

Building Statistics

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GENERIC BUILDING NAME

NOWHERE, USA

1 General Building Information

Building Name	Generic Building Name
Location And Site	Anywhere, USA
Owner Occupant Name	Generic University
Occupancy or function Type	Medical outpatient center
Size	184000 sf
Number of floors	10 total floors, 1 partially below grade
Dates of construction (start – finish)	September 9, 2015- late 2017
Cost	100 Million
Project Delivery Method	Design-bid-build
Architect	Wilmot/ Sanz, inc.
Consulting Arch & Land Scape Architect	Ayer/Saint/Gross
MEP Engineer	James Posey Associates
Structural Engineer	Cagley & Associates
Civil Engineer	RK&K Engineering
Telecomm Engineer	Smith Seckman Reid, inc.
Equipment Planner	Global Workplace Solutions
Construction Management	Whiting-Turner

2 Architecture description

Architecture

The Generic Building Name is a rectangular box in form. It's most prominent architectural moment is the large, 2 story underpass below the building on its plan north edge. This creates a covered space for drop of patients and an access road to the parking garage on the other side. The main entrance is a two story mezzanine. Above the two bottom floors, the floor plans maintain a consistent rectangular shape with little variation. The fourth floor features a connection bridge to the adjacent parking garage.

A protruding block of curtain wall mark the building main façade along the plan west side of the building. This façade faces the main access road. The protrusion is contrasted by step back in the façade in the northwest corner of the building. The windows on this façade also feature a double triple window shade. The building façades become tamer along the other sides of the building, featuring long windows. See figure 2.1 for an exterior rendering of the final design.

Generic Building Name was built to the 2015 IBC (International Building Code). It is zoned in a Community business district.



Figure 2.1: Exterior rendering (Wilmot/ Sanz, inc.)

The programming per floor is as follows:

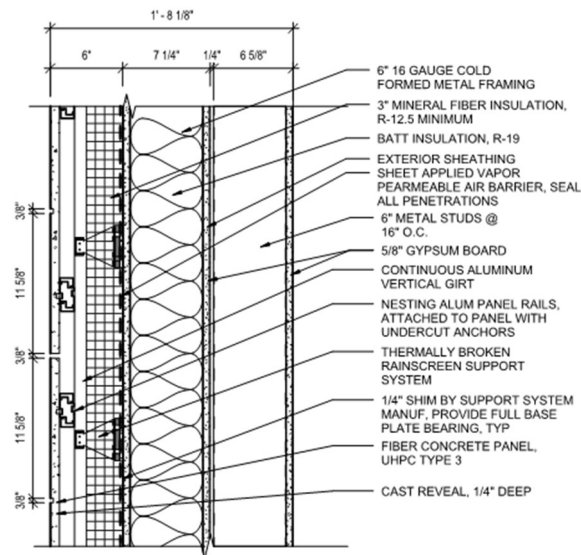
- 1st** Intake, Pharmacy, Phlebotomy
- 2nd** Patient Services, Clinical Research
- 3rd** Mechanical
- 4th** Imaging, Parking Garage Connection
- 5th** Clinic, Administration
- 6th** Infusion
- 7th** Clinical Research, Clinic
- 8th** Clinical Research
- 9th** Clinical Research
- 10th** Breast Clinic, Food Service
- Roof** Elevator Rooms

3 Architecture description

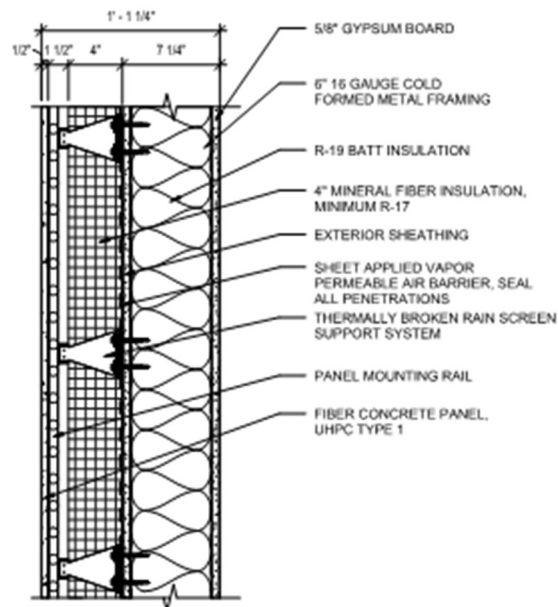
Generic Building Name features five main external wall types, Fiber Concrete Panel Rain screen with cast in place concrete, Fiber Concrete panel rain screen, Plenum wall system, Blue Stone with cast in place concrete and Metal Panel Wall Systems. There are four different Roofing types used, Insulating Paver Roof, Paver Roof Assembly and Plenum Roof Assembly. The screen wall is double pane glass with aluminum sun shades on the western façade and no sun shades on the mezzanine curtain wall. See Below for sections of types discussed.

