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Continuing Care Retirement Community

in North Downtown Omaha

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Disclaimer

This is a study stemming from research conducted by a graduate student in partial fulfillment of the requirements of the M.ARCH and M.CRP degrees from the University of Nebraska - Lincoln. Whereas the recommendations of this study offer a smorgasbord of justifiable choices for further consideration, any design of a CCRC based on such recommendations will require the professional services of a qualified licensed Architect. The product of this study is not intended for implementation by a developer

Preface and
Acknowledgments

Preface and Acknowledgements

Preface

One may ask why a college student would be interested in the elderly cohort of the population. What led him to do a comprehensive project to analyze and develop this type of project? I am not what you would call a typical college student. I first started off by working full time in an Architecture firm that specialized in eldercare facilities. With this firm I have worked on at least a dozen independent living, assisted living, and skilled nursing projects. After working with the clients and residents for a few years I developed a passion to provide the eldercare demographic with better designed facilities. Nursing homes have been around for a long time but if you look at most nursing homes in the United States they were built around the 1960s and 70s. This building stock is where all the horror stories of “I had to put my poor grandma in a nursing home” came from. Just recently I went through that experience of possibly putting my mother, who was fighting cancer at the time, in nursing home at the age of 50 because we could not take care of her at home. My father and I looked over facilities but almost all of them were designed in the sixties and were worse than being in the hospital. The hospital looked like a five star hotel when compared to most the nursing homes.

The buildings were designed like older hospitals; very institutional. But some others and I have, since the 1960s, questioned why these facilities cannot look and feel like homes instead of institutions. Administrators have noticed that something needs to change with the existing 1960s model of a nursing home in last few projects that I have worked on with my firm. The baby boomer generation will not accept that as a standard for themselves or their parents. We are seeing more designs like the pod design, similar to the Green House by NCB Capital, that allow the residents to feel like they are still part of a community. Each pod has about 12 residents and they share common areas with each other.

Another concern for the elderly having to choose a nursing home is the quality of care. As a future architect I cannot directly control the quality of care a caregiver provides but indirectly I can make a big difference. For example, if I know the flow of activity for a caregiver I can make their job easier and give them an enjoyable environment to work in. I can also help provide a resident with the dignity they deserve by providing simple things around the facility like giving all residents a sense of privacy, providing an environment that caters to the resident, giving them a sense that they are home and not in a hospital or a nursing home.

My motivation and passion for eldercare continues and grows stronger every time I work with new clients and residents. When you see a face of resident or a client after either they move into a space or they see a rendering of a facility, words can't explain it. It's what MasterCard likes to call “Priceless.” With the baby boomers starting to reach the age of retirement, eldercare facilities are going to have to adapt to this new generation.

With this project my hope is to give design ideas for other Architects and designers to use to give the elder population a quality of life they deserve.

Acknowledgements

This book concludes a year of investigation into the Eldercare building type. This project brings to light a new emerging model for future eldercare projects in the United States. It was made possible by my mentors allowing me the freedom to research and choose what I found pertinent to the project. The quality of this project would have been impossible without the generosity and support of a variety of people.

I would like to first thank both my mentors, Dr. Brito Mutunayagam and Dean Wayne Drummond, for allowing me to be independent and to merge two disciplines into one cohesive project. Your guidance and criticism during the last nine months has pushed me to complete a project well beyond my own expectations. Also to my terminal project committee you all provided great feedback that strongly impacted the project over the course of the last nine months. To all my professors at the College of Architecture for contributing to my education, giving me the skill set essential to propel my professional career.

I would also like to thank my friends and colleagues who supported me through the last seven years of my degrees in Architecture and Community and Regional Planning. You were there when I needed a laugh and there when the times were tough to push me to do nothing but my best.

And finally, would like to thank my family for their understanding during the long hours and stressful moments of this thesis project and the last eleven years of college. I would like to also personally thank my dad and mom for being there when I needed something; you may never know how much you impacted my life and helped me through the journey of my college career.

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Executive Summary

Over the next few years North Downtown Omaha will evolve into one of Omaha's most exciting and active neighborhoods. The neighborhood already has started with the Qwest Center opening in 2003 and the new College World Series Ball Park opening in spring of 2011. There are condos, hotels and retail shops springing up all over the area. Young people, empty nesters, and seniors are moving to this area to participate in the active lifestyle, enjoy the walkability of the area, and take part in the vibrant street level activity.

A new model for a Continuing Care Retirement Community (CCRC) is on the horizon. This retirement community is designed for active seniors who want to "Age in Place" and not have to relocate to different dwelling units when their healthcare needs change. The seniors that are attracted to this type of community are looking for luxury condos with the added benefit of provided healthcare.

In order to bring the vision for this CCRC to reality, a feasibility study was completed to determine if a CCRC would be a viable option in Omaha area. The study also located a suitable site to locate this facility. The next process was to develop and design the CCRC to give the vision a form and a reality. The process displayed is comprehensive; merging the planning process with architectural design in order to create a cohesive project.

Introduction



Figure 1.1 - Active Living



Figure 1.2 - Active Living



Figure 1.3 - Active Living

There is a growing interest in the terms “Aging in Place” and “Active Living”. These both are fairly new terms that have been used to describe how a person retires and lives out the remainder of their life. The Journal of Housing for the Elderly states that aging in place is not having to move from one’s present residence in order to secure necessary support services in response to changing needs.¹ This journal states throughout its website that “Aging in Place” is growing older without having to move, including moving to a retirement community. There are other definitions for this term, most CCRCs state that “Aging in Place” starts after you move to where you want to retire and plan on spending on the rest of your life without the worry of having to move due to health concerns. There is no right or wrong way to define this term, I believe it is up to the individual to determine if they are “Aging in Place” or not. The CCRC proposed will allow a resident to age in place after they relocate to the facility/ campus.

“Active Living is a way of life where people choose to be physically active every day in their community; whether they are at school, at work, at home, or at play.

Active Living is based on the belief that regular physical activity has many lifelong benefits. It means something different for everyone. Active Living is playing with the kids, walking the dog, dancing with friends, walking at noon with co-workers, gardening, berry picking, fishing, splitting wood, cycling to work or school, or enjoying active times alone or with friends and family. (As seen in figures 1.1 through 1.3) Active Living also involves organized activities such as competing in your favorite sport or participating in an activity class of your choice.”² This is an important issue to all seniors. Active living will help keep the seniors in the “Go-gos” group as long as possible. To state an interesting fact: “93% of Boomers state that exercise is a primary way to manage healthy aging. Only 27% do it regularly, and only 21% do it infrequently. That means 53% don’t bother at all.”³

With the baby boomer generation starting to reach the age of retirement, eldercare facilities are going to have to adapt to this new generation. Sandra Timmermann predicts that, with longer life spans and changing definitions of their circles of trust, boomers will revolutionize retirement. “Boomers may spend twenty,

1. (n.d.). Retrieved December 2007, from Senior Resource.com: <http://www.seniorresource.com/index.html>

2. Healthy Eating/ Active Living. (n.d.). Retrieved November 11, 2008, from Northwest Territories Health and Social Services: http://www.hlthss.gov.nt.ca/english/services/health_promotion/health_eating_active_living/default.htm

3. (2005). Boomers and Healthy Aging Study. Natural Marketing Institute.

thirty or more years in retirement - however we define it - and it may turn out to be their longest life stage.”⁴

Baby boomers all throughout their lives have had a major affect on the “norm”. They have been driving the American economy since 1970 and still drive it today due to their size, as seen in Figure 1.4. “The boomer generation is almost as large as the previous two generations: the GI Generation and Silent Generation combined; and is 11% bigger than the Generation X segment that follows it.”⁵ This generation expects to have the best of everything and feels they are entitled to it. Helen Dennis, Chair of ASA’s Business Forum on

Five Current Generations Alive Today in the United States

GI Generation	1905-25	50,000,000
Silent Generation	1926-45	35,000,000
Baby Boomers	1946-64	78,000,000
Generation X	1965-82	65,000,000
Millennials	1983-02?	80,000,000

Source: U.S. Census 2006

Figure 1.4 - Table of Generations

Aging, stated “Aging is the most cross cutting challenge and opportunity facing American society. Clearly the boomers are driving the agenda that ultimately will serve every maturing generation.”⁶

The healthcare building type is becoming a prominent item in the eldercare realm. “Today there are more than approximately 80 million Americans over the age of 50. By 2015, that number will grow to 108 million.”⁷ The elderly population is more diverse than any other age cohort. Not all of the seniors may need complete care; some are very active and can live independently, and others may need varying levels of healthcare. This project will be designed to meet the needs of not only the seniors that need care, now but also the active adult seniors who may need care in their later years.

As a future Architect and Planner, I am interested in finding where it would be feasible to locate a new Continuing Care Retirement Community (CCRC) in the Omaha Metropolitan area. Where should a CCRC Campus be located to earn a profit and be an asset for the community that it serves? The next step will be to determine if this CCRC campus can be affordable to most seniors. Most CCRCs in the United

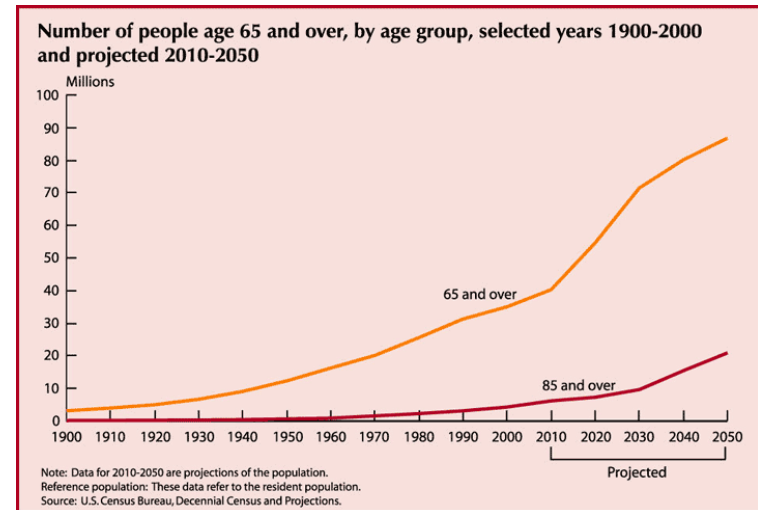


Figure 1.5 - Population Projection Chart

4. Experts Predict Top Trends in Marketing to Baby Boomers in 2007. (2006, July 6). Retrieved November 7, 2008, from Senior Journal : <http://seniorjournal.com/NEWS/Boomers/2007/7-03-06-ExpertsPredict.htm>

5. Thornhill, M., & Martin, J. (2007). Boomer Consumer. Great Falls: Linx Books.

6. Experts Predict Top Trends in Marketing to Baby Boomers in 2007. (2006, July 6). Retrieved November 7, 2008, from Senior Journal : <http://seniorjournal.com/NEWS/Boomers/2007/7-03-06-ExpertsPredict.htm>

7. <http://www.second50years.com/public/10.cfm>

8. (n.d.). Retrieved December 2007, from Retirement Living Information Center: <http://www.retirementliving.com/RLletter.html>

States are expensive to live in. Many CCRCs require a long-term contract and an entrance fee, which may range from \$20,000 to more than \$400,000 and may also include \$200 - \$2,500 in monthly fees.⁸ For a senior living on Social Security, it may be a problem for them to retire and move into a CCRC with such high cost. Under such circumstances it is important to determine if there is a sufficient number of seniors in the Omaha Metropolitan area that have the income level required to live in this facility and to age in place.

The benefit for seniors who move into a CCRC is that everyone around them has things in common with them. Most of the services like drug stores, grocery stores, etc., are typically located nearby. One reason is to allow the seniors to walk or drive a mini vehicle like a golf cart to the local stores. Some seniors may require more care as they age. CCRCs usually are comprised of independent living units, assisted living units, skilled nursing units, and some have dementia care and hospice care. Seniors can move to the appropriate unit type depending on the amount of care that they require. This is a form of "Aging in Place". This proposed CCRC Campus needs to be a facility that enables a senior to stay in the same unit through all levels of care, thereby giving the resident the sense

of "aging in place." Residents enjoy the guarantee that all their future health care needs will be met without endangering their personal financial security or that of their family.



Figure 1.6 - Senior Reflecting on Life

There are distinct differences between the levels of care required by different cohorts in a population that is aging in place. The first level of care is minimal assistance with activities of daily living (ADLs), routine health maintenance, medication provisions and review by nursing staff. These services are typically provided in the resident's dwelling unit with an optional choice of one to three meals a day. This level may be termed as Independent Living.

The next stage of the continuum of care is assisted living. The Assisted Living Federation of America defines assisted living as combining of housing, personalized supportive services and health care

designed to meet the individual needs of persons who need help with the activities of daily living (ADLs), but do not need the skilled medical care provided in a nursing home. The Activities of Daily Living (ADLs) are generally considered to include eating, bathing, dressing, getting to and using the bathroom, getting in or out of bed or chair, and mobility.

As residents age, they usually require more care. The third stage of care is Skilled Nursing also known as a rest home or nursing home. It is a place of residence for people who require constant nursing care and have significant deficiencies with activities of daily living (ADLs). Residents include the elderly and younger adults with physical and mental disabilities. This type of care is for patients who are not sick enough to need hospital care but are not able to remain at home.

The three levels of care described above are what are typically found in all CCRCs. Additional healthcare is needed for seniors suffering from dementia and/or Alzheimer's disease. But other facilities may offer extended levels of care. Dementia is defined as the loss of mental processing ability, including communication, abstract thinking, judgment and physical abilities, which interferes with daily living. Alzheimer's disease is one of the most common forms of dementia. Dementia Care is usually associated with the Skilled Nursing Care level. They both require the same care. Dementia residents, however, need special staff and resources to care for them. This represents the fourth level of health care.



Figure 1.7 - Comforting a Senior

The fifth level of care that is sometimes found in CCRCs is End of Life care. This would include Palliative care and Hospice care. Both of these usually also take place in a Skilled Nursing Facility and are not typically available in an assisted living facility due to a lack of resources and staff. Palliative care aspires to relieve the suffering and enhance the quality of life in people living with acute or chronic health conditions. In many cases there is no medical cure; just symptom management. This may include physical, psychosocial and spiritual health as it relates to the patient and family unit. And, finally, Hospice care is designed to give supportive care to people in the final phase of a terminal illness and focuses on comfort and quality of life, rather than a cure.

Classification of Eldercare Population

By classifying the Eldercare population into different tiers, it allows developers and designers to know what to expect when planning a CCRC and its location. In the following section there will be a description of each tier and key aspects to how each senior may fit into a tier.

Classification of Eldercare Population

The elder care population may be clarified under three tiers as follows: “Go-gos”, “Slow-gos”, and “No-gos”.⁹

The population cohort in the **Primary Retirement tier (Go-gos)** consists of newly retired seniors from their principal vocations and some may still be working. They are a very active group and have high expectations of future activity. The Go-gos will develop various avocations like hobbies, volunteering, education and travel. This group is generally in good health. Typically the Go-gos are empty nesters, but they still help their children financially by helping with college, down payments on a first home, or a recent wedding. This group also sometimes serves as caregivers since most of them still have parents alive who may need assistance.

The Go-gos are the most difficult to convince of a need for congregate housing for themselves. Their decision to move is typically by preference, not need. This group has the most diverse set of available options for senior housing and has more spare time.

Convenience considerations are as important to those of younger people. They prefer to catch up on things long put off by a job and family related obligations. Many go-gos are affluent, mobile, enjoy traveling, dining in fine restaurants, seek high-quality entertainment, and see themselves cashing in on their many years of productive work. A majority of this group has sufficient income and savings to enjoy a life-style of carefree living. And finally this group looks for a wide variety of goods and services to boost their self esteem and reward their sense of personal accomplishments.



Figure 2.1 - Seniors having fun

The second tier is called the **Secondary Retirement (Slow-gos)**. This group is more affected by acuity issues than are the Go-gos. The group demonstrates the broadest extremes of health, with most in their mid 70s. They are still very alert and active and may or may not be retired. Most are active in volunteer work; some even are

in their second or third careers, which often began as avocations. Their housing decisions for Slow-gos tend to be need driven. The majority of this subgroup finds the following issues as important: physical security, manageability of their residences, ready availability of



Figure 2.2 - Senior representing Slow-gos tier

health services, a small amount of conveniences, and a sense of community.

A good reason for a Slow-go to move into a CCRC is usually due to their loss of a spouse. The community can fulfill a need

for social activity and companionship. They also have ample time, and time-saving conveniences are not usually high-priorities. The slow-go group sometimes finds the latest technology and conveniences frightening or confusing. Most of people in this group own or have owned their own homes. Three out of four have their mortgages paid off, giving them a fair amount of collateral and debt free assets. This group is probably the most affluent of the 3 market tiers.

The Slow-gos have a wide range of health needs and activity levels, thus giving them a wide range of housing options like independent living, assisted living, and skilled nursing. This group seeks a balance between life-style and security-oriented elements. Most slow-gos are still active but have slowed down. They are healthy but with declining mobility. They are still engaged in many of the activities they did when they were go-gos but not with the same level of frequency or with the same endurance.

The third tier is the **Tertiary Retirement (No-gos)**. This group

is usually older retirees faced with declining health and income status. A large percentage is driven by absolute needs of assistance in healthcare and the tasks of daily living. Time saving conveniences are usually not as important since they typically have ample time. Depending on their health conditions they can choose from several types of facilities, or in some situations their family chooses for them. Some of the facility types may include independent living, assisted living, personal care (in home care), skilled nursing, and specialty units like Alzheimer's units.

Since the No-gos have decreased mobility, this group needs a greater array of mental, social, physical, and spiritual outside stimuli. The challenge to increase their dignity of daily living activities exists more with the No-gos group than with any other group. Finally, this group is the oldest of the three segments. They may find that they have a reduced income and savings with which to meet their needs.



Figure 2.3 - Senior representing No-gos tier

Assessment of Demand for a CCRC in the Omaha Metropolitan Area

Before developing any project, big or small, it is important for the developer to do a Trade Area study for their project type. This type of study will allow the developer to decide where to locate a building or campus and if it will be feasible to do so. In the following section, a Trade Area Study will be completed and an analysis will be conducted to determine if that study area will be able to justify the development of a Continuing Care Retirement Community.

The first step in the assessment of demand for a CCRC in the Omaha metropolitan area is to delineate the trade area that needs to be served. The counties of Douglas, Washington, Sarpy, Cass, Saunders in Nebraska and Pottawattamie and Mills in Iowa were selected as tentative trade area. In the United States, it was observed that residents in CCRCs will be required to move from a unit offering one level of care to other units offering different levels of care. The CCRC in the trade area is proposed to offer all of levels of care to a resident in each dwelling unit, without a resident having to move to another unit. Research and analysis on how far people would be willing to move when deciding to relocate to a retirement community in Omaha determined the selection of the seven counties above. Another factor was the one hour travel distance between the location of the resident's retirement community and the location to their children's homes. There will be other residents from outside the seven county trade area who could move into a CCRC in Omaha. This facility will allow residents to stay in their dwelling units throughout all levels of care.

