Review of related literature essay

Literature

This chapter present data's and information sited from World Wide Web, books, magazines that can be used as reference and can support in designing a development of Bali]Eagan Elementary School. Redevelopment is the physical development (consisting mainly of renovation, rehabilitation, retrofit, upgrading and the like as well as expansion and/new construction work) within a lot or property that is under-utilized, unfit/unsafe for habitation/use or within other lots/properties that are similarly situated.

Rosa City Profile Figure 1: Map of Rosa City Historical Background The City of Rosa is the provincial Capital of Capri province, a part of Panky Island where Miguel lopes De Legal's settle when he arrived from Zebu. In 1746, Capri was made the set of Politico-military government although it was still ecclesiastically controlled by the Bishopric of Zebu. On May 31 , 1847, a Royal decree turned the province into Alicia. Rosa City was once known as the Municipality of Capri and it become a chartered City on May 12, 1951 by virtue ofRepublic actNo. 03, otherwise known as the City charter. The late Hon.. Lorenz Arnold was its first City Mayor. This as named " Rosa City' in honor of its most illustrious son, the first President of the Republic of the Philippines, President Manuel Sauna Rosa. Figure 2: Manuel Sauna Rosa Geographic Location and Political Subdivision Rosa City is situated at the Northern eastern tip of the island of Panky within the geographic coordinates of 1220 45' longitude and 110 35' latitude.

Its boundaries are: Visalia Sea on the North; Municipality of Paint-an on the South; Municipality of Visas on the West; and Municipality of Panky on the East. It is located 250 nautical miles Southeast Manila, 118 kilometers northeast of Lillo City, and 86 kilometers east f Kalmia, Klan. Travel time to

Manila is 45 minutes by plane and 18 hours by boat. The City is the Center for Domestic and International travel, with its FOR (Very High Omni-Range) included in the quickest and safest aviation route to Australia in Philippine Airspace.

School is anticipated to use only 16, 405 Btu per fat per year.

Comparing baseline data from the old school to that resulting from a post-occupancy evaluation planned over the next year should validate performance results. Regional and Community Design The new Ben Franklin Elementary School replaced an existing facility on a narrow en-acre site that is oriented along a north-south axis. The surrounding residential neighborhood is interlaced with equestrian trails, horse paddocks, and forested lands, including a mature stand of Douglas fir trees that covers the northern third of the property. This rich natural setting and a requirement to maintain operation of the existing school during construction led to new facility's location at the center of the site, embracing the woods. Figure 8: This annotated aerialphotoexplains the site and context of the school.

Community workshops were used to identify the needs and desires of the district, itty, students, parents, Ana enlargers. I en Tortures area at ten northern portion AT the site was identified as a community asset. As a result, the design of the school focused on highlighting the building's relationship tothe forestfor both learning and recreation. Connections from both the classrooms and play areas to this naturalenvironmentare maintained. The school building was shifted to the east to allow both visual and physical

connections from the public street to the forest beyond, inviting the neighborhood to utilize all outdoor amenities of the site.

In addition, the tie design balances theacademicneeds of the school with the recreational needs of the neighborhood. Partnering with the City Parks Department allowed for passive recreational improvements within the forested area and the creation of a multi-sport Plainfield for shared community use. Through community partnerships and outreach the facility and site are being used well after school hours, during weekends, and during summer months. Interior spaces that are heavily used by the public, including the library, gym, and commons, were located near the entry for easy after-hours use. The parking area is configured to accommodate only daily users (staff and volunteers).

Student pick-up and drop-off is accommodated by double one-way drive lanes within the parking lot. Large school events utilize the bus loop and paved play areas for overflow parking, eliminating the need for the oversized parking lots found at many schools. About 85% of the building population uses transit options other than a single-occupancy vehicle. Only 0. 13 parking spaces are provided per person. Land Use and Site Ecology Realizing that each student has the potential to share his or her environmental ethic tit the community at large, the project team designed the site not only to celebrate current green building practices but also to inspire and educate generations of students about more sustainable patterns.

The two central courtyards provide structured outdoor learning environments, exposing students to elements of the region's unique

hydrology and providing direct connections to the site's native forested ecosystem. The functional ecosystem of the southern courtyard makes natural processes visible on a day-to-day basis. This outdoor environment provides educators with a three-dimensional, " hands-in-the-dirt" laboratory that fosters understanding throughobservation. Highlighting subtle environmental variations in sun, wind, rain, and shadows, the integration of building, courtyard, and sculptural focal point provides a lens through which visitors of all ages can view the intricate workings of the environment in which they live.