External Wall Sections

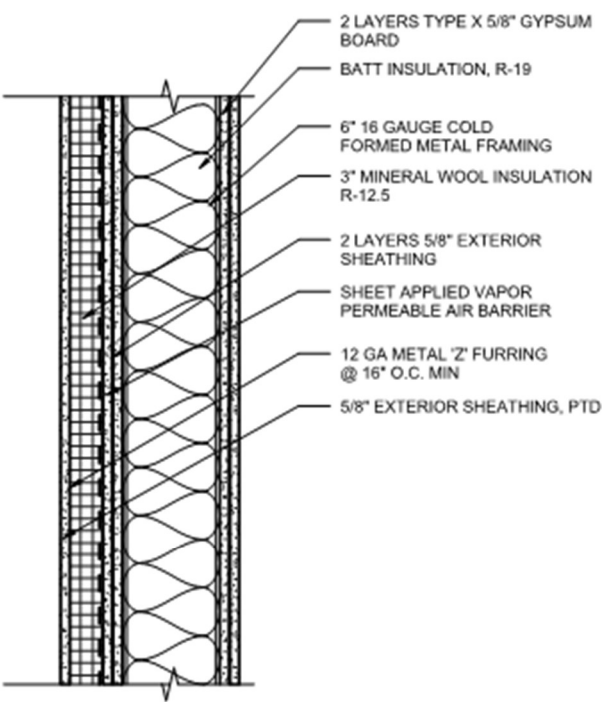
Fiber Concrete Panel Rain screen with cast in place Concrete