Figure 3.1 shows three concentric circles drawn around Omaha at radial distances of 100, 200, and 300 miles from Omaha in the six surrounding states. There are only nine CCRCs within a 100 mile radius of Omaha. The population of people over the age of 55 for the counties in the six states within 300 miles of Omaha is mapped and displayed in Figure 3.2. Figure 3.5 takes a closer look at the data in Figure 3.2, around the Omaha location. Douglas County has the majority of the population aged 55 and over as seen in Figure 3.5.

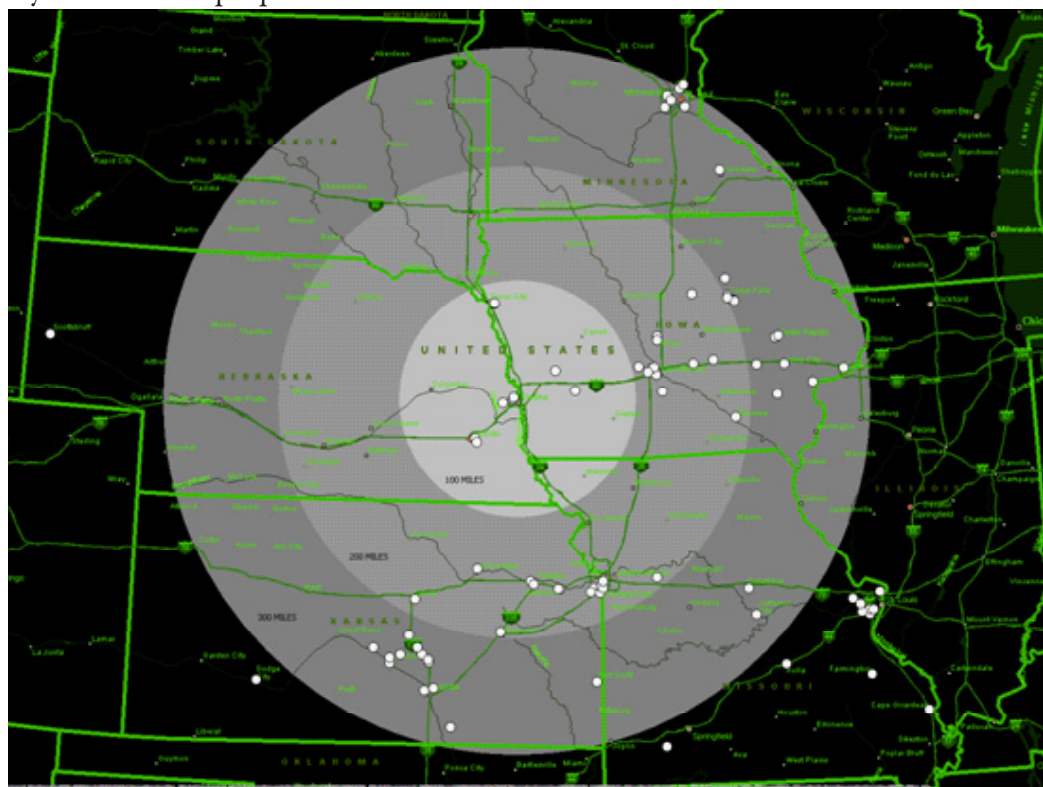


Figure 3.1 - Regional Map Showing CCRC Locations

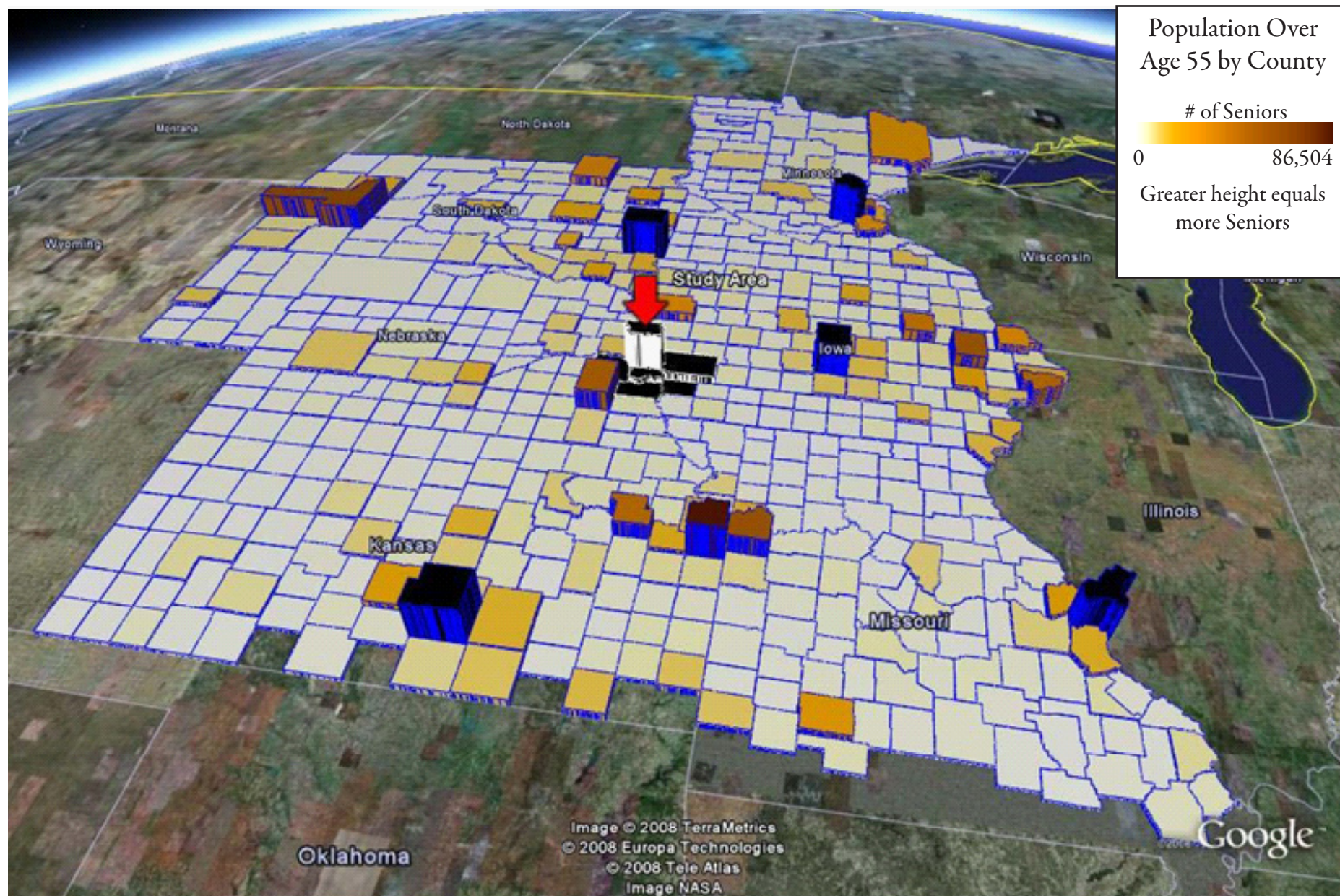


Figure 3.2 - Over Age 55 Population by county, Study Area in Black (Census 2000)

The trade area has only 3 CCRCs that are located in Douglas County. This is displayed on Figure 3.3. Figure 3.4 displays the population over the age of 65 in the market area and also includes population projections into years 2010, 2015, and 2020. The numbers projected are conservative and assume a zero net migration. The population will most likely be larger, especially if the effect of the baby boomer generation population increase is taken into consideration. Figure 3.4 indicates that there will be a projected population of 94,578 over the age of 65 in the trade area in 2010 and the number will increase to 131,671 people by the year 2020. Figure 3.6 contains income levels of the population over 65 whose income exceeds \$60,000 a year in the trade area. Figure 3.7 justifies the \$60,000 criterion that was selected as the minimum household income required by a potential resident who can afford to live in a CCRC.

Based on the analysis, it is estimated that there will be 23,496 senior headed households in the trade area. Five percent of that would be 1,174 senior headed households. The CCRC envisioned in this study is 200 units. It is very likely that 400 potential customers may consider the envisioned CCRC as their preferred choice from the group of 1174 seniors headed households identified above, thereby justifying the fiscal feasibility for locating a CCRC in the Omaha metropolitan area. Since this is a new concept for a CCRC in the United States, the trade area was only set at five percent of the potential market, in order to reduce the risk confronted by a developer. Once this concept of an "Aging in Place" CCRC becomes the model for new facilities, the market share could possibly be in the twenty percent range with more aggressive developers.

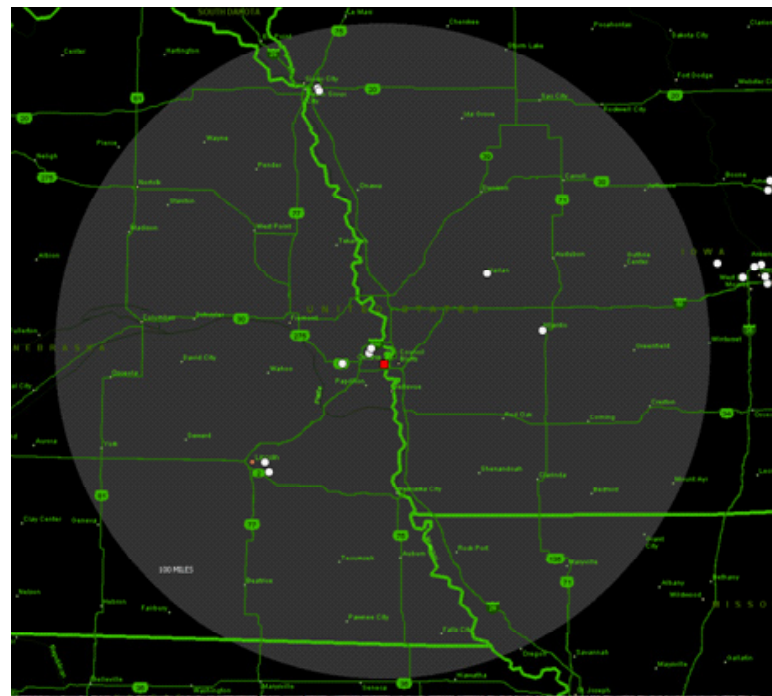


Figure 3.3 - Market Study Area, Circle represents 100 mile radius from Omaha

Gross Population - Over the age of 65

County	U.S. Census Data			Projections		
	80	90	2000	2010	2015	2020
NE	205,685	223,068	232,195	243,551	274,046	317,894
Douglas	41,483	47,333	50,795	58,003	68,940	82,939
Sarpy	2,909	4,892	8,123	12,145	15,789	19,863
Cass	2,601	2,776	3,000	3,572	4,167	4,887
Washington	1,916	2,252	2,425	2,724	3,246	3,842
Saunders	2,949	2,919	3,043	3,187	3,539	3,952
Iowa		426,106	436,213	447,740	453,614	459,654
Pottawattamie		11,056	11,972	13,083	13,676	14,295
Mills		1,812	1,836	1,864	1,878	1,892
TOTALS		73,040	81,194	94,578	111,235	131,671

Figure 3.4 - Gross Population - Over the age of 65

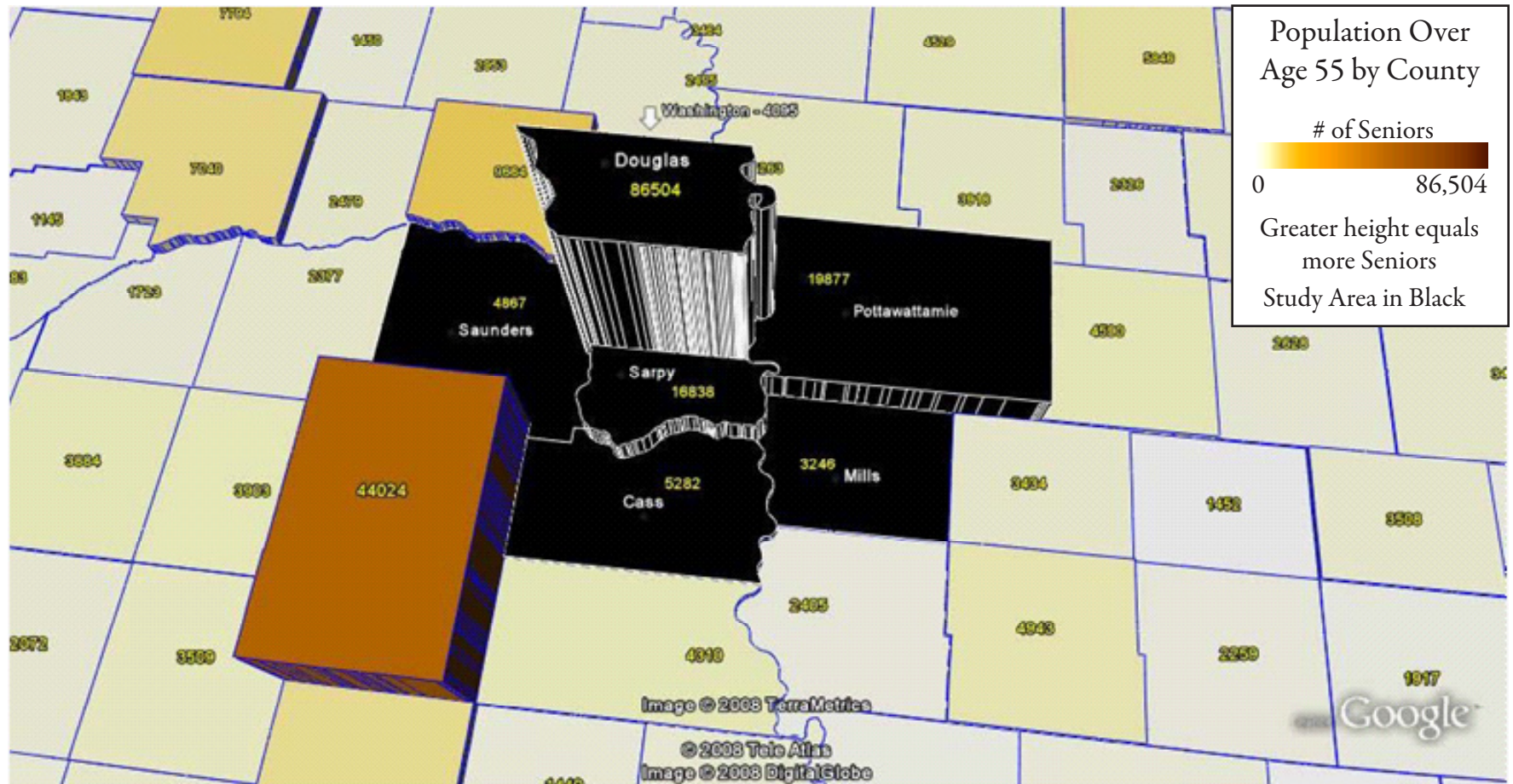


Figure 3.5 - Over Age 55 Population by county, Study Area in Black (Census 2000)

Trade Area - 7 Counties	
Household Income Level	# of Households
\$60,000 to \$74,999	7,657
\$75,000 to \$99,999	7,417
\$100,000 to \$124,999	3,682
\$125,000 to \$149,999	1,673
\$150,000 to \$199,999	1,421
\$200,000 or more	1,646
Total Households w/ \$60,000+ Income Level	23,496

Figure 3.6 - Trade Area

	Local CCRCs Average Monthly Fee	Total Annual Fee	Estimated Annual Income Needed (37% of Total)
Low	\$1,989.00	\$23,868.00	\$64,508.11
Med	\$2,167.50	\$26,010.00	\$70,297.30
High	\$2,769.50	\$33,234.00	\$89,821.62

Figure 3.7 - CCRC Fee in relation to Annual Income Needed

In conclusion, the assessment of demand for a CCRC in the Omaha Metropolitan Area showed that there is a need for a CCRC within the City of Omaha. Even with the conservative numbers used in this study there are an abundant number of senior residents that could boost the demand for such a proposed facility. This envisions future growth when the “Aging in Place” CCRC building type becomes a new model for future development of Retirement Communities in the United States.

Goals and Objectives

Mission Statement

To create a residential environment that provides a facility, space and support features necessary for all levels of care that will allow a resident to “age in place” in the “NoDo” urban setting.

Goals and Objectives for the Project

Goals in Red, Objectives in Black

• Find a Site located in the Omaha Metropolitan Area.

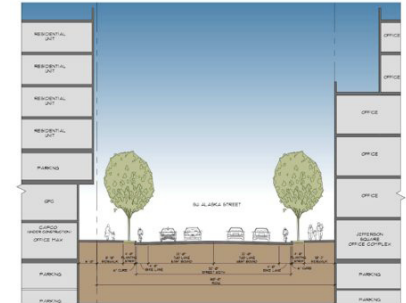
- Site should be in an urban setting.
- Space required for a new CCRC is determined by using Trade Area study and height restrictions to calculate how much area will be needed for a facility.
- Location characteristics of a site that are suitable for a CCRC:
 - Zoning requirements
 - Access needed
 - Height restrictions
 - Setback requirements
 - Parking requirements
- The location meets the following Infrastructure Needs:
 - Water
 - Sewer
 - Storm Sewer
 - Electricity
 - Telecommunication Wiring
 - Cable
 - Public Transit
- Residents should have access to a majority of these services:
 - Commercial Development
 - Beauty Shops/ Barber Shops
 - Grocery Stores
 - Retail
 - "Niche Shops"

- Restaurants
- Drug Store
- Recreational Business
- Community Events/ Entertainment
- Sports and Recreation
 - Walking Trails/ Paths
 - Pedestrian friendly urban area
 - Parks
 - River/ Lake Access
 - Nature/ Bird Sanctuary
 - Bike Trails/ Paths
- Community Facilities and Services
 - Churches
 - Schools
 - Healthcare Facilities
 - Clinics/ Geriatric Specialties
 - Dentistry
 - Library
 - Community Center
 - Emergency Services

• Find a Site which has the capacity to accommodate a CCRC with the following attributes:

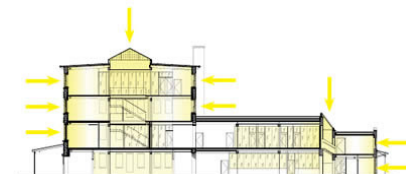
- 200 dwelling units
- 400 potential residents, who are 65 and over whose income exceeds \$60,000

- **The project should provide a direct, simple and functional circulation system for the residents, staff and visitors.**
 - Major pedestrian corridors between parking and the facility should be visually appealing and protected from the elements.
 - Major paths should accommodate the full range of handicapped users.
 - The neighborhood should be walkable and pedestrian friendly.
- **The project should possess a soothing and restful character, similar to that of a home.**
 - Spaces should provide adequate visual stimulation without being distracting.
 - Institutional infrastructure shall be hidden from public view especially along public circulation corridors.
- **The project should ensure adequate security as needed for peace of mind.**
 - Security measures should be set in place to protect residents who have mental deficiencies.
 - Entry into residential and staff corridors should be monitored and regulated.
- **The project should encourage local design standards to be incorporated into the design.**
 - The proposed building facade should be compatible with local area facades.
- **The project should promote health and happiness.**
 - Public and residents shall have access to outdoor and indoor gardens.
 - Active Living principles shall be followed.
 - The facility shall promote socially interaction among residents.
- **Every resident shall have direct access to daylight.**
 - Each resident shall have direct access to daylight at their choosing.
- **The project should give the residents a sense of place.**
 - Design of space should give residents a sense of belonging and identity.



<http://westseattleblog.com/blog/wp-content/uploads/2008/09/potentialbuildout.jpg>

Figure 4.1 - Walkable Friendly Neighborhoods and Mimic Area Facades



<http://green.harvard.edu/theresource/new-construction/design-element/indoor-environmental/images/daylight.jpg>

Figure 4.2 - Direct Access to Daylight

Site Selection

The site was first selected that fulfilled the majority of goals and objectives stated in the previous section. The selection process is described below.



Figure 5.1 - Panoramic Photo of Site and Surrounding Area - View looking North

Photo by HDR, North Downtown: Omaha's New Urban Neighbourhood Site Location Marked by Jesse McConnell.

The site is located in Omaha, Nebraska in the North Downtown Area. The Site is between Webster street on the south and Cuming Street on the North. And is bound by 14th Street on the East and 15th Street on the West. The site is approximately 3.93 acres.

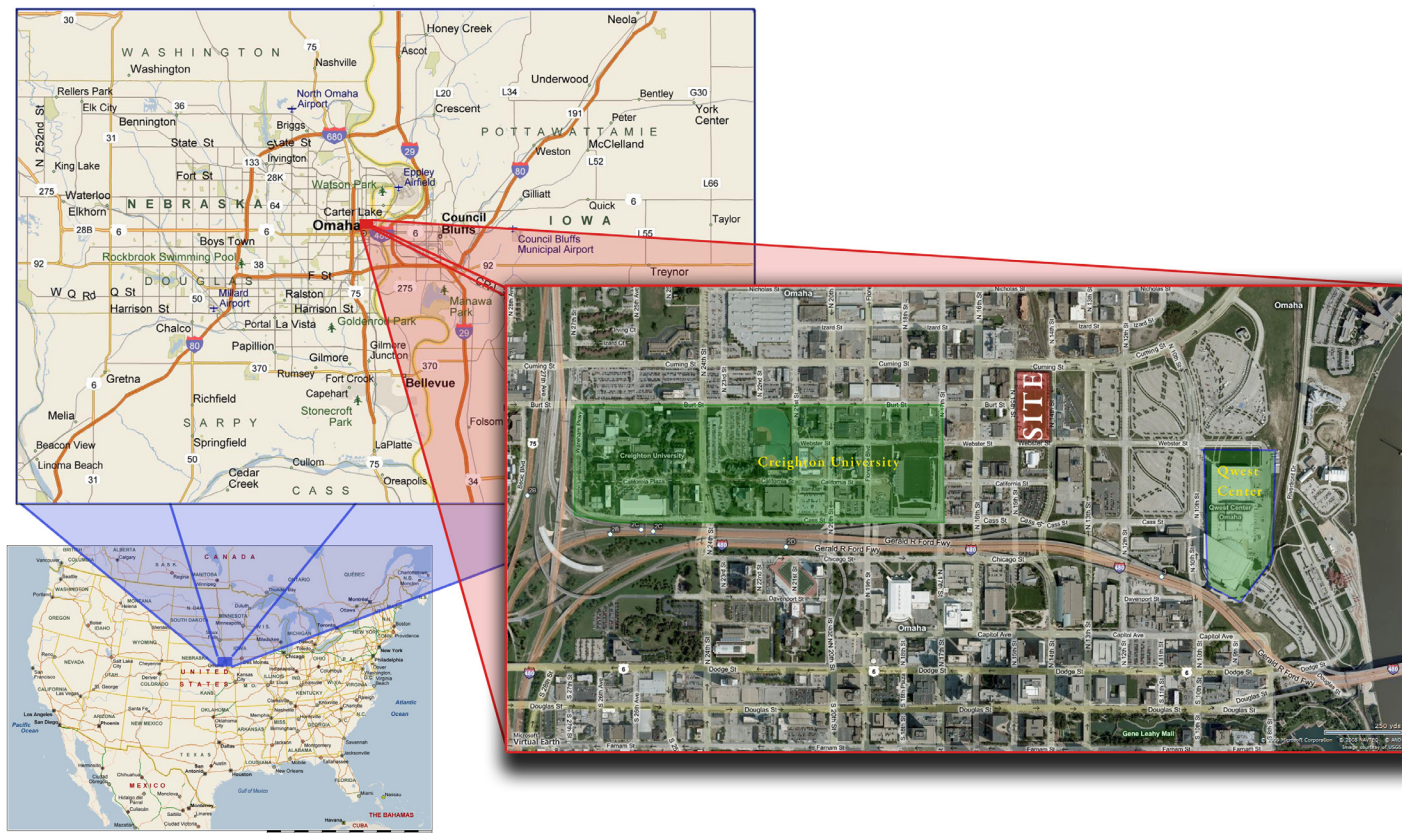


Figure 5.2 - Location and Map of Site

This site is located in a redeveloping area in Omaha as shown in Figure 5.3. This map was created by HDR for the North Downtown New Urban Neighborhood Study and will be referred to throughout the project. Since the Qwest Center was built in 2003, there has been a spur of hotel and condominium developments in the area. Recently, a new College World Series Ball Park is being installed with a scheduled opening in 2011. More businesses and residents are moving in, making this a great location to locate a CCRC. This site offers a majority of the services and amenities that a CCRC requires.

With this North Downtown Area developing at a fast pace, there are weekly changes to the area. The dynamics of change in the locality were constantly in a state of flux, and the author had to impose a time freeze constraint for purposes of conducting this study. The freeze date was set as Oct 1, 2008. Changes occurring in the locality after that date were not considered.

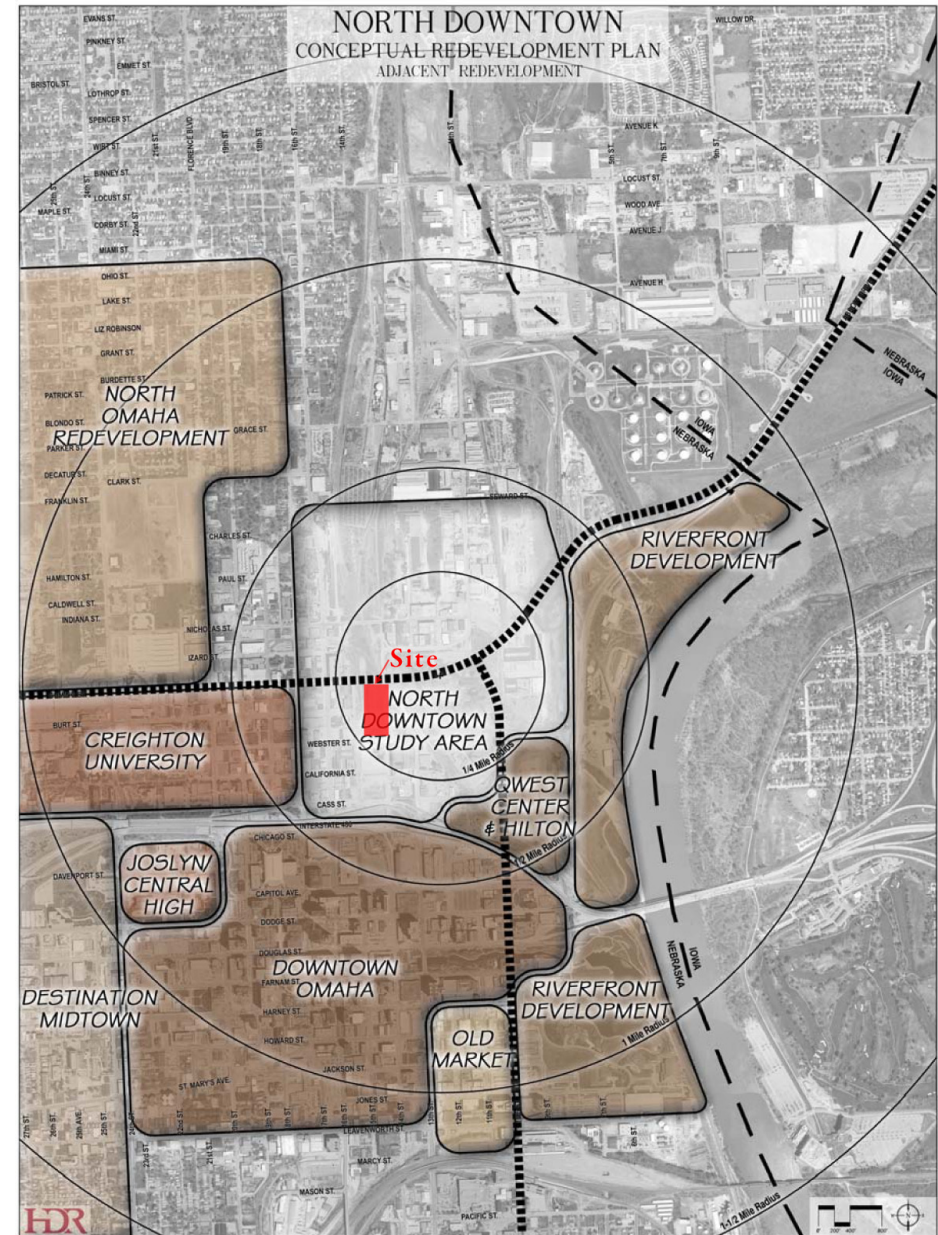


Figure 5.3 - Redevelopment Plan for the Area adjacent to the Proposed Site

Map by HDR, North Downtown: Omaha's New Urban Neighbourhood
Site Location Marked by Jesse McConnell.

Site Analysis

The previous section selected the location for the proposed CCRC which was considered to have met the majority of goals and objectives proposed earlier. It is critical that such selection has to be validated for suitability. The site analysis that follows is conducted to provide the validation for suitability.

A report reference in Analyzing Seniors' Housing Markets was published in 2000 by Fitch, Duff & Phelps, and considers proximity to services and places of interest, ease of accessibility, and degree of visibility as key factors in site suitability. A similar approach has been adopted in the site analysis that follows.

Site Analysis

The site selected consists of two parcels located between Cuming Street on the north and Webster Street on the south and between 14th Street on the east and 15th Street on the west. When HDR completed the North Omaha Downtown Study, both parcels were zoned HI - Heavy Industrial as seen on Figure 6.1. Right before the “time freeze” mentioned earlier, the eastern parcel was rezoned to commercial and the western parcel remained as Heavy Industrial. The city of Omaha zoning map has not been updated to reflect the zoning change, mentioned above. The Future Land Use Plan for 2040 contained in the 2007 Omaha Comprehensive Plan shows this area zoned as Heavy Industrial. The City of Omaha is current working on a new masterplan for the North Downtown area and it is expected that the future land use and current zoning will eventually be updated. HDR’s North Downtown study recommends that the city initiate the rezoning of the areas zoned HI (Heavy Industrial) and GI (General Industrial) to CBD (Central Business District) or DS (Downtown Service). This was suggested to proactively ensure that a conventional development pattern (i.e. suburban style big box retail) does not occur within the North Downtown area.

CCRCs have multiple uses located on the same campus or in the same building. CCRCs can be treated as a residential or institutional land use, which frequently results in the need for amendments to existing zoning codes or variances. An evaluation of a site’s suitability for use as a

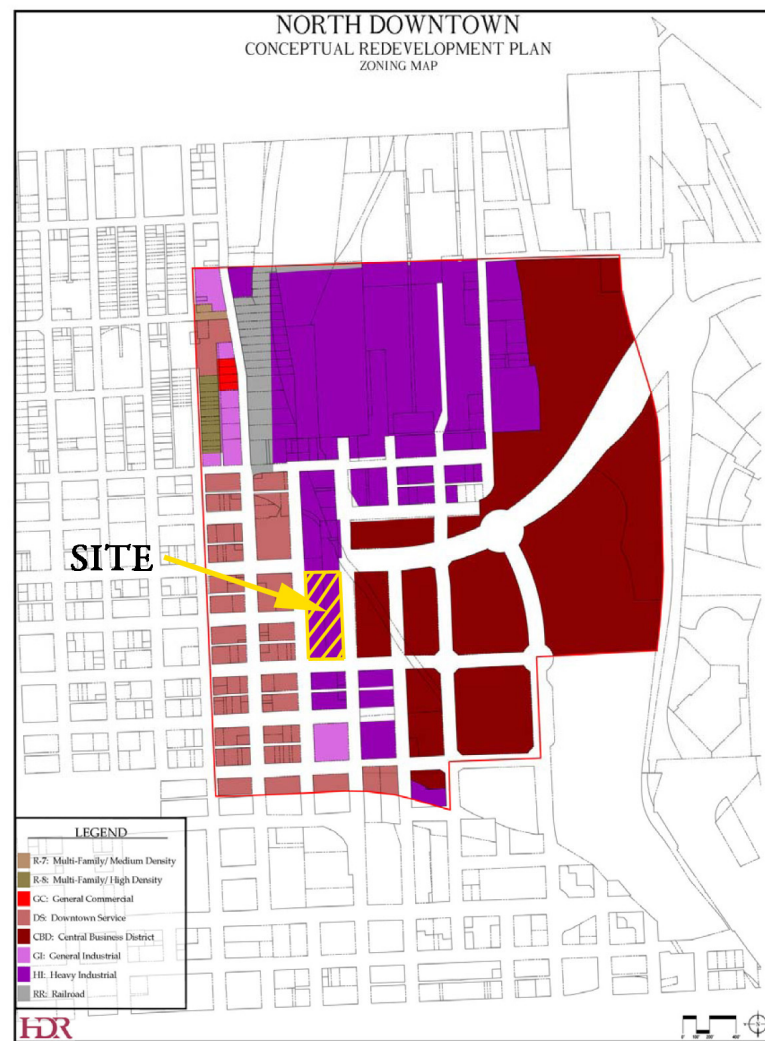


Figure 6.1 - Existing Zoning Map

CCRC must consider whether appropriate zoning is already in place. If not, approval for a zoning change will be required.

Two key informants (practicing planning professionals from Omaha, whose identities are maintained anonymous) were asked for advice on how to address the issue of zoning change to permit the location of a CCRC in the North Downtown Area in the context of current zoning codes referenced in Appendix B.

The first of two suggestions was to create a PUD overlay district for the site, allowing the developer flexibility of design and innovation. During research of the Omaha Zoning Code Sec. 55-583 PUD district there are some development regulations that limit the use of this option in an urban downtown setting. PUDs are only permitted in underlying base districts that allow a PUD (Sec. 55-585(a)). And also as stated in Sec. 55-586 (b) the maximum building coverage shall be 60 percent. The urban design guidelines recommend “zero setback” for the North Downtown Area according to HDR. This is in conflict with the prescribed building coverage requirement in Sec. 55-586 (b) of the Omaha Zoning Code.

The second suggestion was to rezone the parcels as recommended in the HDR North Downtown Study to CBD (Central Business District). The CBD (Sec. 55-422) is designed to provide appropriate development regulations for downtown Omaha. This zoning ordinance allows for mixed use and is strongly encouraged. An assisted living and institutional living are not listed as a permitted use; therefore, the developer will need to request a variance to be able to build a CCRC on this site. The positives about the CBD zone are that there are no height restrictions, lot width restrictions, or setback requirements. Also, a 100 percent coverage of the lot is permitted. The zoning also works to the developer’s advantage when it comes to floor

area bonuses in Sec. 55-428. Floor area bonuses encourage certain development features that produce public benefits and further planning objectives for the central business district.

The recommendation of this study is that the developer should pursue the second suggestion necessitating a variance to build a CCRC permitting institutional living.

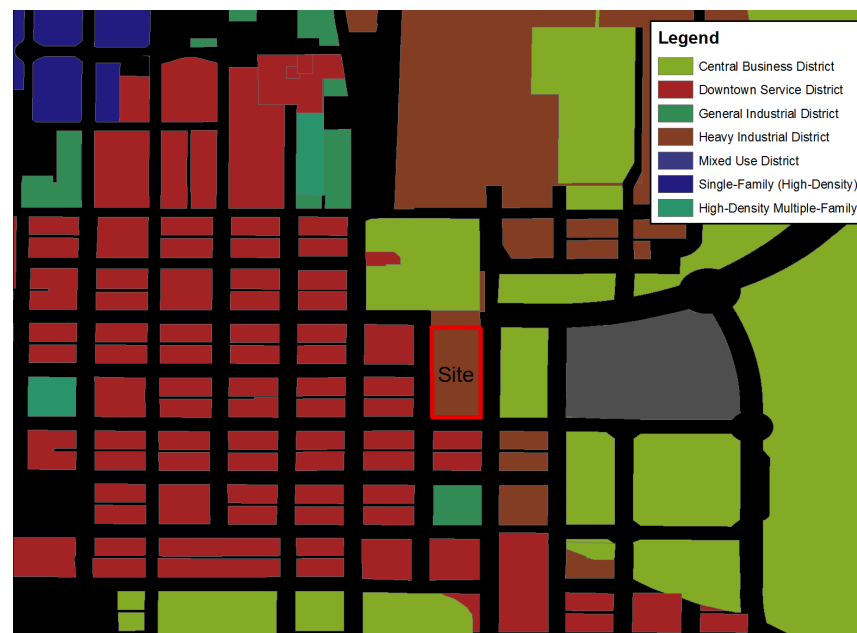


Figure 6.2 - HDR's Proposed Land Use Map

Transportation is very important to seniors' housing projects. There should be easy access to transportation systems, both public and road transportation. Omaha is proposing a streetcar line that will provide the CCRC with public transportation to shopping, medical facilities, and entertainment. There is also Omaha's Metro bus line that will need to provide transportation to and from the facility. The MAT Bus line has five routes that come within a half mile of the proposed site. The five bus routes are shown in the map in Figure 6.3.

The site location of the CCRC facility provides residents and staff direct access to public roads with multiple access points to the Interstate system. The local Interstate system includes Interstate 80, Interstate 480, and North Freeway (Highway 75 and Kennedy Freeway) and with connection to Interstates 680 and 29. Cumming Street is to the north of the CCRC site which provides an arterial access to I-480 to the west and Eppley Airport to the east. Webster Street is to the south of the site and is proposed to be a pedestrian street as per the HDR North Downtown Plan. Finally, 14th Street on the east and 15th Street on the west provide access to Interstate 480, which will connect to Omaha and Council Bluffs.

Streets are important to a CCRC for another function that most people don't think of, but marketing is a very important aspect of a CCRC and its survival. When CCRCs are located away from major roads, people do not see the facility when they drive by. These drivers may include potential clients or family members or friends of such clients. Facilities located on main thoroughfares have a sense of self marketing. As mentioned in Analyzing Seniors' Housing Markets, according to Assisted Living Federation of American (ALFA) provider survey in 1999, nearly 11 percent of residents first become aware of the assisted living community by driving past such communities.

