

# 8<sup>th</sup> Street Office Building

Richmond, VA

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structural option

[www.engr.psu.edu/ae/thesis/portfolios/2010/clg5017](http://www.engr.psu.edu/ae/thesis/portfolios/2010/clg5017)



## general data

project area: 307,178 ft<sup>2</sup>  
height: 4 levels below grade, 10 above + penthouse  
total cost: \$113 million  
construction dates: not scheduled  
delivery method: design-bid-build

## project team

owner: Commonwealth of Virginia  
architects: Commonwealth Architects; Perkins + Will  
landscape architect: Snead Associates, P.C.  
preconstruction services: W.M. Jordan  
civil: Draper Aden Associates  
structural: Rathgeber/Goss Associates  
MEP: Integral Performance Engineering  
lighting: Grenald Waldron Associates  
telecommunications: WB Engineers|Consultants  
fire protection: The Protection Engineering Group

## arch

spaces: retail, secure main lobby, assembly areas and offices  
atrium: 6 stories, acts as a connector to the adjacent building  
facade: glass curtain walls and precast concrete panels  
terraces: planters atop granite on the 3rd, 7th and 10th floors  
roofing: standing seam stainless steel system around perimeter

## struc

materials: concrete parking garage, steel superstructure  
foundation: 48" thick mat reinforced with #10 bars  
floors: lightweight concrete over 18 gage composite metal deck  
lateral system: 12" thick concrete shear walls around 4 cores  
roof: structural slab with 20 gage metal roof deck

## mech

heating: three 250 HP boilers for 14,500,000 MBH load  
cooling: three 500 ton centrifugal chillers for 1,450 ton load  
air systems: variable air volume air handling units  
smoke control: atrium smoke removal fans on adjacent roof

## ltg/ elec

office lighting: indirect/direct pendants to 40-45 footcandles  
circulation lighting: compact fluorescent downlights  
interior distribution: three 5kV to 480/277V unit substations  
exterior distribution: two transformers in a vault on 8<sup>th</sup> Street provided by Dominion Virginia Power

