- **Analysis Background:**
  - Owner turns over floors to construction for demolition and renovation in a scattered sequence for the existing building
  - Phasing relationship between floors is affected by the duration of occupancy move-in
- **Re-Sequencing the Project Schedule:**
  - Establish a direct phasing relationship between residential floors six and nine, seven and ten, and eight and eleven
  - Overall Schedule Reduction of 168 Days
  - 10th Floor Reduction of 107 Days
  - 11th Floor Reduction of 182 Days
  - Overall Cost Savings of $206,723
- **FM:Interact Move Management Software:**
  - Feasible to utilize for a more efficient method of managing the occupancy move-in process during various phases of the project
  - Overall Duration Savings of 14 days
  - Duration Savings of 7 Days/Floor for Existing Building
  - Overall Cost Savings of $439,488

**Material Staging and System Prefabrication**
- **Analysis Background:**
  - Utilize integrated, prefabricated MEP racks to reduce site congestion, construction costs, and construction schedule
- **Implementation of Prefabricated MEP Racks:**
  - Second, Third, Fourth, and Fifth Floors in Corridors of the New Building
- **Material Staging Plan:**
  - Maximize efficiency for manufacturing versus delivery versus installation
- **Schedule Savings:**
  - Overall Duration Savings of 200 Days
  - Cost Savings:
    - Overall Labor Cost Savings of $1,673,293

Senior Thesis Website: [http://www.engr.psu.edu/ae/thesis/portfolios/2012/ADD5065/index.html](http://www.engr.psu.edu/ae/thesis/portfolios/2012/ADD5065/index.html)