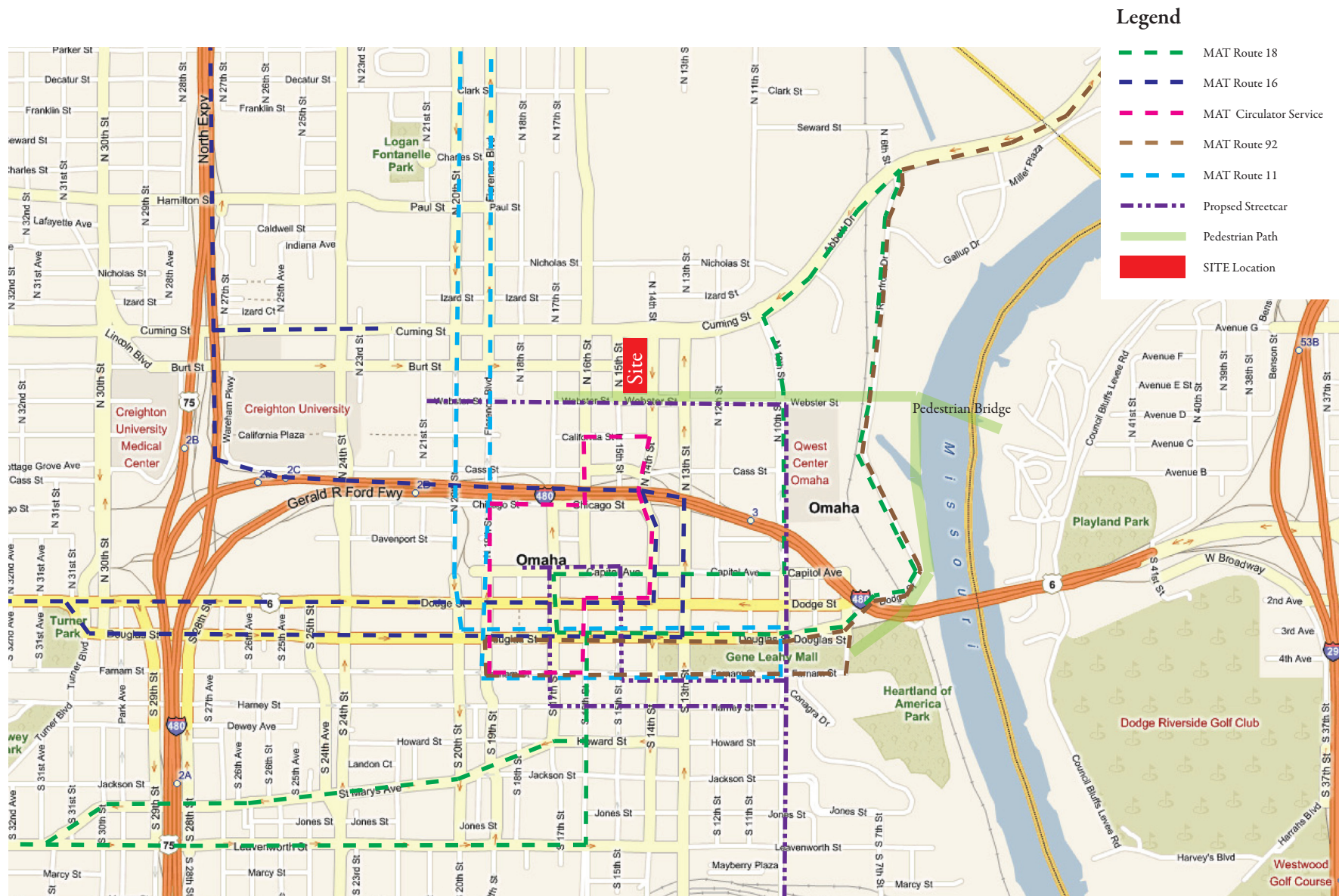


Figure 6.3 - Access to Current MAT Bus Routes, Proposed Streetcar and Pedestrian Corridor

Hospitals

H = Hospital

Hospitals are an important service for a CCRC and most of the residents will need some level of healthcare or emergency service during their tenure at the CCRC. Creighton Medical Center is located within one mile of the selected site. A total of six hospitals are located within an eight mile radius from the site. They provide healthcare and emergency services that residents will need.

Left: 1 mile detail level
Right: 6 mile detail level

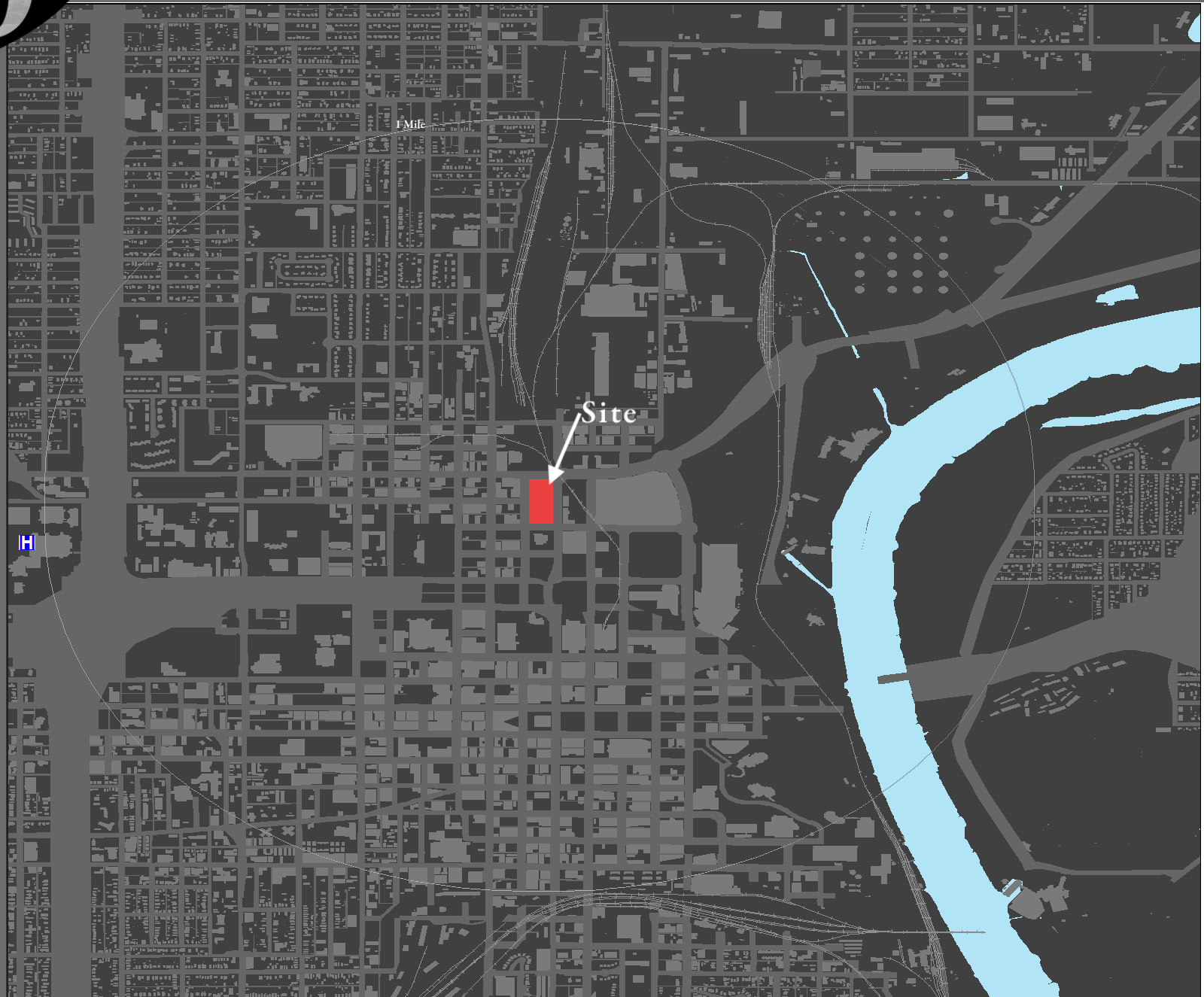


Figure 6.4 - Proximity to Hospitals - 1 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

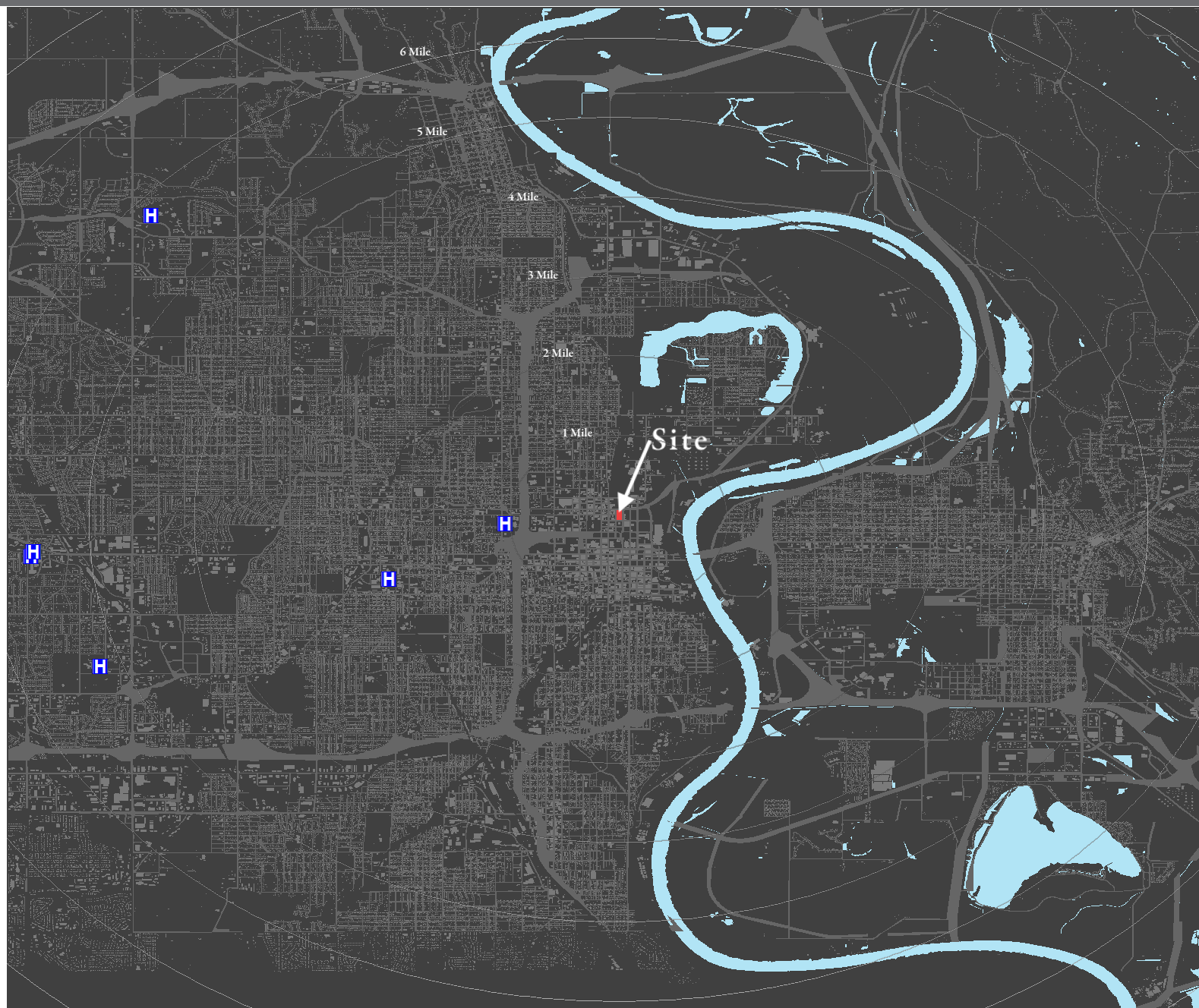


Figure 6.5 - Proximity to Hospitals - 6 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

Clinics

+ = Clinic

Close proximity to medical clinics are important to the residents of a CCRC. As seniors age, they typically have to visit a clinic more frequently. There are at least eight clinics within a one mile radius and 26 clinics within a two mile radius of the proposed site. As such clinics are accessible within walking distance or short driving distance from the proposed site.

Left: 1 mile detail level

Right: 2 mile detail level

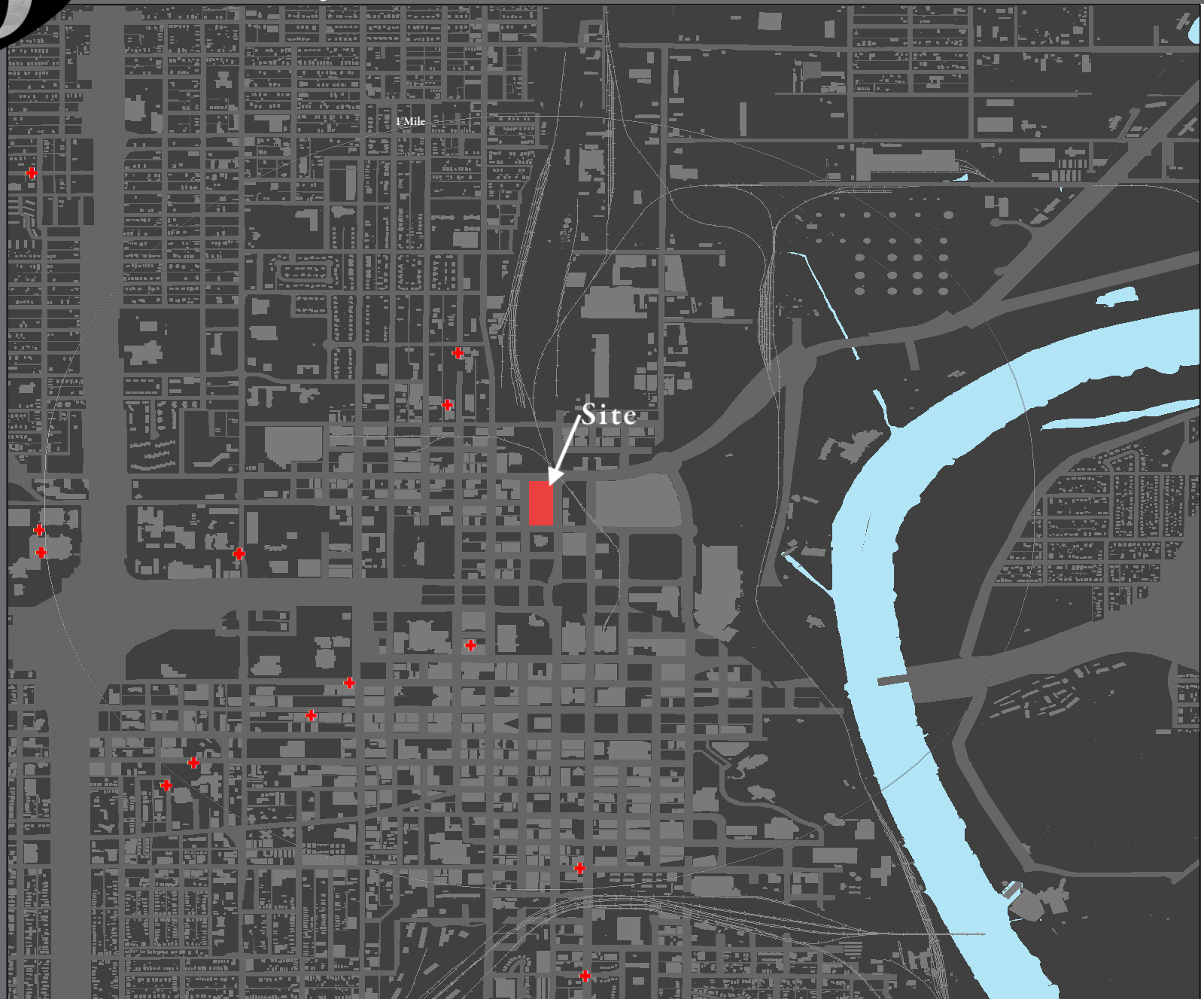


Figure 6.6 - Proximity to Clinics - 1 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

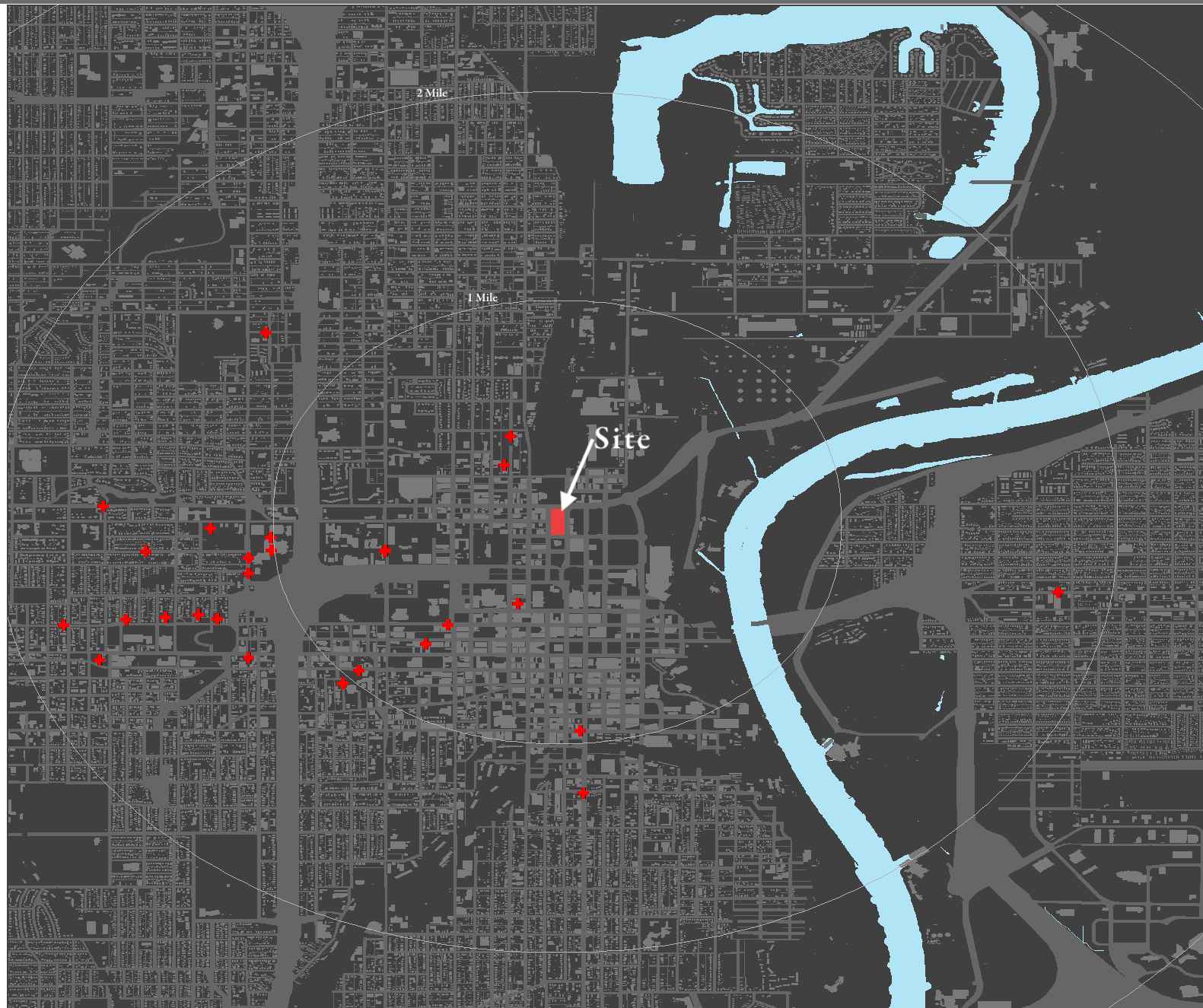


Figure 6.7 - Proximity to Clinics - 2 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

Pharmacy

▲ = Pharmacy

There are two pharmacies located within a mile radius and six pharmacies located within a two mile radius of the proposed site. As such pharmacies are accessible within walking distance or short driving distance from the proposed site.

