ENHANCED ASSISTED LIVING

SPRING 2018 THESIS PRESENTATION

MENGKE XING
THESIS ADVISOR: GANAPATHY MAHALINGAM
INTRODUCTION

Due to the emergence of large numbers of elderly people as the Baby Boomer generation ages and the life span extends, an aging population has become a serious issue for modern society with far-reaching economic and socio-political consequences. In developed countries, this phenomenon is even more severe. The excessive aging population will have a tremendous negative influence on these nations’ economies. These negative influences, such as an increasing public expenditure, may lead to declining labor forces, lower fertility, and an increase in age dependency and working-age to old-age ratios. If the basic mental and physical health and financial and social needs of aged people are not satisfied, the consequences of this neglect will be a dramatic increase of hardship for everyone, not just the elderly.
THE BABY BOOMER GENERATION

Nine months after World War II, Baby Boomers spread around the world. The number of babies that were born in 1946 was more than any year before: 3.4 million, 20% more than in 1945. 1946 was the first Baby Boomer year, and in 1947, 3.8 million babies were born. Not surprisingly, 3.9 million were born in 1952. In the next few years, there were about 4 million babies born each year. Until 1964, the trend of Baby Boomers gradually disappeared, but by that time there were 76.4 million Baby Boomers in the United States. The total number of these Baby Boomers accounted for 40% of the United States population.
The number of Americans ages 65 and older is projected to more than double from 46 million today to over 98 million by 2060, and the 65-and-older age group’s share of the total population will rise to nearly 24% from 15% (Aging in the United States, 2015).
The rapid evolvement of technology in medical care is a very important factor in the extension of human lifetime.

The aging Baby Boomer phenomenon has increased the economic burden and generated many political issues for human society.

We have to make this aging population’s living environment better and increase the number of supporting facilities and assisting resources in order to help aged people adapt to modern society.
How can we use architectural design to improve the living environments of aged people?
ISSUES TO TRY TO SOLVE

1. Make up for the lack of assisted living homes in the South Fargo.

2. Improve the conditions of building facilities and the management mode of assisted living.

3. Improve the detail design of assisted living space.

4. Enhance the convenience of assisted living space.
GOAL OF THE PROJECT

The goal of my project is to improve the living environment in a scientific way in order to make aged people for improve their physical and mental states.

In this project, the model I built has comprehensive medical care facilities to ensure the physical health of aged people and many activity venues to enrich their lifestyles.

The model also includes professional nursing staff to help with the medical demands of aged people.

This project has developed a new community structure to help aged people transition into a modern living style.
THE SITE

The specific location of this project is at Rose Creek, on 48th Avenue close to the Red River. Due to the expansion of the population, South Fargo needs an assisted living center to address the needs of the aging population. This site is close to the river and has beautiful scenery. In addition, this area is close to University Drive and 52nd Avenue, a walking distance that is less than ten minutes from the site. Near this location, there are churches, golf courses, Sunset Memorial Gardens, and a park surrounding this area. This site is away from the noisy downtown area, so it is very suitable for elderly people.
SURROUNDING AREA AND TRAFFIC
DESIGN PROCESS
WHY I USE THIS SHAPE?

• Get more natural light
• Make sure that each apartment has outdoor space
Residential:
17 Studio (275 sq. ft)
17 One bedroom (485 sq. ft)
9 Companion suite (755 sq. ft)

Health related services:
Physical therapy
Nurse’s Station
24-hour “alert” staff room
Rehabilitation Center
Gym
Daycare

Service spaces:
Housekeeping
Laundry
Hair cut

Community spaces:
Lobby
Dining
Kitchen
Staff Lounge
Activity area
Theatre
Non-denominational chapel
Garden

Mechanical room

Security room

Parking
ADJACENCY MATRIX

- Residential
- Health related services
- Service Spaces
- Community Spaces
- Security Room
- Mechanical Room
- Parking

Adjacency Matrix:
- adjacent
- nearby
- not adjacent
- not related
Parking
Mechanical room
Storage room
Lobby
Dining center
Activity area
GYM & Rehabilitation center
Nurse’s station
Staff lounge
Haircut store
Food store
Daycare
Housekeeping
Laundry
Office
2 Studios
3 One bedrooms
3 Suites
Nurse’s station
24 hours alert stuff room
Housekeeping
Laundry
Staff lounge
8 Studios
7 One bedrooms
3 Suites
Nurse’s station
Housekeeping
Laundry
Staff lounge
7 One bedrooms
3 Suites
Nurse's station
Housekeeping
Laundry
Staff lounge
Chapel
7 Studios
THEMES OF THE PROJECT

• Improve facilities for the convenience of the elderly.

• Create a reasonable mobile route.

• Create lighting that meets the vision needs of the elderly.
Improve facilities for the convenience of the elderly.

- The room is surrounded by handrails and there are lights under the armrests to ensure the safety of the elderly.
- Wheelchair accessible in every corner of the room.
- There are no stairs and obstacles in the room to ensure that the elderly will not stumbled.
- Put Lighting Controls at 4 ft and outlet position at 2 ft 6 inch to make it easily accessible when needed.
Create a reasonable mobile route.
Improve facilities for the convenience of the elderly.

Use accessible doors and windows

Use accessible shower room
Improve facilities for the convenience of the elderly.

In this project, I used stairlifts on all escape stairs. Elderly can get out of the building use spare motors to start these stairlifts when fire breaks out.
Create lighting that meets the vision needs of the elderly.

As people age, less light reaches the back of the eyes because the pupils decrease in size as you age, the lens inside your eye becomes thicker, and the lens scatters more light, causing objects and colors to appear less vivid. It is especially important to provide strong illumination in stairwells to prevent slip and trips. Due to physical limitations, they may be deprived of natural sunlight. So in this project, Interior light consists of ceiling lighting and lights under the handrails, even at night, accessibility can be achieved through sensor lights on the wall.
FOURTH FLOOR
DINING
PHYSICAL THERAPY & SWIMMING POOL
NON-DENOMINATIONAL CHAPEL
SECTION VIEW
QUESTIONS AND COMMENTS?

THANK YOU