



“Symphonic Design”

**When the owner, architect and contractor all work together,
architectural music is created**

**By: Michael Rust – Architect LLC and
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PROJECT DETAILS

Project Location: Scottsdale, Arizona
Architect: Michael Rust – Architect LLC
Home Builder: Gemini Development Corp
Square Footage: 4864 sq. ft enclosed air conditioned space
Date Completed: May 2012
Photographer: Taube Photography

1. Project Needs and Client Requirements

- a. The clients desired a space where they could entertain and showcase their extensive middle-eastern art.
- b. The home will be as maintenance free with minimal areas that need cleaning and dusting, both inside and out.
- c. Due to health requirements, the kitchen area will be designed with an adjacent space for indoor growing room. The growing room will be designed with efficiency and be able to be closed off from other areas of the house.
- d. Special mechanical and ventilation systems were design for the indoor growing room.
- e. All the spaces are designed to exceed standard ADA requirements.
- f. Natural light was requested in major areas without increasing solar gain and cooling requirements.
- g. House to be designed incorporating both passive solar design concepts and maximum insulation.
- h. Large Space for musical performances with ease of moving pianos from different rooms.
- i. Two guest rooms and private bath to be designed so these areas can be locked off from house and separate mechanical system for when spaces are not used.
- j. Large garage (3 car plus) space adjacent to growing area without making garage dominate design feature of house.

2. Project Solutions and Opportunities

- a. Large open walls some almost 11' high were designed in the great room/music room what will show case large art pieces mounted on the wall and floor adjacent to the wall. Other rooms have lower ceiling but with slightly larger floor spaces for carefully placing of art pieces on the floor. LED light fixtures were located in ceiling of these locations to show case the art at night. The large living / music room has concealed continuous LED strip lighting at the ceiling line that will gently wash the wall and art on the wall.

b. The exterior materials were designed with a standing seam roof and fascia, split face block walls and a stone earth berm on the north side. The windows are dark bronze aluminum on both the exterior and interior for a no-maintenance required finished appearance on both sides of the house. On the north side the split face block stops 16" from the ceiling soffit and two courses of glass block are installed to give a continuous floating roof appearance from the outside and continuous high soft natural light on the inside. The glass block was located inside of the split face block wall so there would not be any ledges inside that would need cleaning. The ledge created on the outside is sloping metal to match the roof and can be easily be cleaned with a garden hose. Gray concrete slabs are poured on both sides that slightly slope away from the building for easy cleaning.

c. Due to health needs, the clients grow inside their own food supply of wheat grasses, sprouts and plants. The grasses grow at different stages and are located on growing racks. Special mechanical supply and exhaust systems were designed and installed to promote the growing of the grasses with the proper balance of temperature, humidity and exhaust without disrupting the mechanical system of the rest of house. In door watering system and internal floor drains were installed to provide the required watering of the plants. Solar tubes were installed above the plants to provide natural light.

d. As we all get older, accessibility challenges can increase. This home was design with no steps anywhere. Not even small depressions from interior to exterior spaces. Broad overhangs keep water away from the doors and low sloping exterior patios. These exterior to interior spaces will be easy to maneuver with wheel chairs or motorized scooters if needed in the future. Wider hallways, custom handicapped grab bars, showers with no steps or curbs are designed for easy access now and into the future. Exterior hose bibs are encased in a bronze recess box that blends with the exterior block for a more finished look and the hose connection will be fitted with a plug and release hardware (similar to an air hose) that provides easier means of attaching hoses for exterior washing and watering.

e. The north side, partial west and east sides have 16" high continuous glass block for a soft indirect lighting into these areas. The glass block is located at the exterior soffit elevation so that with the 4' overhanging roof, the glass block will practically not get any direct sunlight which will make the light more even and diffused without any solar heat gain into the interior spaces.

f. The house is designed with passive solar concepts in mind. North / South major axis, with broad 4' overhangs the north, east and west sides and larger (14-22') overhangs and covered patios on the south side. Windows are located near the roof line to reduce the amount of solar heat gain. The house is designed with 8" solid grouted split face concrete block around the entire exterior. This provides an approximately R-2 insulating value just by itself.

These walls then have 4" of sprayed Icynene insulation on the inside which added R-28 of value. The entire north side of the house has a 4' high earth berm on the block wall which adds approximately R-2 of value for every foot of dirt coverage. Thus the exterior walls have a minimum of R-30 insulation. All the interior walls were sprayed with Icynene to provide sound isolation between rooms. The roof was sprayed with a minimum of 6" of Icynene which provides an R-42 value. Since there is not a typical attic space like most house have the air conditioning ducts are located under the insulation which make the spaces the ducts are providing cooler air to naturally cool and thus less mechanical cooling is required thus saving the home owner on cooling and heating cost throughout the year. 10" and 18" "Solar Tubes" were located in various locations bringing in natural light to interior spaces without the normal heat gain of typical skylights.

g. A large multipurpose room was designed as the living room and music room. The room will have space for one grand piano full time but this space has been designed so that a second piano can easily be rolled into this room when needed. (3) 18" solar tubes are located in this space so that natural lighting can be used for daytime performances. LED lights have been located inside all the Solar tubes for night time illumination as well.

h. Two guest rooms and private shared bath were designed with easy access from either the front door or garage space. The guest rooms have direct access to the kitchen and living room spaces but can be sealed and locked from the main house when not in use. Separate mechanical system was designed just for these spaces which will only be used when needed.

i. A large 48x24 garage with ample space for (3) cars was designed with the doors facing due east. The garage doors cannot be seen when entering the house. The garage doors have full height decorative lighted glass block piers on each side to add interest and continue to make the roof appear as floating at night.

Other items of interest.

j. Other items were designed to add art to the house. The front entry has a wall with approximately (25) ½"x8"x8" glass inserts into the vertical joints of the split face block. This creates a random decorative lighting pattern on the inside of the house during the day and a decorative lighting element that guest will see when arriving to the front door of the house.

k. The space directly adjacent to the front door is the office space that has approximately 8 lineal feet of 8' high glass block. This area is covered by 4' of roof over hang and faces due north for soft natural light into the office. The glass block offers privacy and notification from guest approaching to the front door.

- l. The entry doors are stainless steel for a low maintenance, security and contemporary appearance.
- m. Exterior windows and doors on the south have electric concealed roll up shutters in the ceiling.
- n. The other exterior passage doors are metal for low maintenance and security.
- o. There is a large exercise room on the south side of the house with a rubber floor made of recycled tires, and having a large sliding glass door, opening onto a patio, which, when open, provides fresh air during early-morning exercise.
- p. Next to the exercise room is a large bathroom with a glass shower and a four-person far infrared sauna.
- q. The kitchen, growing room and the three bathrooms have walls and floors covered entirely with porcelain tile for both appearance and easy maintenance.

SPECIAL PRODUCT/CRAFTSMEN CREDITS:

Split face block – Superlite
Roofing – Firestone – UN- CLAD
Windows: Western Insulated Glass
Glass Block – Pittsburg Corning
Front Door – Neoporte Modern Door®
Kitchen Appliances – Bosch / Subzero
Door hardware – Emtek
Kitchen Cabinets - Bulthaup
Plumbing Fixtures: Toto, Hansgrohe
Roll Shutters – Roll Shutter Systems.
Tile flooring - Rossini
Art: by Owner

For more information about this exciting project or to schedule a MEDIA TOUR, please contact Michael Rust at 480-219-0554 or mrust@rust-architect.com