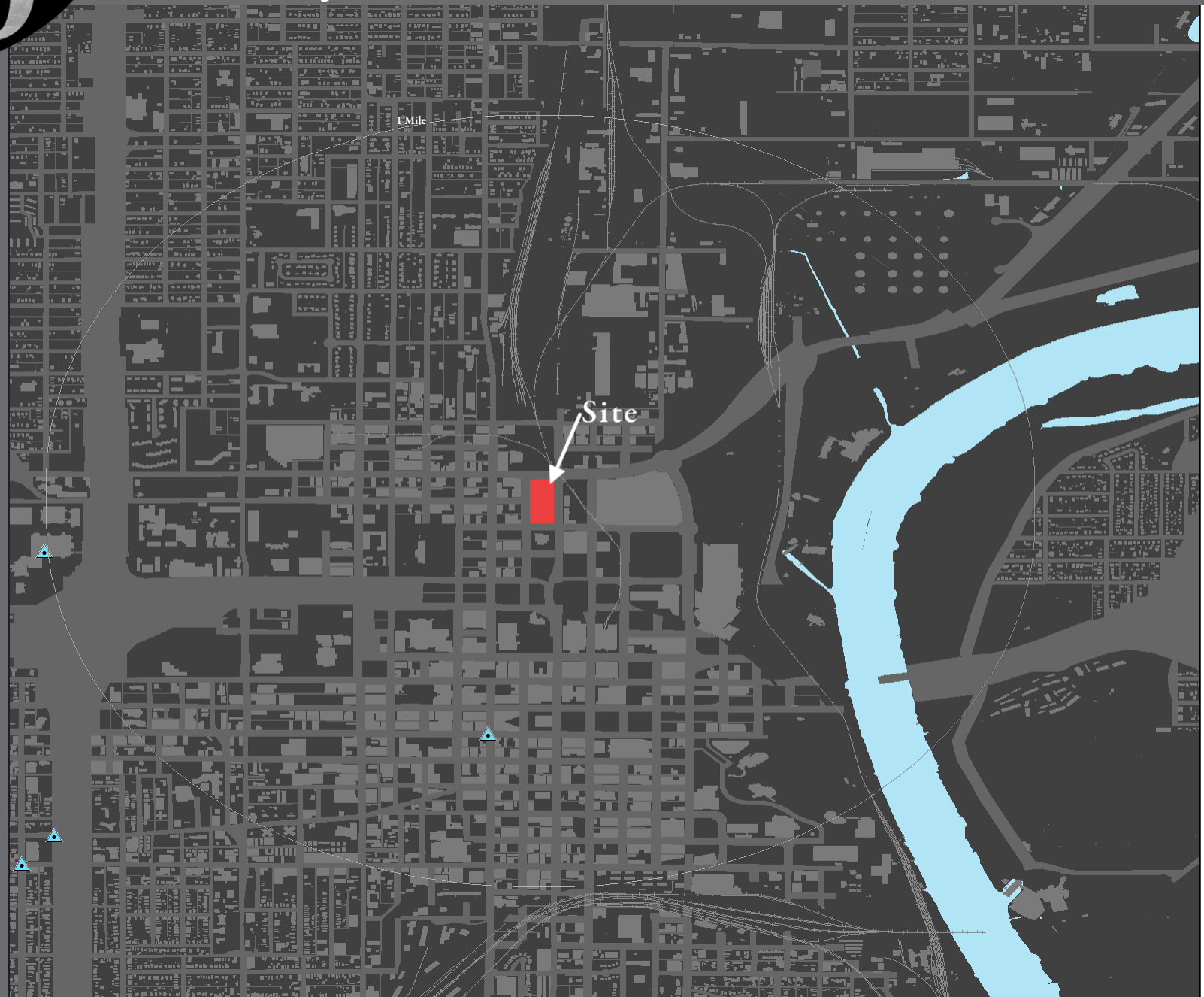


Figure 6.8 - Proximity to Pharmacies - 1 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

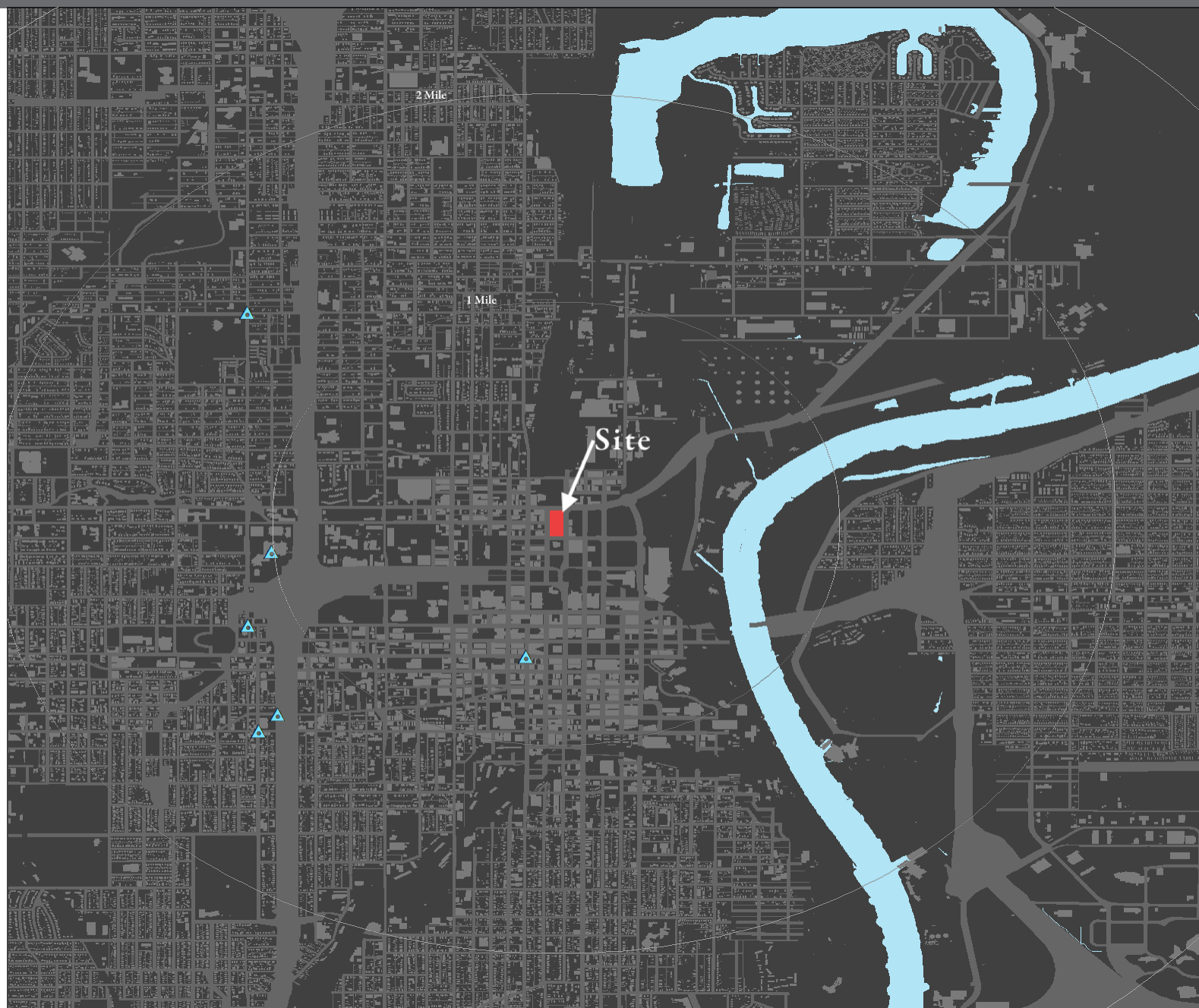


Figure 6.9 - Proximity to Pharmacies - 2 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

Site Analysis

Churches

 = Church

There are numerous churches located within a mile and a two mile radius of the proposed site. As such churches are accessible within walking distance or short driving distance from the proposed site. For many Seniors, their religion is very important to them. Spiritual health is just as important as a residents' physical health.

Left: 1 mile detail level
Right: 2 mile detail level

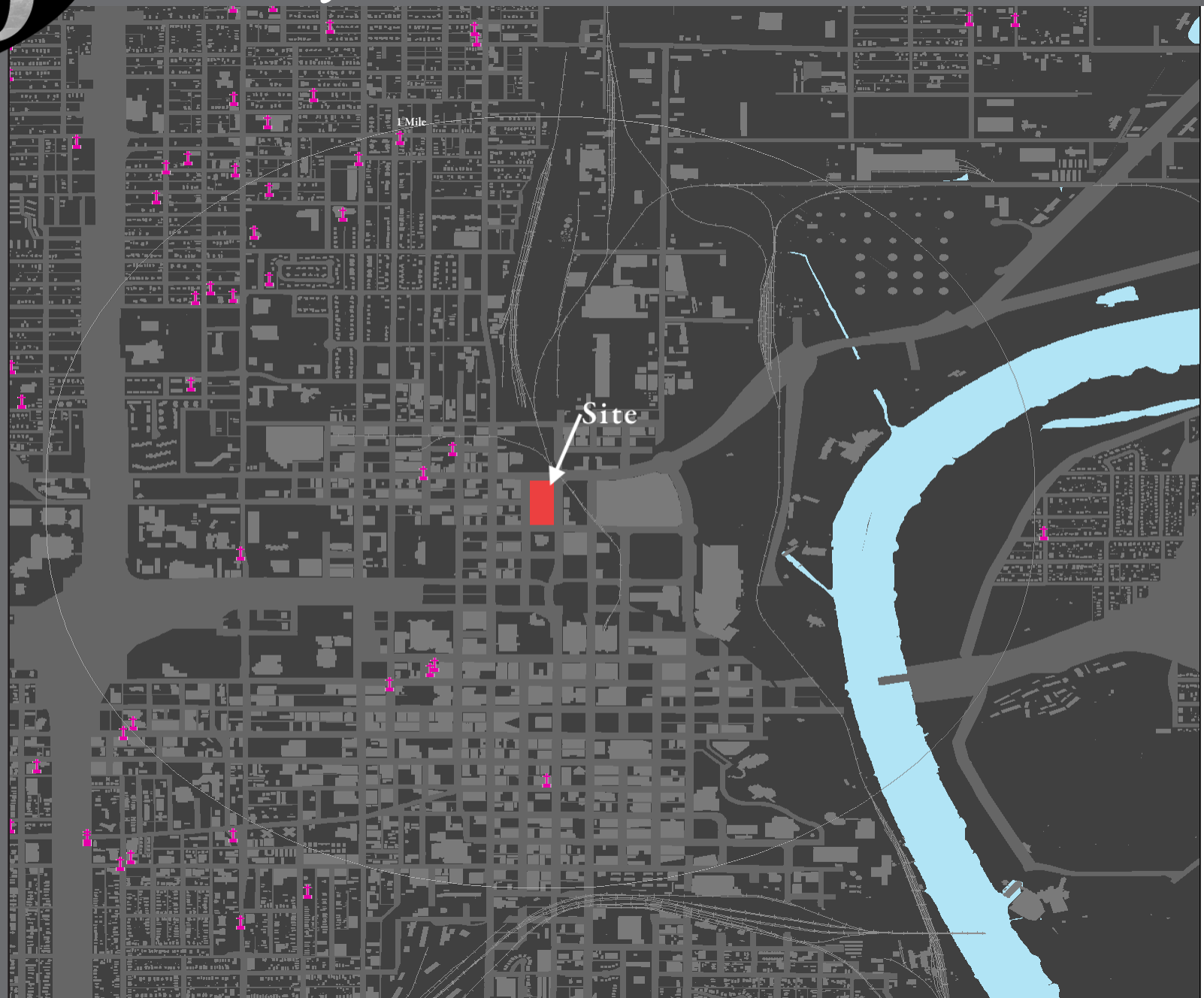


Figure 6.10 - Proximity to Churches - 1 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

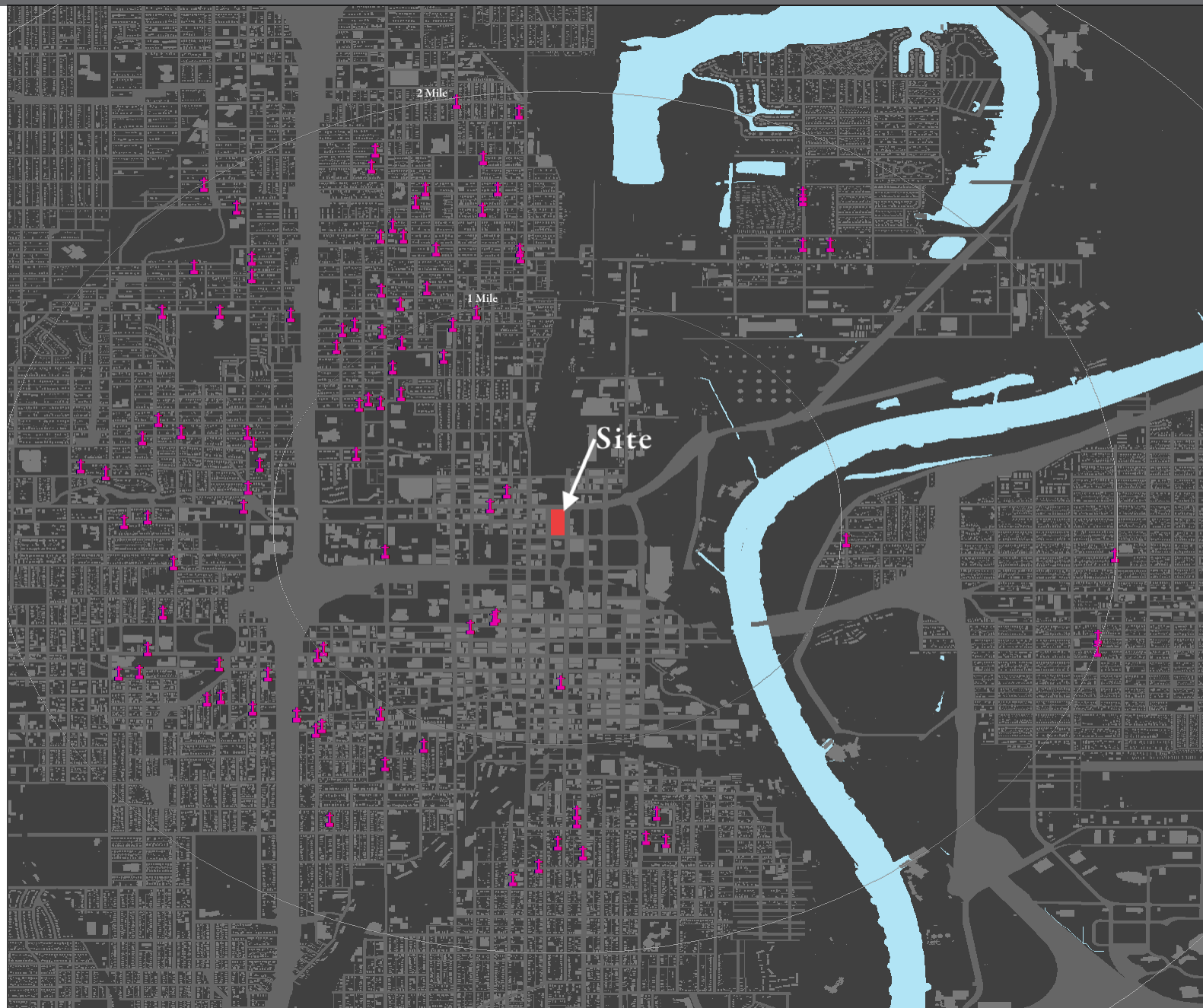


Figure 6.11 - Proximity to Churches - 2 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

Restaurants

● = Restaurant

There are numerous restaurants located within a mile and a two mile radius of the proposed site. As such restaurants are accessible within walking distance or short driving distance from the proposed site. A number of new restaurants have also been proposed in the North Downtown Area redevelopment proposed by HDR. Residents will find the availability of multiple choices for dining to be a very attractive feature of the area surrounding the proposed CCRC.

Left: 1 mile detail level
Right: 2 mile detail level

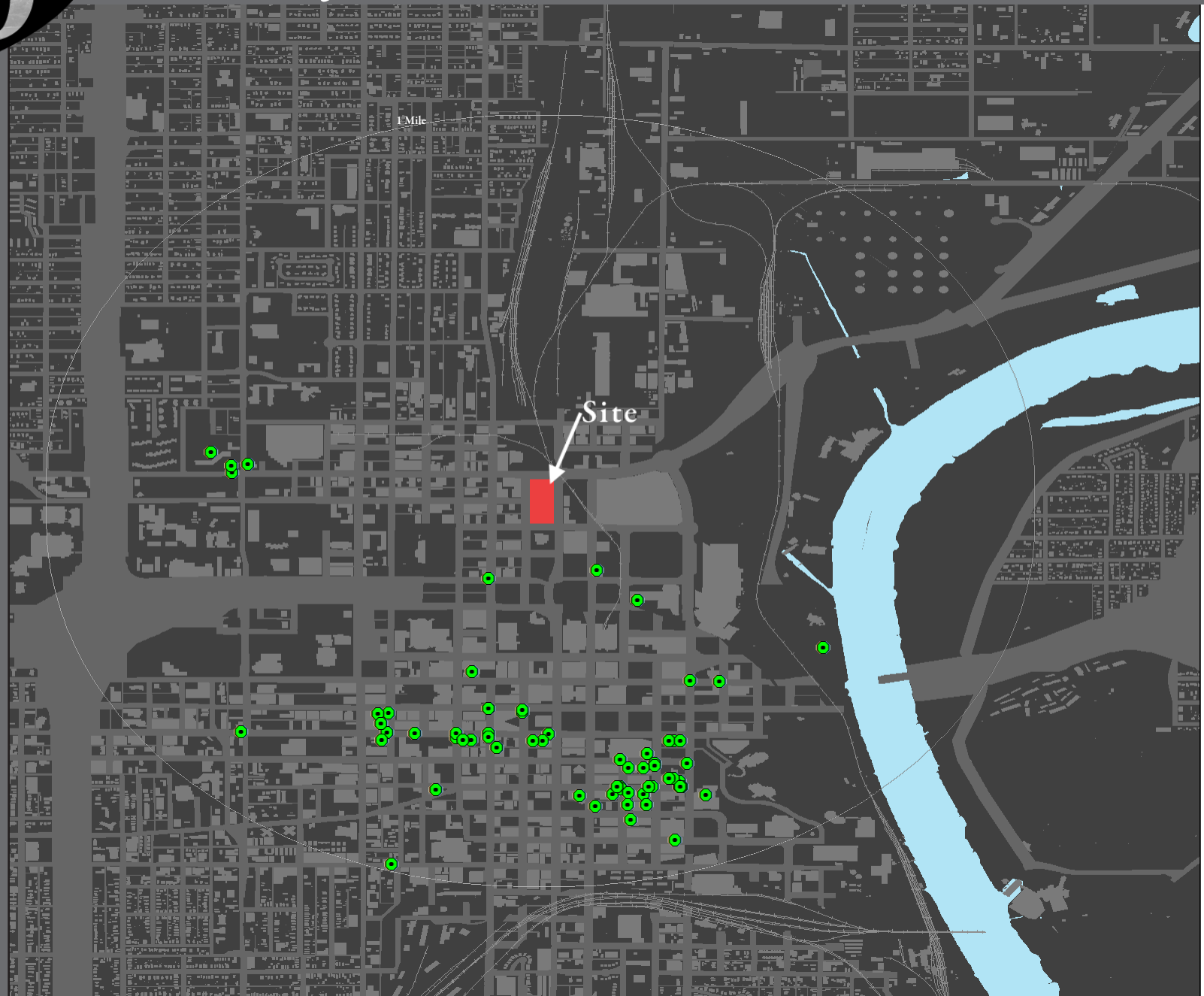


Figure 6.12 - Proximity to Restaurants - 1 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

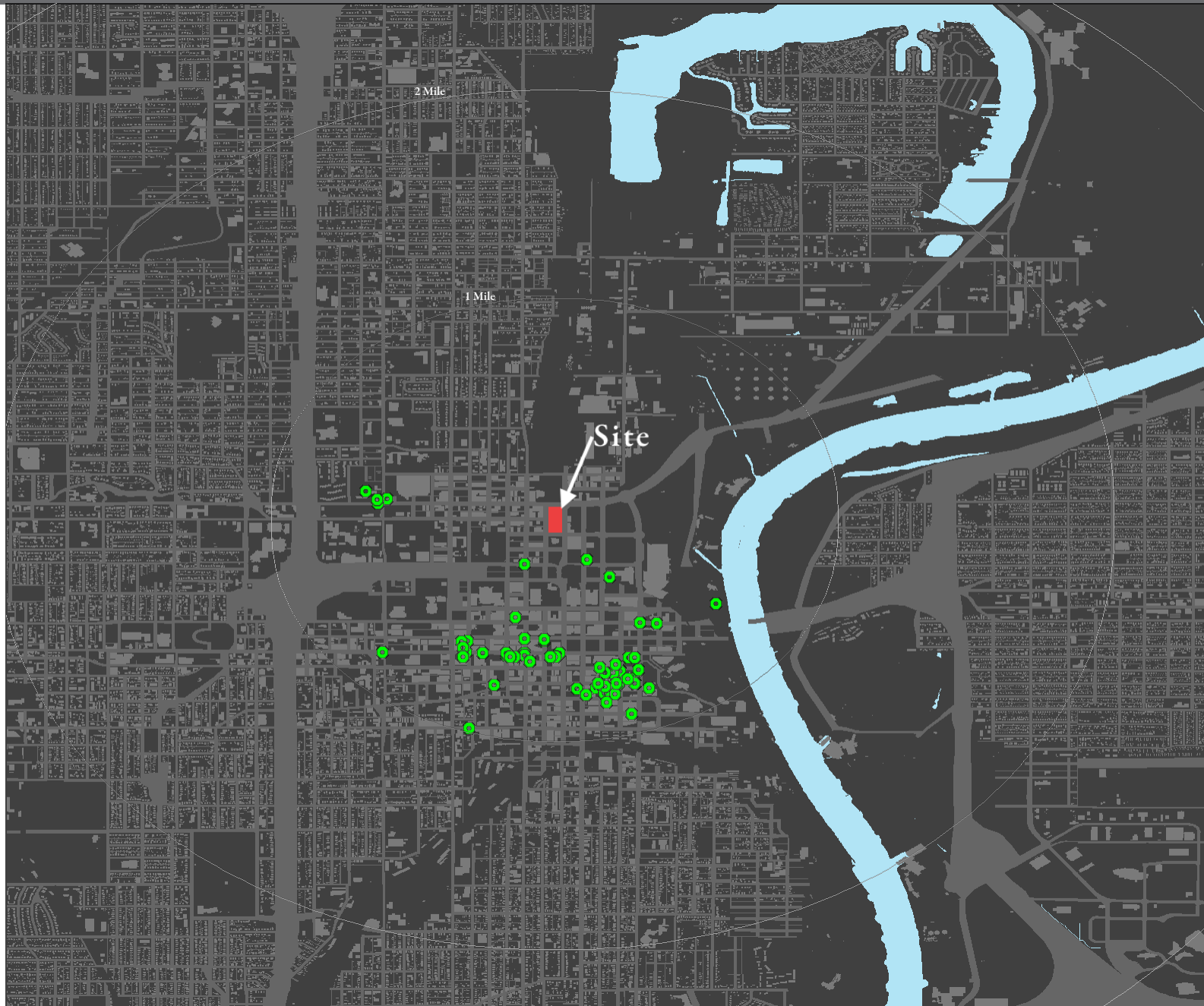


Figure 6.13 - Proximity to Restaurants - 2 Mile Detail Level

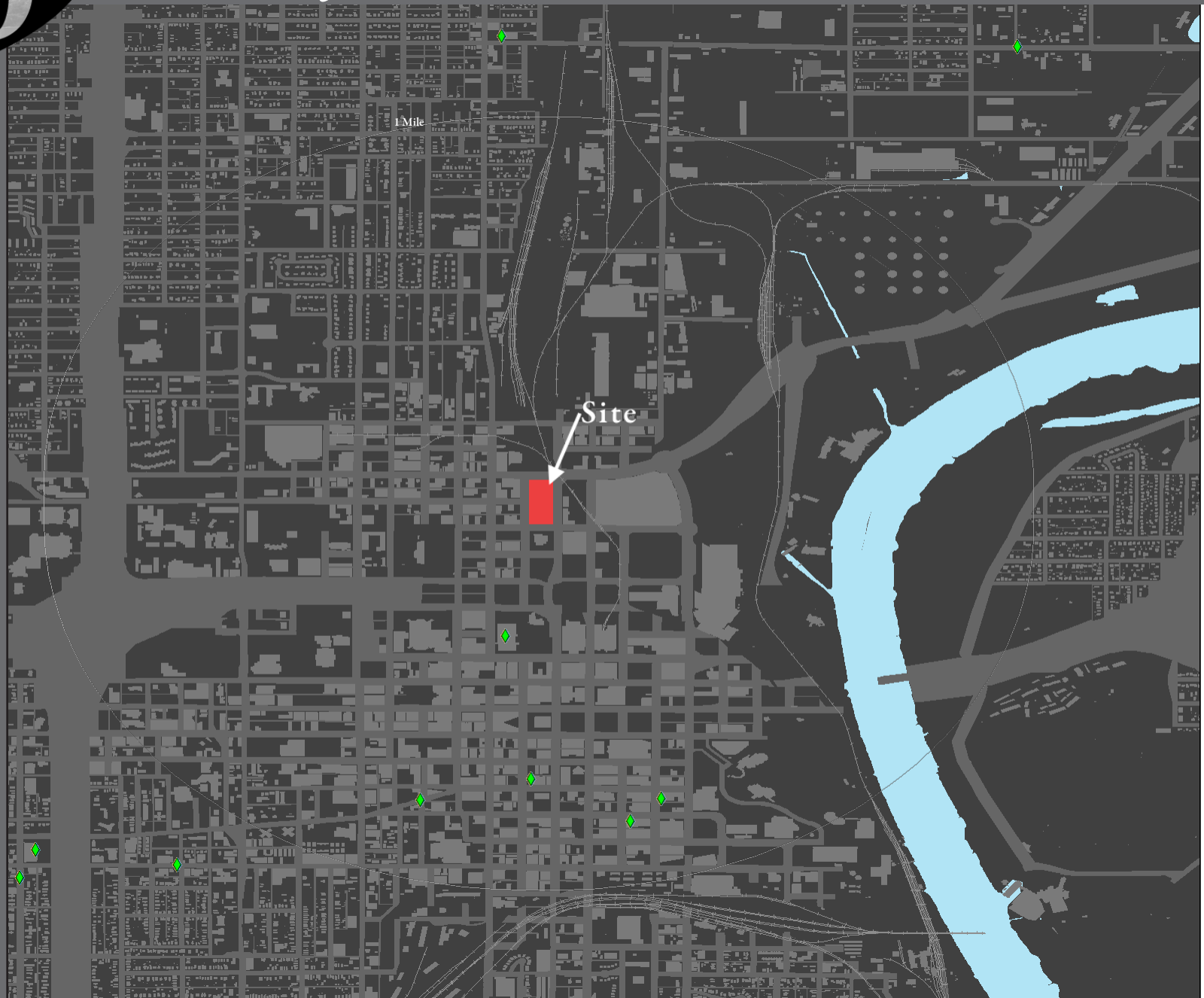
Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

Site Analysis

Grocery Stores

◆ = Grocery Store

There are 5 grocery stores within a mile and 12 within a two mile radius of the proposed CCRC site. As such grocery stores are accessible within walking distance or short driving distance from the proposed site.



Left: 1 mile detail level
Right: 2 mile detail level

Figure 6.14 - Proximity to Grocery Stores - 1 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

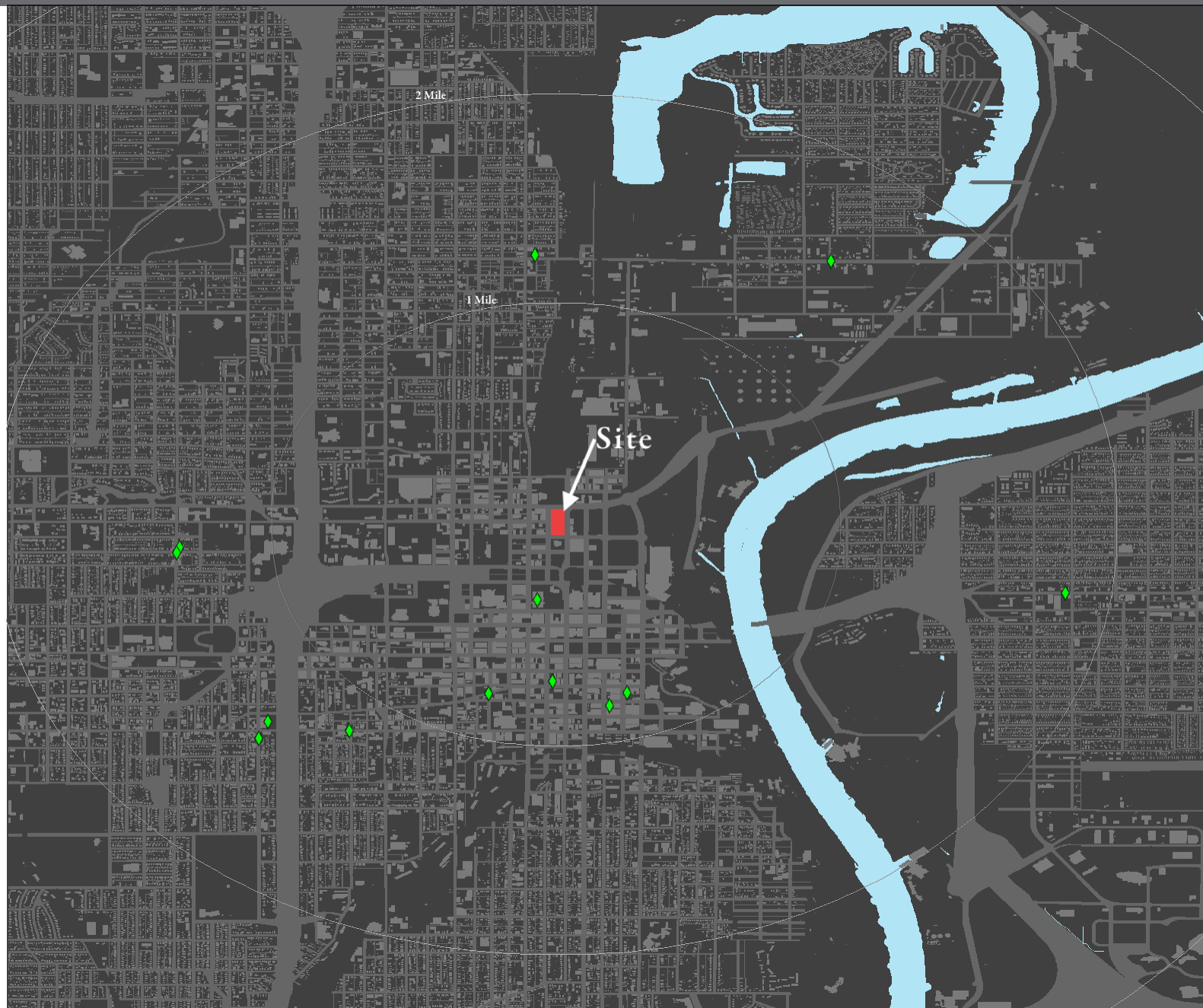


Figure 6.15 - Proximity to Grocery Stores - 2 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

Library

 = Library

Libraries are a way for a resident to continue to learn. There are eight libraries located within a mile of the facility. Residents in the proposed CCRC have a range of choices in selecting a library to fulfill their reading and learning needs within walking distance.

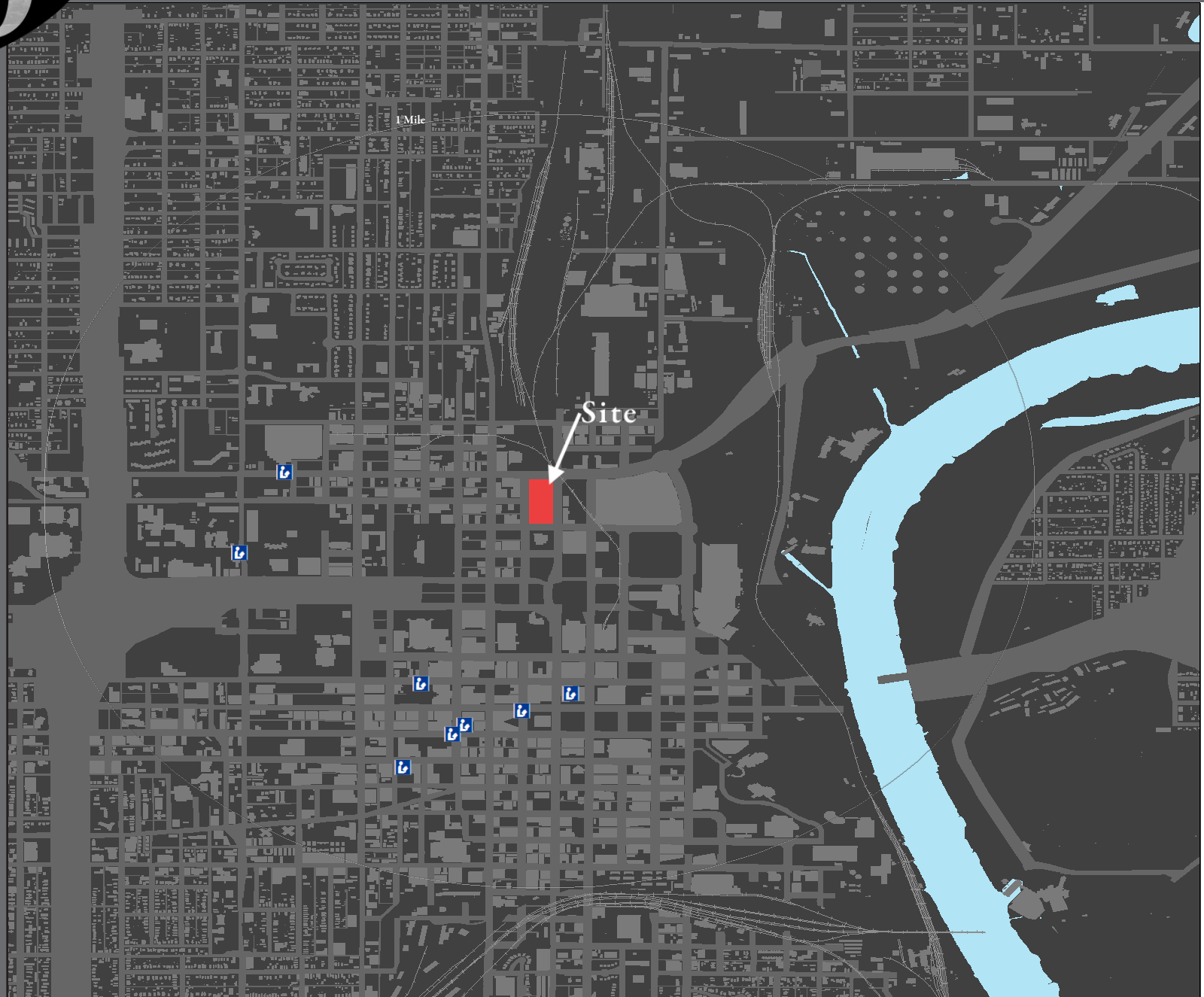


Figure 6.16 - Proximity to Libraries - 1 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

