Anthony Grab

Construction Management

Building Statistics

8/31/2012

# Square 1400 Apartments

2700 Dorr Ave. Fairfax, VA 22031

| | | |
|---|---|---|
| Square 1400 LLC | Owner | http://www.hitt-gc.com/ |
| HITT Contracting | General Contractor | http://www.hitt-gc.com/ |
| S B E & Associates Inc. | Architects | http://sbeassociates.com/ |
| Dewberry & Davls | Civil | http://www.dewberry.com/ |
| Meyer Consulting Engineers | Structural | http://www.mcecorp.com/ |
| J.B. Wyble & Assoclates, PA | Mechanical | http://www.jbwpa.com/ |
| Polysonics Corp. | Acoustical | http://www.polysonics-corp.com/ |


Figure 1.2 (Site Map)

| | |
|---|---|
| Building Occupant Name | Residential |
| Occupancy or function types | R-2 1st Floor to 11th Floor |
| Size | 327,431 SF |
| Number of stories above grade / total levels | 10/11 |
| Dates of construction | January 2012 - October 2013 |
| Actual cost | Contracted - 40 Million |
| Project delivery method | Design-Bid-Build |

**Note:** There is no historical data that relates to the project.

**Major national model code/s ( IBC 2003, BOCA 1999, etc. Do not list routine standards such as ASTM etc. for this assignment)**
IBC 2006 VUSBC 2006 ICC ANSI A117.1 2002

**Zoning**

Mixed Use: A mixed of related uses such as office, hotel, residential, and/or retail development within a designated area. Consult the area plans for detail land use recommendations.


Figure 1.3 (Zoning Map)

**Building Facades**

Figure 1.4 (Mock-up)

The building maintains the same façade throughout the exterior of the building. A typical Façade detail can be seen above. A typical layer consists of brick façade on the exterior followed be an air gap, 1.5” rigid insulation, and finally exterior sheathing.

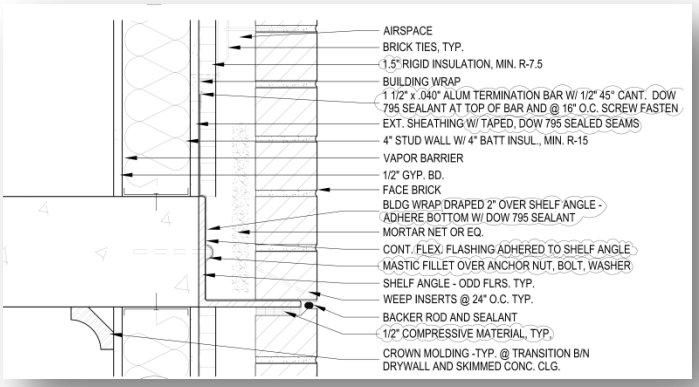


Figure 1.5 (Façade Detail)

**Roofing**

Figure 1.5 (Roof Picture)

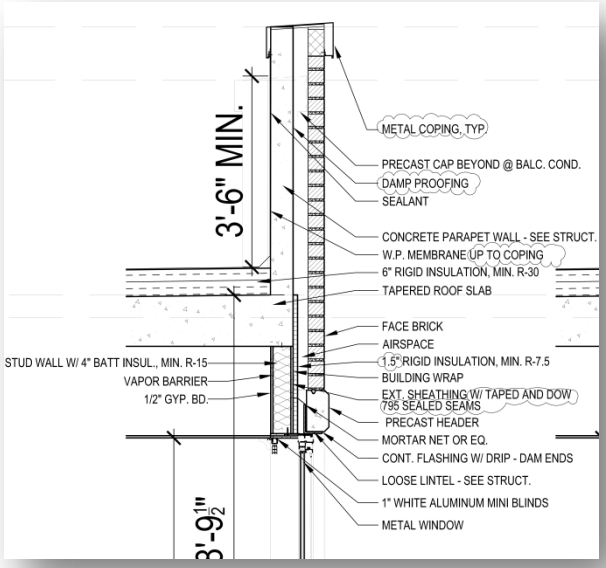


Figure 1.6 (Roof Detail)

The roofing system will consist of two layer of rigid insulation the first at 4” with an R-value of 20 and the second layer of 2” with an R-value of 10 with a 3/8” cement topped hydroguard, Totaling 6” of rigid of insulation with an R-value of 30. 2’ by 2’ paver are installed as walkways. The roof will carry a 20 year manufactures warranty.

**Sustainable Features**

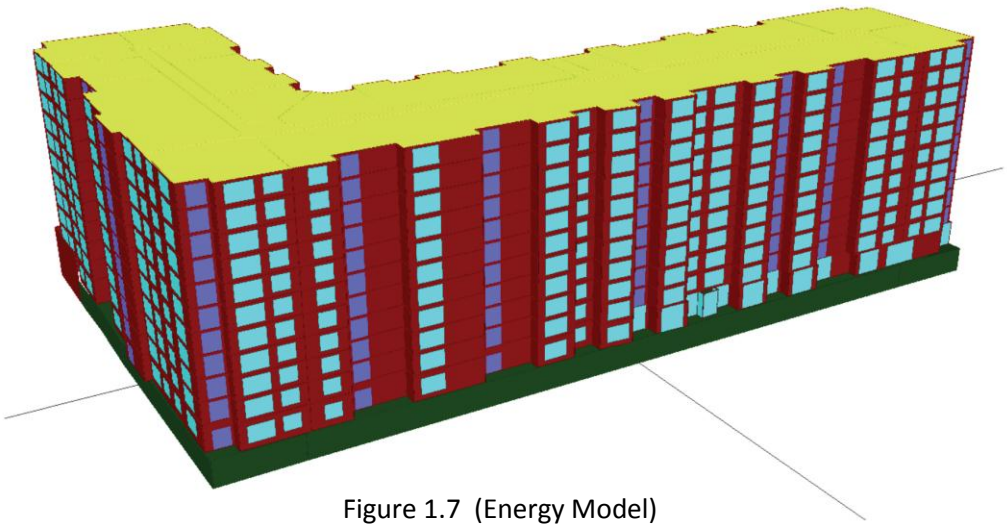

Figure 1.7 (Energy Model)

This project is applying for LEED for new construction. As part of this process the project must comply with ASHRAE 90.1-2007. The project must maintain a minimum of 10.0% annual energy cost saving. This is regulated by the USGBC. The building implements a number of energy efficient parameters designed to optimize the building performance.

- Residential: 13 SEER split system heat pumps (baseline is 9.105 EER PTHP)
- Corridors: High Efficiency Aaon units with VFD fans and Economizer
- Common Areas: High Efficiency VRF system
- High efficiency garage lighting at 0.15 W/sf max (baseline is 0.20 W/sf for covered parking and 0.15 W/sf for open parking lots an drives)
- High Efficiency Windows (apartment sliders, residential IGUs and curtain walls)
- 1.5 gpm shower heads and faucets (assumed – no actual selections provided)
- ENERGY STAR Qualified Refrigerator (20% improvement)
- ENERGY STAR Qualified Clothes Washer (35% Improvement)
- ENERGY STAR Qualified Dish Washer (25% Improvement)
- Fixed building shading, self shading, overhangs and porches

**Architecture**

The apartment building is primarily composed of cast-in-place concrete frame with two shades of face brick on the exterior. The nearby precast parking structure features a precast skin with face brick to match the adjacent apartment building. Because the site is located on a corner lot, the building utilizes an L-shape to maximize the natural sun light. The building also features a courtyard in the rear of the building.

Figure 1.7 (Exterior Rendering from the rear)