Figure 1: The functional ecosystem in the southern courtyard, shown in this photo, is a structured learning environment connecting the students with the natural processes of the region. The continued use of the previously developed site and the multi-story design of the new facility have resulted in no net increase in the site's impervious surface area. Combining the resources of the City Parks Department and the school district to offer shared community amenities has reduced impacts on undisturbed sites in the region. The new building was constructed atop an area previously occupied by Plainfield. New site amenities such as Plainfield, playgrounds, parking, and bus circulation space, were located on the former building pad or already-paved portions of the site.

Biostatic Design I en Duologue's articulate Toppling Ana root Tort allow all spaces to Detent t Trot exposure to daylight and natural ventilation. The building's two courtyards intimately once students and teachers with the local ecosystems. Daylight during thewinter seasonis relatively easy with the

predominantly overcast sky. Direct sun exists primarily in the summer months, when the sun is high in the sky and its light is easy to control. Major glazing and roof slopes face either north or south to maximize and control natural daylight and views. To reduce solar heat gain, significant overhangs and sunshades were incorporated on the south elevations. The result is reduced glare but increased diffuse light in the learning areas.

Figure 9: The pathways of light, air, heat, and views through the commons, humanism, and library spaces. Figure 10: Views, ventilation, and light pass through the classroom cluster section, as shown in this drawing. With maximum temperatures ranging from 45 to OFF and more than 36 inches of rainfall each year, the Pacific Northwest climate allows for a relatively permeable and articulated structure. Outdoor temperature and humidity levels from late spring through early fall are generally within the acceptable limits of indoor comfort conditions as prescribed by SHARE, creating an ideal opportunity for natural ventilation and passive cooling. Visual Comfort and The Building Envelope Orient the floor plan on an east-west axis for best control of daylight -Use large exterior windows and high ceilings to increase daylight -Use skylights and/or clerestories for daylight * Visual Comfort and Interior Design -Design open floor plans to allow exterior daylight to penetrate to the interior * Visual Comfort and Light Sources -Provide illumination sensors * Ventilation and Filtration Systems -Provide occupants with access to operable windows -Design for optimum cross-ventilation through window placement * Elimination of Indoor Pollutants -Use finishes that are easy to clean using mild surfactants and water * Reduction of Use only very low or no-VOCE paints * Facility Policies for ICE -Recommend a non-

smokingpolicy for the building Light and Air All learning areas are naturally ventilated without the use of air handling equipment or supplemental fans. Operable windows and ventilation chimneys in the classrooms generate a natural stack effect that results in ten air changes per hour, providing an exemplary indoor air quality without energy consumption. All rooms were modeled for thermal performance using computer simulation. The U. S. Green Building Council's LED boundary comfort parameters were used as a benchmark for acceptable comfort levels. Operable windows located throughout the building allow for individual control of the environment.

In 80% of the building, required minimum ventilation wall De conclave tongue a system AT perimeter louvers located Deanna t heating units. Carbon dioxide sensors and occupancy sensors automatically adjust louvers to control ventilation and conserve energy. Natural convection draws outside air through the lower louvers and pulls exhaust through the thermal chimneys. In the limited areas with forced-air ventilation (the gym and commons area), no duct liners were used in the supply ducts. Extensive glazing connects the occupants with the outdoors. The spaces are oriented along an east-west axis, with glazing facing north and south to control and maximize the natural daylight within the building.

Energy Flow and Energy Future The primary and fundamental goal of the design team was to create synergies among consultants, ensuring that all elements of the building would work together to respond to seasonal changes in weather and occupancy. Implementing the concepts of year-round natural ventilation, daylight, and eliminating mechanical comfort

cooling required close coordination of all disciplines. Using the concepts of thermal uncanny and pressure differentials, thermal chimneys create a stack effect in the building, drawing fresh air through low-level perimeter windows and louvers and venting it at high level. Extensive computational analysis was performed to perfect the geometry of openings through each classroom.

Whole-building natural- ventilation design techniques, affecting building orientation, windows, shading, construction materials, daylight, and ventilation openings, were employed to allow for passive cooling throughout the building during occupied seasons. In heating mode, the air passes over fin-tube water heating elements located at the perimeter oeuvres before it is introduced into the classroom spaces. Figure 11: This drawing of the first-level floor plan shows the path of air entering the building through the perimeter hydrocyanic heating and ventilation louvers. Occupancy sensors and automatic dimming controls were installed on light fixtures in all classrooms.

Daylight models of the classrooms, activity areas, library, gym, and commons were analyzed to ensure that the spaces would meet optimal design criteria and achieve a 2% outside illumination baseline. Automatic dimming controls adjust light levels in the classrooms to maximize the energy efficiency benefit of the alighting. Daylight harvesting is expected to reduce lighting energy usage by 25% in these areas. Mechanical systems were designed to avoid unnecessary redundancy. Instead of " doubling up" on equipment to ensure complete backups or relying on large safety factors the design team used the SHARE design criteria for the heating systems.