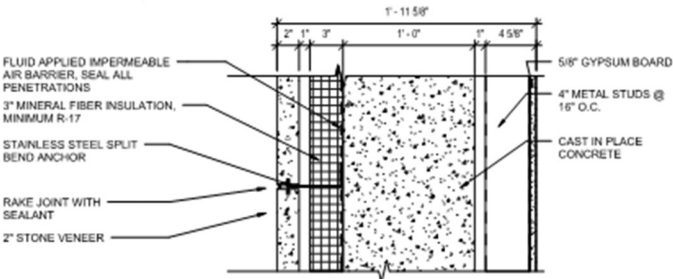
Fiber Concrete panel rain screen



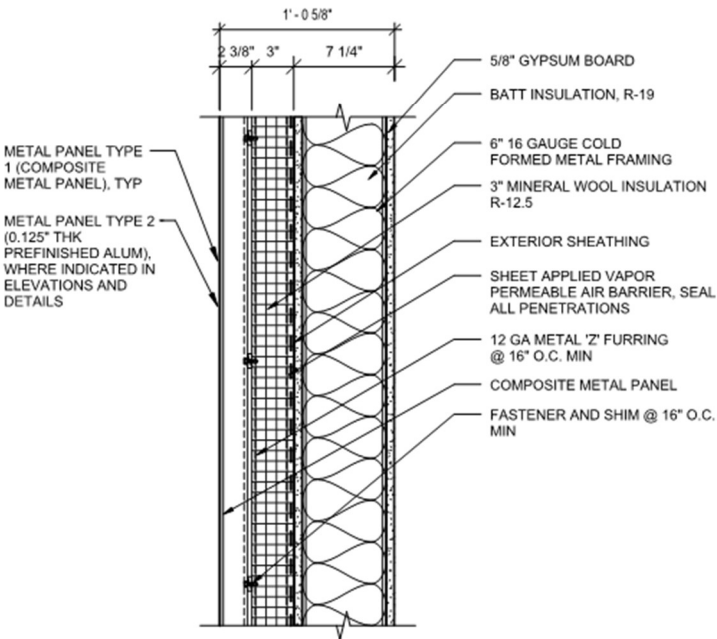
Plenum wall system



Blue Stone with cast in place concrete

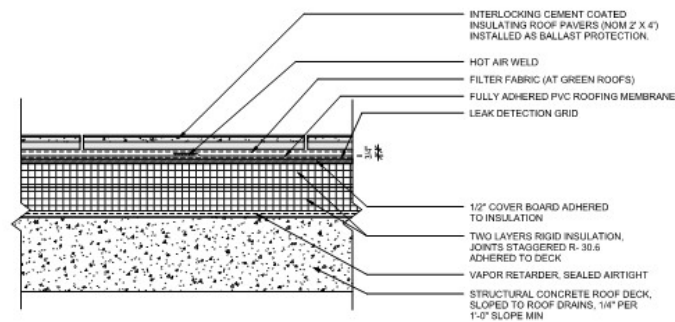


Metal Panel Wall System

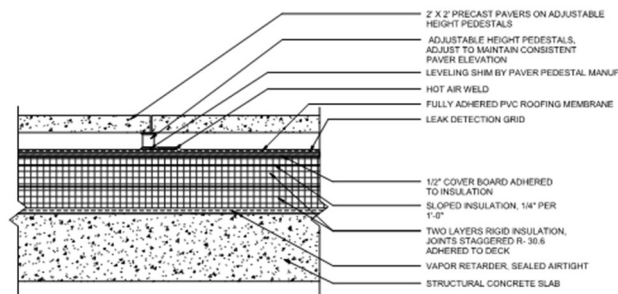


Roof Exterior Systems

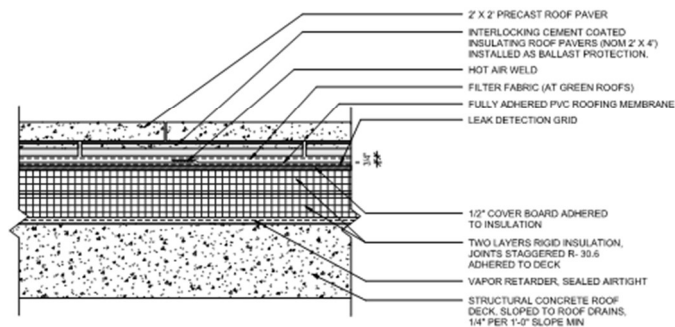
Insulating Paver Roof



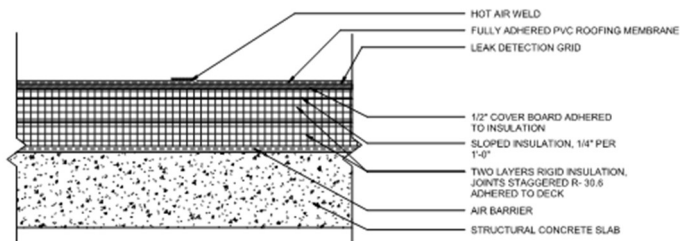
Pedestal Roof Assembly



Paver Roof Assembly

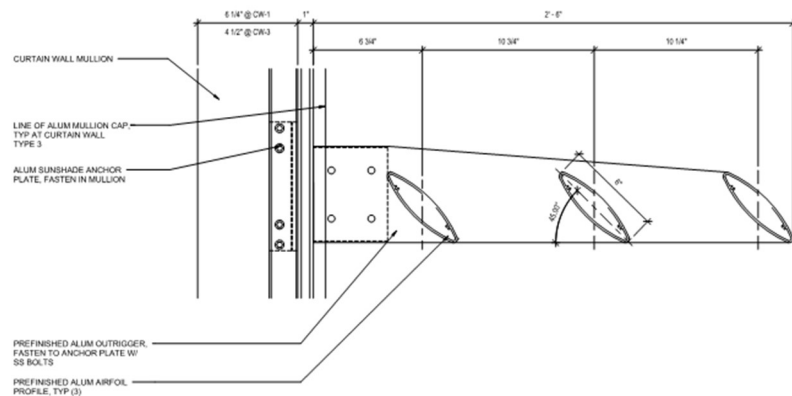


Plenum Roof Assembly



Curtain Wall System

Aluminum Sun Shade Detail



4 Sustainability

Generic building Name is being built to obtain a two green star rating from its Local Green Building Standards Council. This is about the equivalent of a LEED silver rating. In order to obtain this rating locally manufactured materials, certified wood, and low emitting materials are all being used on site. Physical features such as thermal design, ground level heat reduction, a white roof and a partially vegetated roof all also are planned to help achieve a two star green rating.

5 Systems

5.1 Construction

Construction of the project started in September 9th 2015 and is scheduled to finish late 2017. One crane was used on site for lifts. All concrete is to be placed on site. Work on the adjacent existing parking garage's electrical system was included in scope. The Project was delivered as a design-bid-build contract type.

5.2 Electrical & Lighting

The building is being fed by an on campus power plant from two lines, the main line and an emergency line. For increased sustainability and lower energy consumption, all lighting fixtures

used in the Generic Building Name are LED. The Lighting includes automatic shut off features run by occupancy sensors and reduced lumen output in daylight zones. One Hundred percent and 50% presets are available on lightning controls.

5.3 Mechanical

Mechanical equipment is housed on the third floor. Vents in the building enclosure supply outside air intake and exhaust air. A chilled water system is used for cooling. There is one cooling tower on the roof. The building is heated by a combination of finned tube radiation and electric heating units. The air handling used operate automatically based on the buildings operation schedule.

5.4 Structural

The Generic Building Name is a reinforced concrete building with two way reinforced concrete slabs. Typical Floor slabs are 8 inches thick. The floor slab increases to 12 inches in areas of increased super imposed dead load, i.e. areas with large medical equipment. Drop panels of additional 6 inches of concrete are included around columns to increase slab stiffness. Shear caps are included around columns of with higher punching shear. The Lateral system is ordinary reinforced concrete shear walls. Post tensioned beams act as transfer girders to create the canopy on the norther edge of the building. The foundation system is reinforced concrete auger piles.

5.5 Fire Protection

The active fire protection system in the Generic Building is an automatic sprinkler system. All concrete structural elements are 2 hour fire rated, this includes the shear walls surrounding the 2 fire stairs and the 5 elevators.