Left: 1 mile detail level
Right: 2 mile detail level

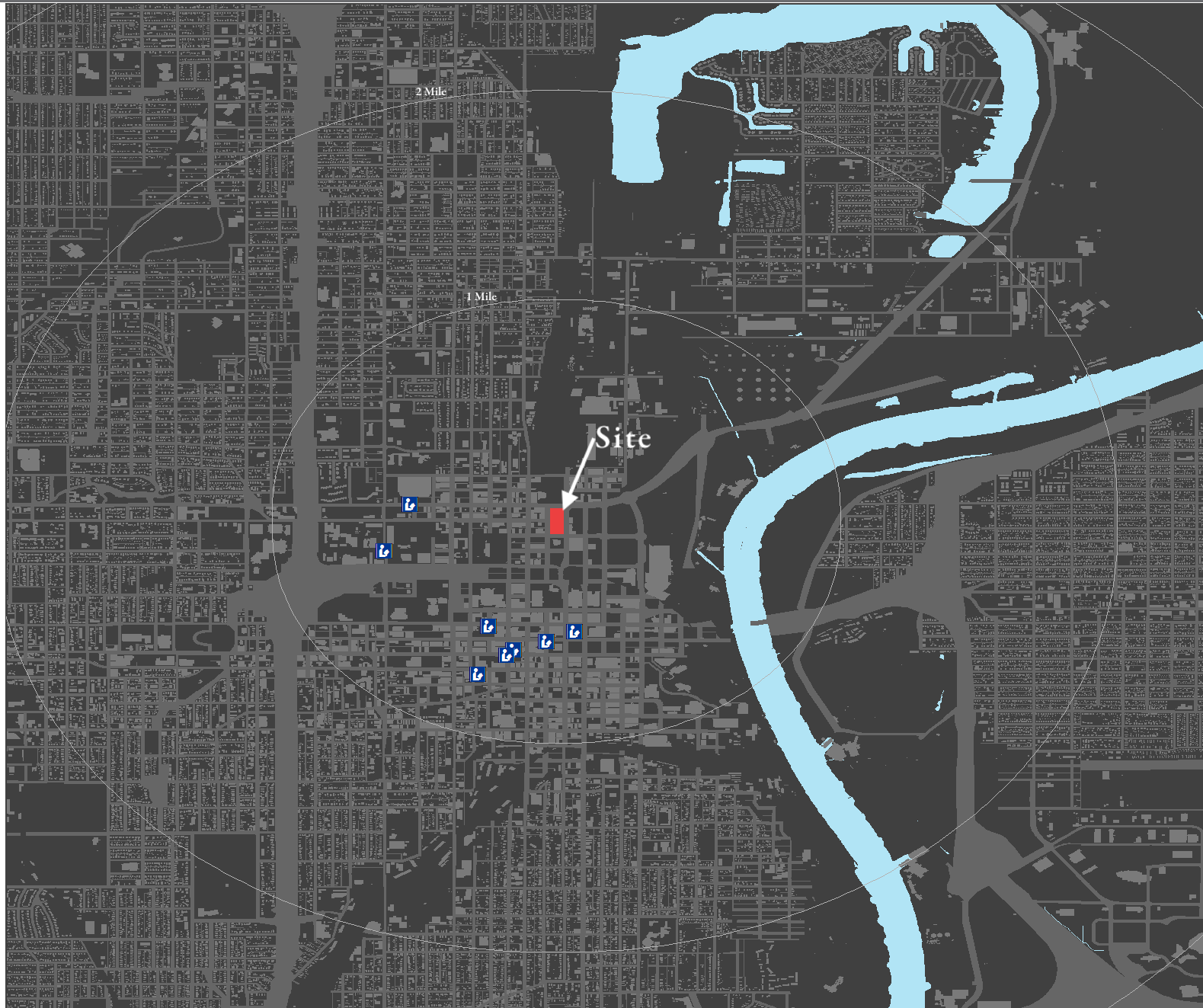


Figure 6.17 - Proximity to Libraries - 2 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

Site Analysis

Museums

■ = Museum

Museums are not essential attractions that need to be located within close proximity to the proposed CCRC. Regardless there are two within walking distance and one more just beyond a mile from the proposed location of the CCRC. As such, residents of the CCRC can enrich their personal cultural well-being by choosing to live in the proposed location.

Left: 1 mile detail level
Right: 6 mile detail level

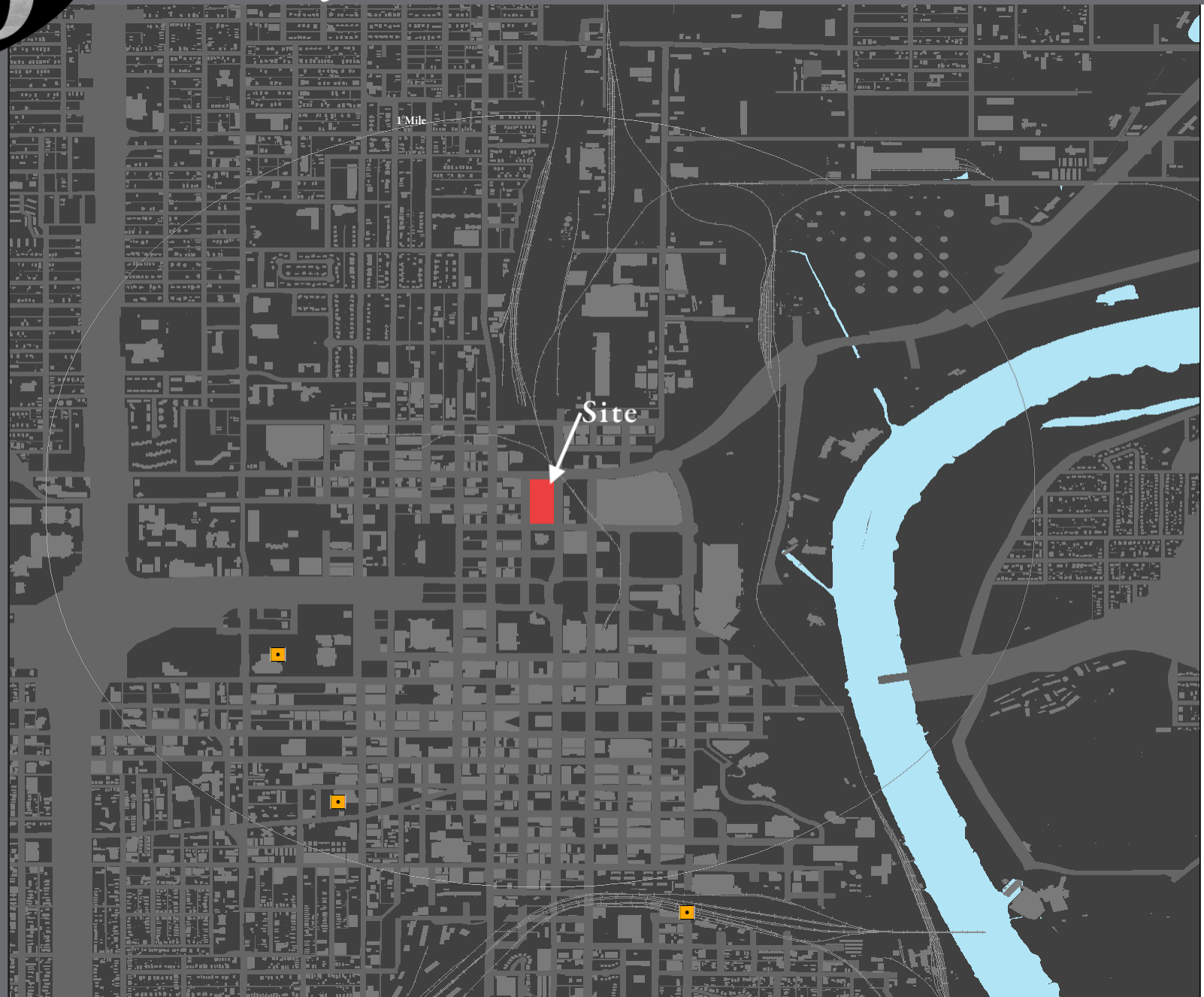


Figure 6.18 - Proximity to Museums - 1 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

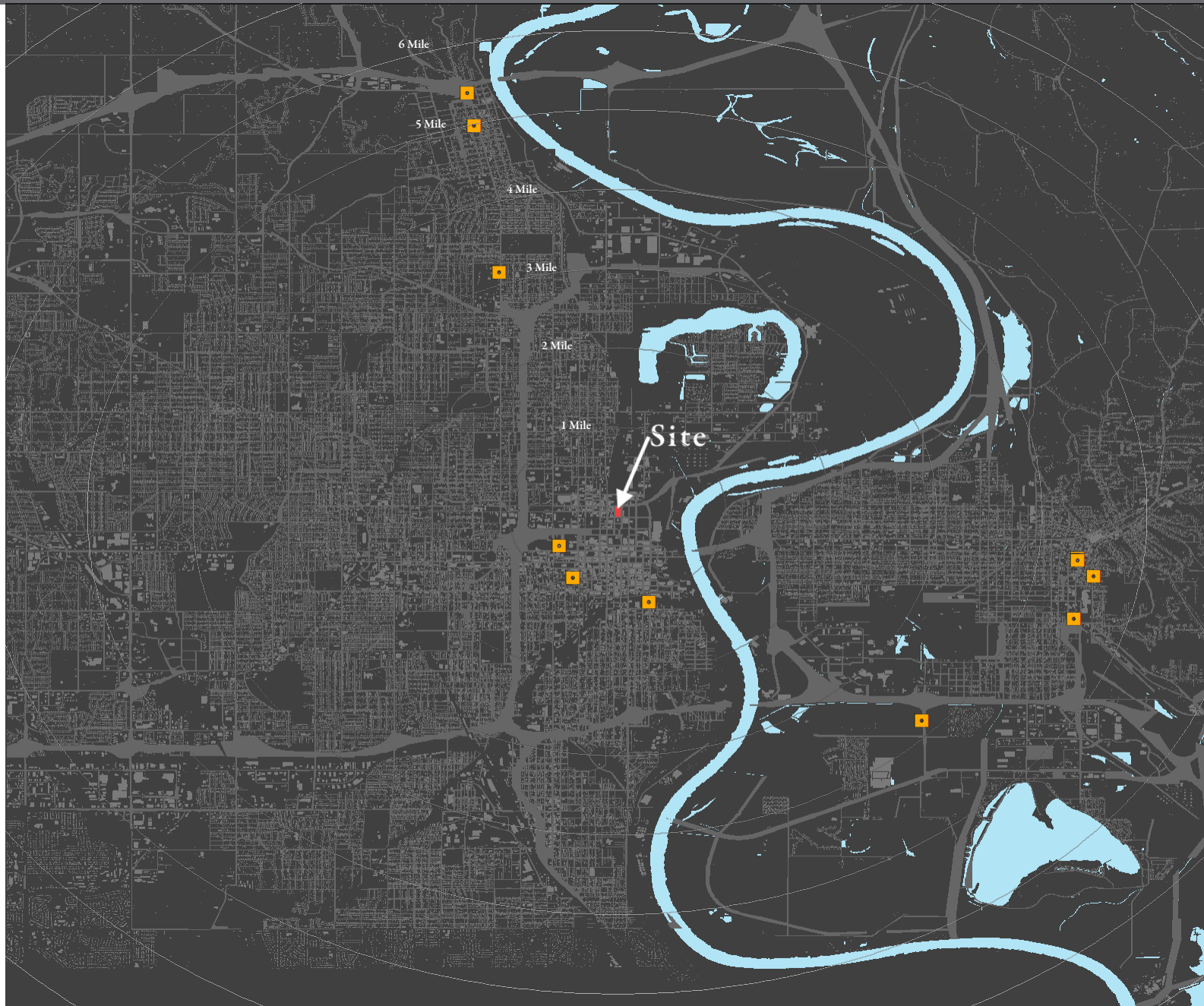


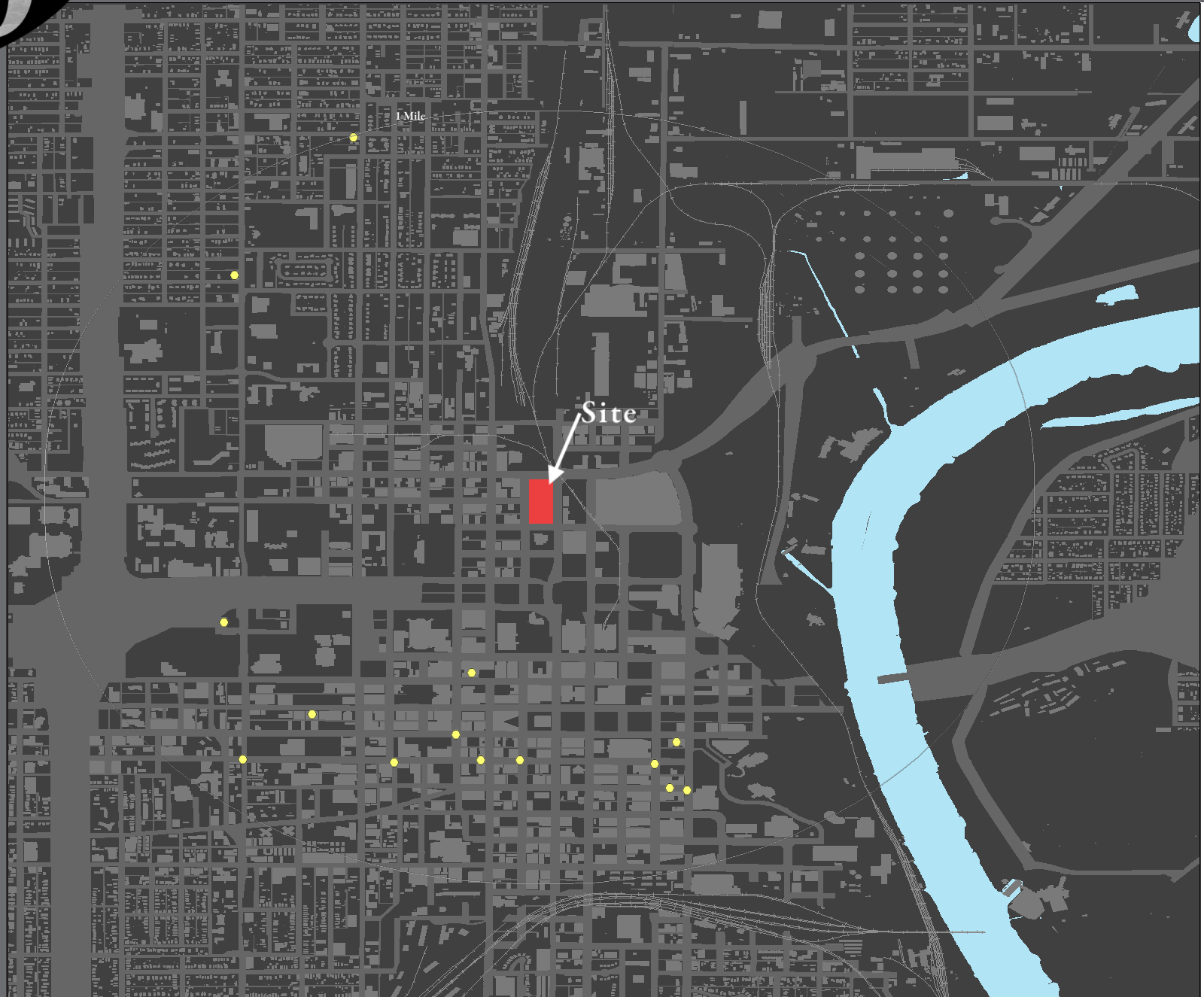
Figure 6.19 - Proximity to Museums - 6 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

Barber/Beautician

● = Barber/Beautician

There are 14 barber/beautician establishments located within a mile radius of the proposed site. Access to barber/beautician establishments within walking distance or short driving distance from the proposed site is considered to be a very positive and convenient attribute of the site.



Left: 1 mile detail level

Right: 2 mile detail level

Figure 6.20 - Proximity to Barber/Beautician Establishments - 1 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

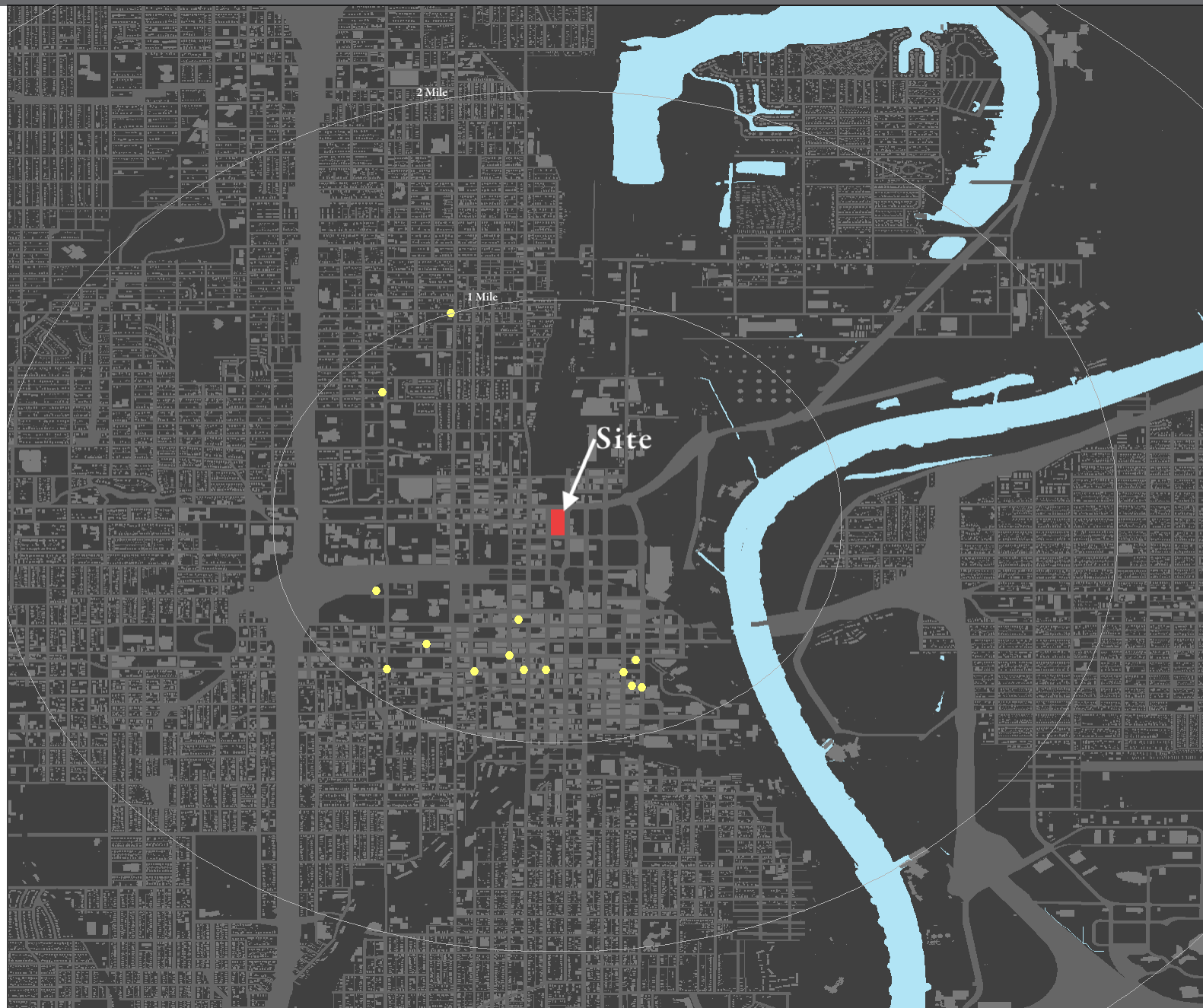


Figure 6.21 - Proximity to Barber/Beautician Establishments - 2 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

Trails and Parks

- = Trails
- = Parks

Parks and trails are very important to the health of residents of a CCRC. According to the Centers for Disease Control, Americans living closer to parks are more likely to exercise regularly, leading to weight loss, increased energy, and better overall health.