Each condensing boiler was sized for 60% of the total capacity rather than 100%.

The building systems were designed to reduce reliance on any energy source, including fossil fuels, through improvements beyond code requirements for insulation and lighting levels, daylight, year-round natural ventilation, the limitation of mechanical comfort cooling, lighting controls, and high-efficiency equipment such as condensing boilers that serve perimeter hydrocyanic convection heating units. The building skin provides a high-performance envelope. The walls are insulated to R-25, and the roof is insulated to R-38. The building, which has all regularly occupied spaces on the perimeter, would continue to be functional during regular school hours even in the case of a blackout. Source. Nntp://www elementary-school LocalCase Study. Arcane typewriter. Com/l -cocoons/projects/5-Denial-Transplant School Improvement Plan Rosaries V.

Marimba Elementary School, San Feline, Nag City Rosaries V. Marimba Elementary School is a public Elementary School located at bargain San Feline, Nag City. It is the only elementary school here in Bogy. San Feline that is accessible to the the children and pupils in our bargain, It has a land area of 6, 234 sq. M. Bounded on west by the Nag Carolina National road on its three sides by private lots. It is about three kilometers away from the city proper and will take five to ten minutes ride by Jeep or tricycle. The school is founded in 1946 and bears it name as San Feline Community School. In 1952, the lot was donated to the city government of Nag. Through the years, its population expanded.

In 1962, the school is recognized as a complete elementary school. It was this year that the name was changed to San Feline Elementary School. In 1971, by the virtue of R. A. 6202, approved on June 10, 1971, the school adopted the name of its donor Mrs.. Rosaries Village Marimba. Hence, the school was called Rosaries V. Marimba Elementary School. The school follows the BasicEducationCurriculum and its lessons are in consonance with Philippine Elementary Learning Competencies (PEEL). It has twenty regular permanent teachers and two preschool teachers funded by the city government of Nag. It has also two bargain tangos who acts as security guards and peace keepers in our school.

For this school year it has 886 elementary pupils which constitute four sections in grade 1 and three sections from grades two to six. One of the best facilities in the school is the multi- purpose pavilion which provides a conducive ambiance for any co casino. Figure 12: Rosaries V. Marimba Elementary School Personnel The school head's works ranges from supervision to teachers, clerical works as well as electric and water maintenance. There are twenty teaching staffs which caters the instruction to pupils. Hence, act as coordinators to an area of interest and discipline. There are also two locally funded teachers in preschool. There is one canteen helper who helps to manage school canteen's operations.

Security guards are the bargain tangos which is subsidized by the local government and recently supported by the collections made from the pupils. Physical ; Ancillary Services REEVES has eleven 11 buildings with 23 classrooms. 20 out of 23 has a floor area (ex.), 2 classrooms with (ex.), and 1

classrooms with (ex.) floor area, Thus, 22 out of 23 lassoer is below the standard of classroom of (ex.) floor area. There are no principals office, guidance office, library, school clinic, canteen, sciencelaboratories, stock rooms, Ana computer rooms. I nerve are Tale classrooms Witt melee uses sun as classrooms are shared by the library, canteen, guidance office, stock rooms, and clinic.

The room intended for classrooms is used as a principals office, computer room, as well as stock room. Source: School Improvement Plan of Rosaries V. Marimba Elementary School (San Feline, Nag City) SD,' 2010-2013 Design Concept General Consideration in Conceptualizing Space, form and function constitute a large part of architectural design, and are important at every stage of the design process. There is a need for a coherent relationship between all three factors. Spatial relationships need to be studied and explored: How will the space be occupied? Will the forms interlock or will they be adjacent to each other? What will be the purpose of the building?

Considerations regarding circulation and movement around and within the space need to be made at an early stage. When creating interior public spaces, architects deed to ask themselves: Will the public be able to relate to the outside? If there is enough natural daylight in the building? What kind of atmosphere will this create? Spatial concept General The space a building occupies and the space within a building are very important in architecture. Understanding how to define one space, enables the overlapping of multiple spaces to explore the variety of spatial zones established in the buildings of

Bali]Eagan Elementary School. The spatial concept of Bali]Eagan Elementary School is organized in a linear manner.

A linear organization consists of a series of spaces. It is a linear sequence of repetitive spaces; it can also consist of linear spaces that organize along its length a series of spaces that differ in sizes, form of its function. Site Concept Bali]Eagan Elementary School is inspired in form of a linear organization. It is inherently flexible and can respond readily to various conditions of its site. It can adapt to changes in topography or a stand of trees, or turn to orient its spaces to capture sunlight and views. It can be straight, segmented, or curvilinear. It can run horizontally across its site, or diagonally up a slope, or stand vertically. Source: