

WELFARE REHABILITATION FACILITY

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Abstract

The government of Saudi Arabia have introduced vision 2030 and are working towards eliminating poverty among the less fortunate community. The main mission is to provide shelter and upgrade the overall welfare of the poor community. Thus, to accommodate this 2030 vision, this work proposes the development of welfare rehabilitation facilities in Jeddah, Saudi Arabia. For this work, three case studies were examined in terms of welfare facilities architecture. Thus based on the analysed case studies, the estimated gross floor area for the proposed welfare rehabilitation facility is 44500 m². The welfare facility consists of few areas, such as low-cost apartments, temporary shelters, bazaar area, training centre, health centre, open space area, and administration. In this work, two sites were proposed for constructing the welfare facility. Site evaluation analysis was performed to select the most suitable site, Based on the results of the site analysis, Site 2 scored the highest score of 68 and was chosen as the construction site. This welfare rehabilitation facility is expected to complement the vision 2030 of Saudi Arabia and it will assist in eliminating poverty among the local community.

Keywords-- Welfare, facility, center, Saudi Arabia

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INTRODUCTION

Saudi Arabia is the world's largest oil exporter and spends more than 4 percent of its total annual GDP on donations and humanitarian aid that reaches people in more than 110 nations around the world [1]. It is therefore difficult to imagine that poverty exists in the world's largest oil exporting country. But there is a brutal reality among the extravagant shopping malls and luxury SUVs, one laced with destitution, begging and unemployment [2]. Although Saudi Arabia's economy is one of the world's most powerful, welfare programs have not kept up with the booming population now estimated to be over 33 million people [3].

The country has about 16 million Saudis making up most of the workforce, with the remaining being foreign workers. As the young population struggles to find work, the rate of poverty continues to rise. Government statistics show that nearly two-thirds of the population is under thirty, and three-quarters of all unemployed Saudis are in their twenties [4]. King Abdullah has made some efforts to tackle poverty-related issues, but no lasting impacts have been made. Furthermore, the Saudi government pledged to tackle poverty issues and gave out a \$37 billion handout in an apparent bid to get the country's poor back on their feet [5]. The money helped with unemployment benefits, raising wages and providing affordable houses, but the people of Saudi Arabia need a long-term solution [6].

Saudi Arabia has introduced vision 2030 to eliminate poverty from society that creates positive change on Saudi Arabia communities [7]. The mission is to achieve the vision by providing shelter for individuals and families and taking care of individual needs. Thus, to achieve this vision, this work proposes the development of a welfare rehabilitation facility at Jeddah, Saudi Arabia.

Case Studies

This work analysed three case studies associated to welfare center architecture. The details for each case study will be discussed as follows.

- The Bridge Homeless Assistance Center
- Portland Oregon Innovative Homeless Service Model

- Welfare Centre for Children and Teenagers

The Bridge Homeless Assistance Center

The Bridge Homeless Assistance Center is located at Dallas, Texas (Figure 1). This building was designed by Overland Partners. This center has an area of 75000 m². This center was designed based on campus concept. This center consist of six buildings organized around a series of interior courtyards. The buildings are welcome building, services building, the dining hall and kitchen, outdoor restrooms and showers, the sleeping pavilion and the storage building. The welcome building adjoins the entry courtyard on the northeastern part of the building and contains laundry services, post office, daycare, barber shop, library, and schools. The service building has three floors and includes the following facilities for special needs: medical clinics, housing, administration spaces, dorms and rooms. The dining hall and kitchen is located in the complex's central region and is the complex's social hub where food is prepared. The outdoor restrooms and shower area provides spaces for guest to take care of their basic daily needs. The particular organization of structures and the ensuing sequence of courtyards represents added importance from the architecture team. The courtyards generate rooms where the community can develop.



Figure 1. The Bridge Homeless Assistance Center

Portland Oregon Innovative Homeless Service Mode

Portland Oregon Innovative Homeless Service Mode is located at Oregon, United States of America (Figure 2). This building was designed by Holst Architecture. This building has an area of 10600 m². This center's mission is to provide a continuum of services to help transition homeless individuals to stable, permanent living arrangements. The design accomplishes this objective in the articulation of both structure and capacity: a walk in all day section with open patio and access to administrations; a 90-bed transitory safe house; and a secure access to 130 productive, outfitted studio lofts for vagrants or ladies looking for perpetual lodging with administrative facilities.

The originators thought about the clients' wellbeing and prosperity in each plan choice, and utilized vitality sparing innovations, materials, and development strategies to guarantee that open assets were utilized carefully. The overall design has incorporated the usage of natural daylight, open natural ventilation, and basic passageways for each of the facilities for easy access. Furthermore, the building has its own courtyard as a socialization space.



Figure 2. Portland Oregon Innovative Homeless Service Mode

Welfare Centre For Children And Teenagers

Welfare Centre for Children and Teenagers is located at Porte des Lilas, Paris, France (Figure 3). This building was designed by architect Marjan Hessamfar. This building has an area of 5211 m². The architects created an L formed composition with divergent stepped levels in the center, providing big recreational terraces on each ground. This layered system optimizes access to daylight and open opinions at the very heart of the construction. Each ground is intended as a single unit with its own particular use. Furthermore, the building is also designed with a façade wall framed in wood with metal cladding, while columns, columns and surfaces are produced of concrete. The concrete design of the columns and columns provides the entire building a certain degree of flexibility.

