
DAVIDSON & ASSOCIATES

CONSTRUCTION ANALYSTS, INC.

Element 12420

Technical Construction Document Review & Construction Quality Assurance



This 93,000 sf commercial office building is a complete rehabilitation of a four-level existing structure with 14 to 16-foot floor-to-floor dimensions and on-site surface parking. The property was gutted to the steel structure and foundation and a new building envelope was installed. The building incorporates an innovative spray foam air barrier system, spray polyurethane foam roofing system and open-cell spray foam insulation in the light gauge metal framed infill walls. The envelope components include glazed curtain wall systems, window wall systems, cast stone and brick veneers. The project is registered LEED Silver. The project is located in Rockville, Maryland.

Challenge: Review the construction documents to identify air and water infiltration issues, vapor and thermal transmission through the exterior envelope.

Value Added: D&A's technical review of the construction documents included evaluation of the air/vapor barrier system design, which led to the selection of the spray foam air barrier system, the open-cell spray foam wall insulation and evaluation of a proposed substitution of a spray polyurethane foam roofing system that was ultimately selected for the project. D&A worked closely with the client, developer and general contractor to develop appropriate and cost effective detailing for the integration of the waterproofing, air barrier and roofing systems. During the construction phase D&A provided on-site quality assurance for the building envelope installation.

Service performed: Technical construction document review of plans; quality assurance during construction

Client/Architect: DNC Architects

Contractor: Buch Construction

Duration: 2008-2009

Developer: JBG Companies