The interior design of the building presents a homely feel throughout the whole building. Exterior precast concrete components are produced of white electro less cement. Therefore, the concrete is self-cleaning. This selection of self-cleaning product is essential in the fight against poor weather and pollution. In addition, white concrete, gold shutters and black ironwork are used on all houses to reinforce a homogeneous atmosphere for the entire construction. This facility is a housing emergency facility where it functions as both a shelter for children and a home for homeless individuals to feel welcomed, sheltered and cared for.



Figure 3. Welfare Centre for Children and Teenagers

PROGRAM SPACE DETAILS

For the proposed welfare rehabilitation facility at Jeddah, Saudi Arabia, the estimated gross floor area is 44500 m². Table 1 shows the space details. Based on Table 1, the zones of the rehabilitation is comprised of low cost apartments, temporary shelters, bazaar area, training centre, health centre, open space zone, and administration.

Table 1. Space details

Zone	Gross Floor Area (m ²)
Low cost apartments	27200
Temporary shelters	1500
Bazaar area	1800
Training centre	4800
Health centre	500
Open space zone	2900
Administration	5800
Total	44500

PROPOSED SITE

Proposed site: Site 1

For Site 1 (Figure 4), this site is located at AlZahra district, King Abdul-Aziz road. This site has an estimated area of 45000 m².

Proposed site: Site 2

For site 2 (Figure 5), this site is located at Al-Aziziyah district. This site has an estimated area of 48000 m².



Figure 4. Site 1



Figure 5. Site 2

SITE EVALUATION AND ANALYSIS

For this work, two sites were suggested as the construction site for the proposed welfare rehabilitation facility. Hence, to select the most suitable site for construction, site evaluation analysis was performed. The analysis was done using weighting factor (WF) was used to evaluate the site, where WF=1 is less important, WF=2 is important, and WF=3 is very important. Both sites were evaluated based on several criteria's such as site capacity, price, accessibility, visibility, services, utility, noise level, safety, demographic patterns and future development plans. Table 2 shows the evaluation results. Based on Table 2, the results showed that site 2 attained the highest score of 68 compared to site 1 with score of 59. Figure 6 shows the proposed zoning of the selected site.

Table 2. Site evaluation

Criteria	Weighting Factor (WF)	Site 1	Site 2
Site capacity	3	9	3
Price	3	3	9
Accessibility	2	4	6
Visibility	1	3	1
Services	3	6	9
Utility	3	9	9
Noise level	2	4	4
Safety	3	9	9
Demographic patterns	3	3	9
Future development plans	3	9	9
Total	-	59	68



Figure 6. Site zoning

PROJECT DESIGN

The goal of welfare rehabilitation facility is to provide a more humane environment to restore dignity and identity to homeless youth, which in turn gives these individuals the opportunity to experience the necessary psychological, physical, social and emotional security.

The building of the welfare rehabilitation facility is comprised of several zones, such as welfare center administration, health center, residential units, educational facilities, commercial facilities and cottage industry. The welfare center administration contains the lobby, admin office, hall and therapy counseling area. The health center contains clinic, daycare, pharmacy and gym. The residential units contains the low cost apartment units. The educational facilities contains training work shop area and classes.

The commercial facilities contains supermarket, stores, restaurants and cafes, open spaces, garden, recreational area and playground area. The cottage industry contains the bazaar, workshop, workstation, lab and counseling spaces. The design of the welfare rehabilitation facility is based on contemporary c-shape blocks and square shape blocks. Figure 7 to Figure 10 shows the proposed design of the welfare rehabilitation facility.



Figure 7. Overview of the welfare rehabilitation facility

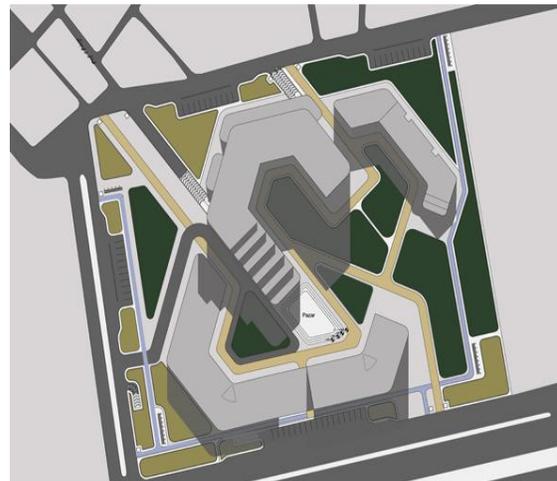


Figure 8. Top view of the welfare rehabilitation facility



Figure 9. Side view of the welfare rehabilitation facility



Figure 10. Entrance to the welfare rehabilitation facility

CONCLUSION

This work has discussed a proposal for a welfare rehabilitation facility in Jeddah, Saudi Arabia. This project proposed a facility dedicated to the social, economic, and overall health and well being of people. The main goal is to eliminate poverty from society that creates positive change for communities in Saudi Arabia. In addition, the implementation of this project will contribute to and fulfil the 2030 vision set by Saudi Arabia's government.

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