The location is very close to both city parks and recreational trails. The Omaha Riverfront Trail – South (Downtown Segment) runs from the North by Abbott Road to the south to Heartland of America Park, which connects to the Gene Lehey Mall.

Left: 1 mile detail level
Right: 6 mile detail level

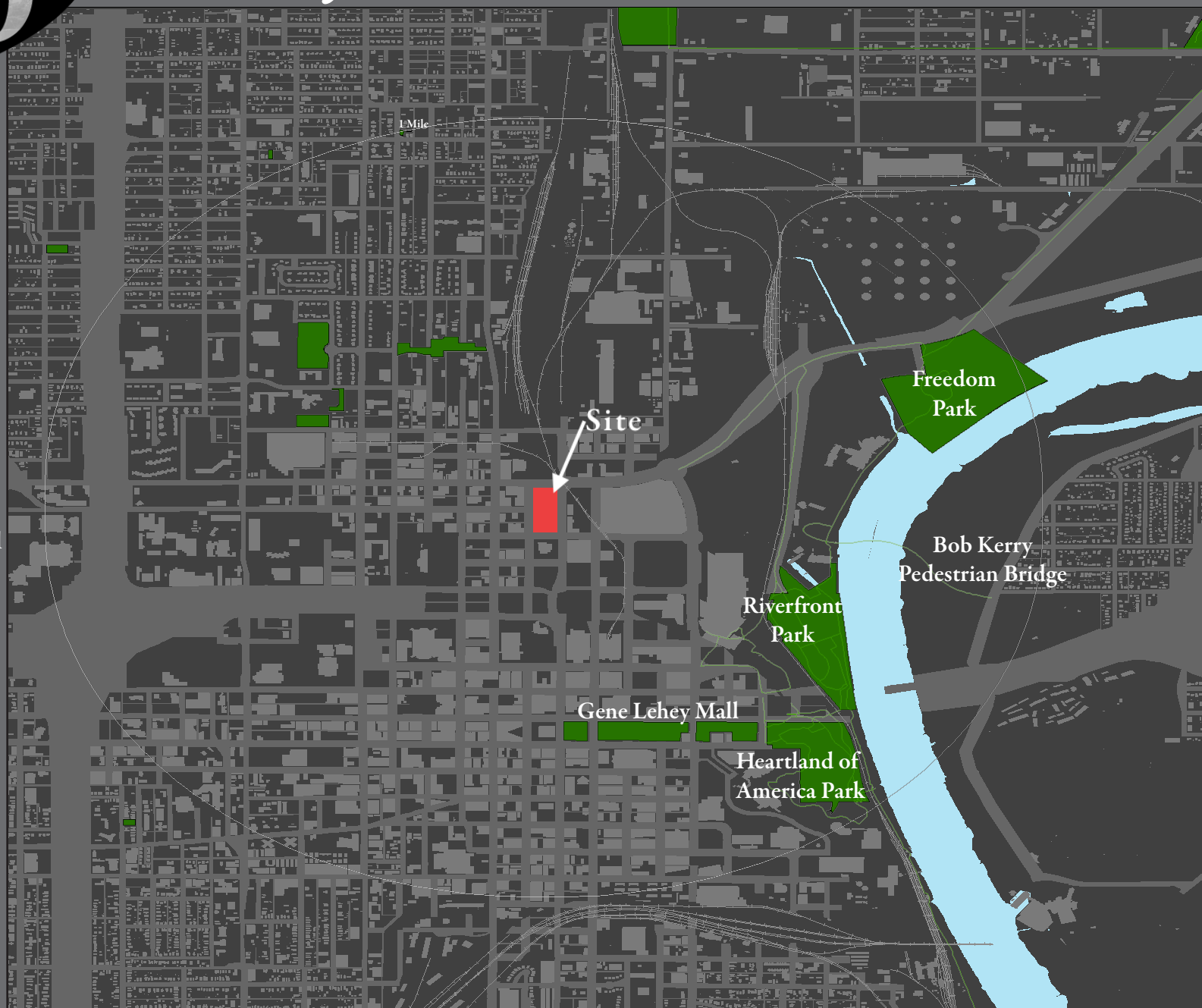


Figure 6.22 - Proximity to Trails and Parks - 1 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

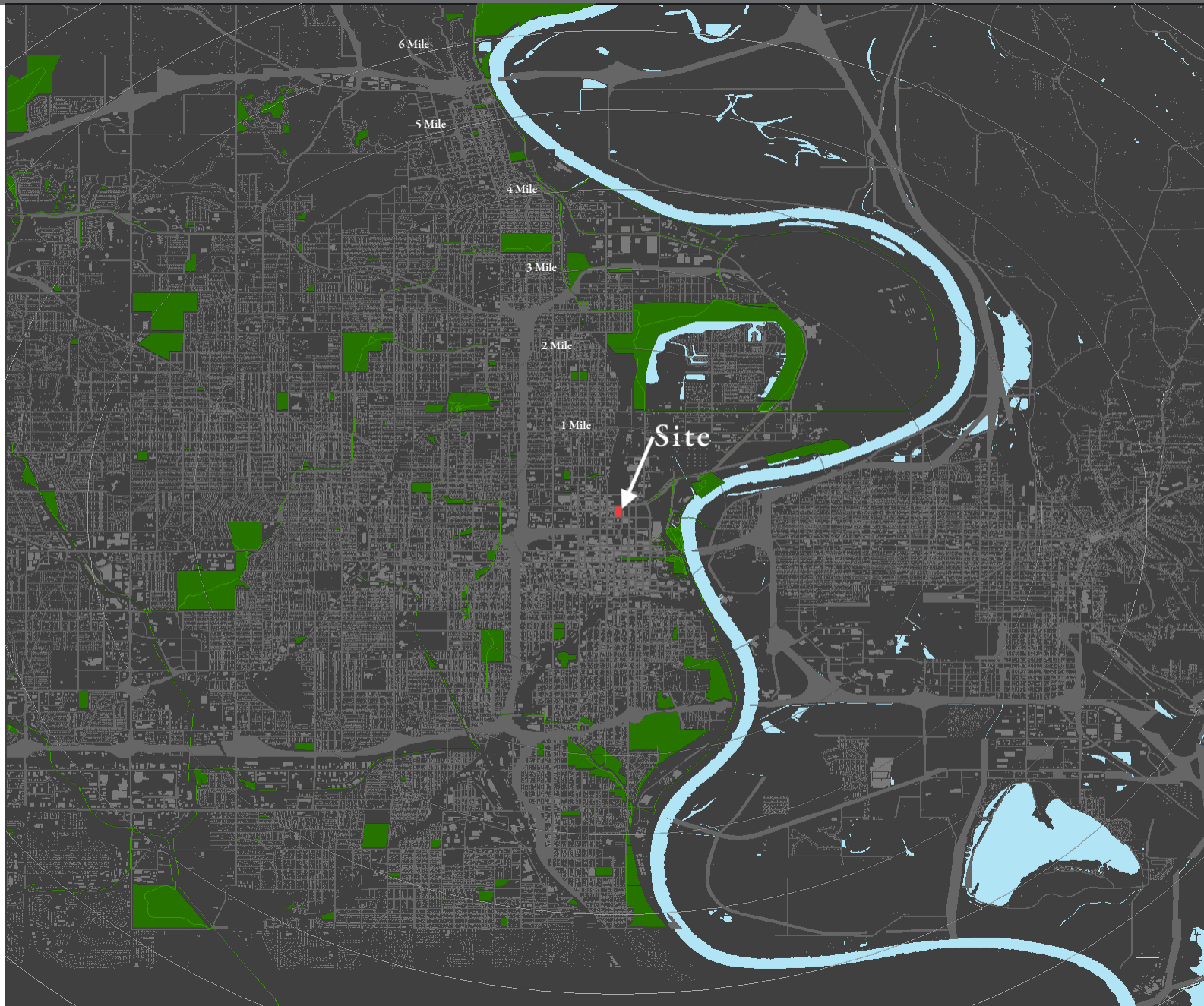


Figure 6.23 - Proximity to Trails and Parks - 6 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

Trails and Parks (con't)

The Omaha Riverfront Trail – South is almost 4 miles long with access to two parks. This trail system is less than half mile from the CCRC site.

Convenient access to parks and trails is very congenial to an “Active Living” lifestyle and the proposed location the CCRC may be considered ideal for seniors who choose such lifestyles.



http://www.asinine.org/albums/Omaha/IMG_5535_Gene_Lehey_Mall_and_Heartland_of_America_Park.sized.jpg

Figure 6.24 - View of Gene Lehey Mall and Heartland of America Park



Photo by jiminomahal
<http://static.panoramio.com/photos/original/8025493.jpg>

Figure 6.26 - Gene Lehey Mall

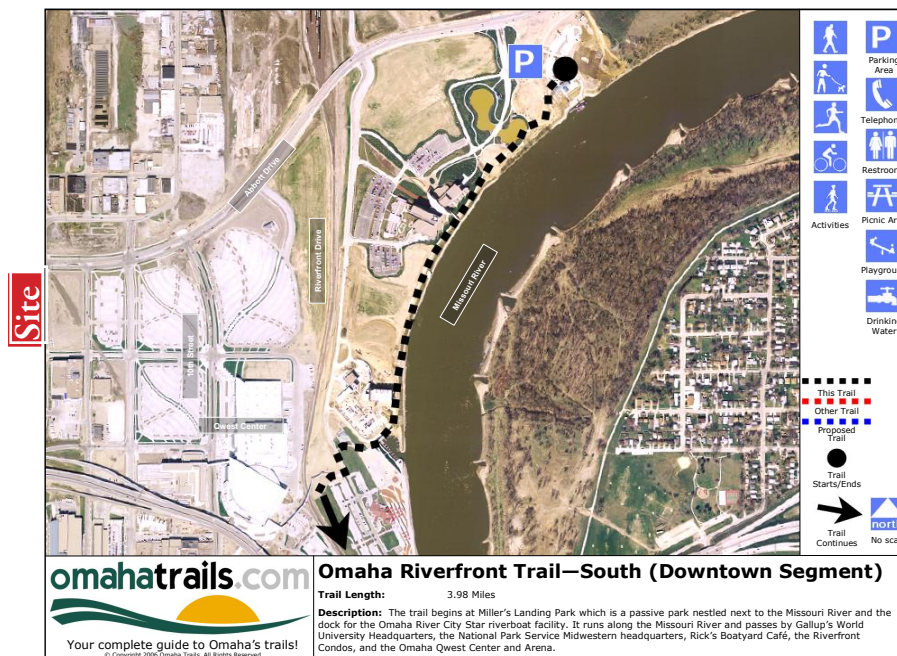


Figure 6.25 - Omaha Riverfront Trail (South)



Photo by Daniel Dunlap
<http://mw2.google.com/mw-panoramio/photos/medium/10792553.jpg>

Figure 6.27 - Heartland of America Park



Figure 6.28 - Bob Kerry Pedestrian Bridge

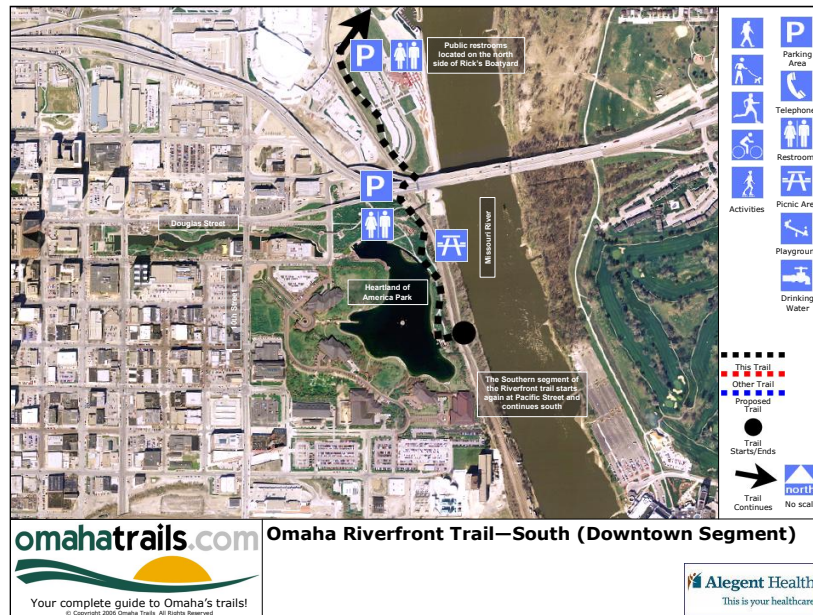


Figure 6.29 - Omaha Riverfront Trail - South

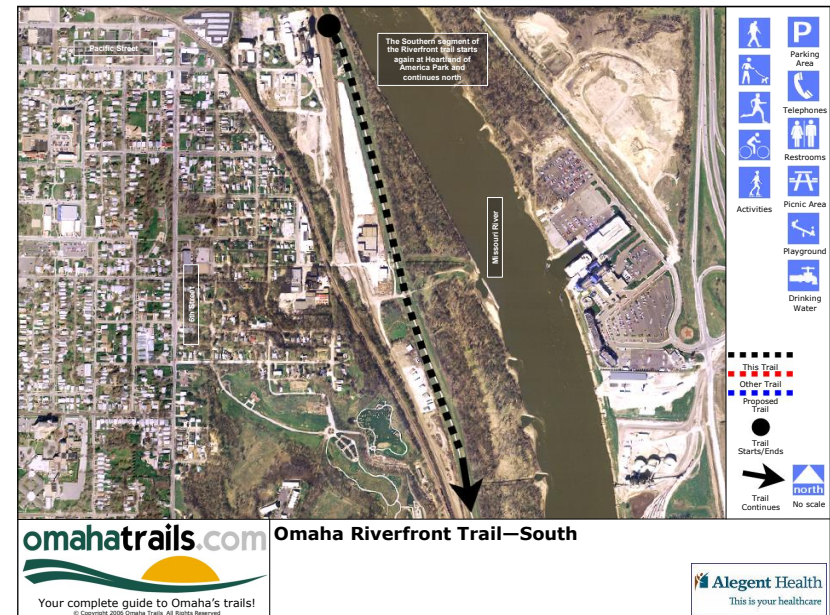


Figure 6.30 - Omaha Riverfront Trail - South

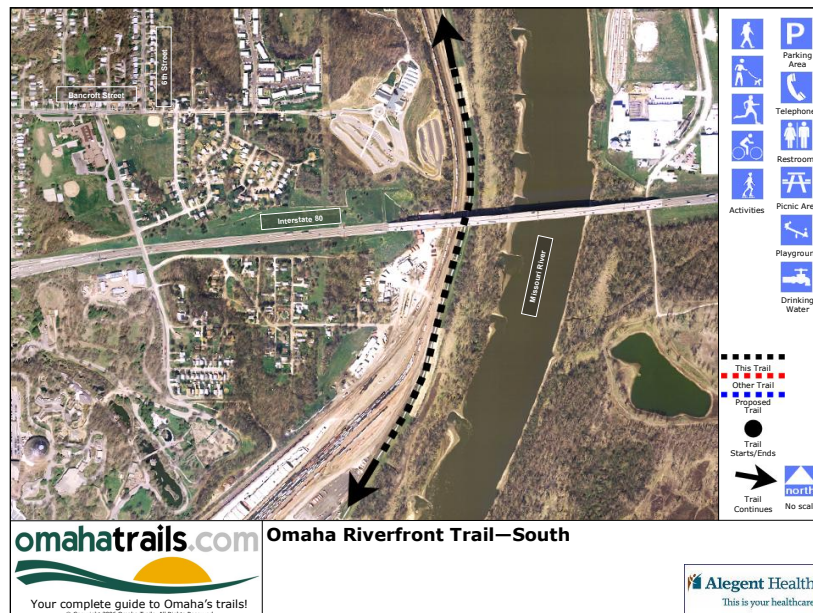


Figure 6.31 - Omaha Riverfront Trail - South

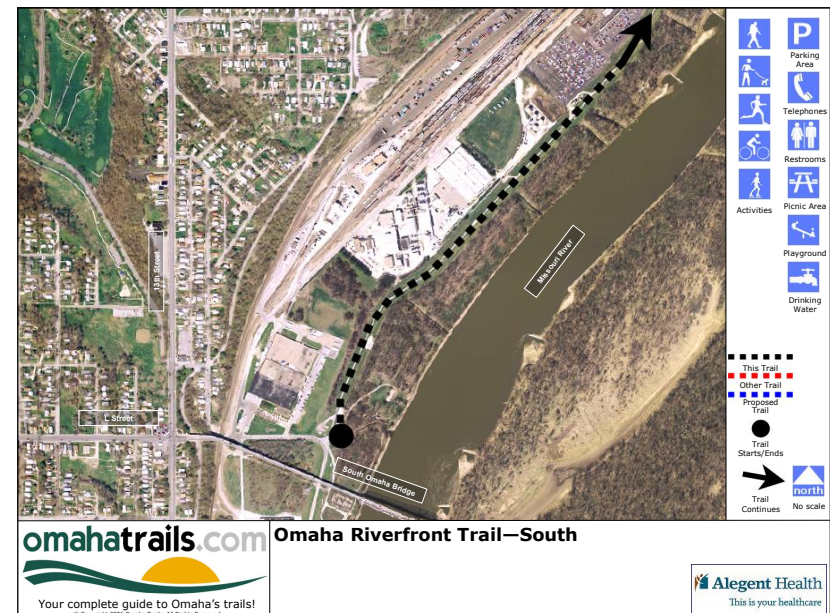


Figure 6.32 - Omaha Riverfront Trail - South

Site Analysis

Streetcar

----- = Line

● = Stop

Omaha is proposing a Streetcar line that will provide this CCRC with public transportation to shopping, medical facilities, and entertainment. Webster Street is to the south of the site and is proposed to be a pedestrian street as per the HDR North Downtown. The streetcar is proposed to run along this street from the Qwest Center to Creighton University. The Street Car line is also proposed to run along 10th Street from the Qwest Center to the Old Market on the south side of Downtown Omaha. This streetcar system



Figure 6.28 - Access to Proposed Streetcar System- 1 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.



proposed in phase two will continue south to the Henry Doorly Zoo.

This streetcar system will provide residents with convenient access to arts, entertainment, restaurants, shopping, specialty shopping, education, and recreation, especially to those who are unable to drive. This is considered a very positive virtue of the proposed site.

*Left: 1 mile detail level
Right: 6 mile detail level*

Figure 6.29 - Access to Proposed Streetcar System- 6 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

Major Arterials

The site location of the CCRC facility provides residents and staff with quick and convenient access to the interstate system. The local interstate system includes Interstate 80, Interstate 480, and North Freeway (Highway 75 and Kennedy Freeway) and with connection to Interstates 680 and 29.

Cuming Street is to the north of the CCRC site which provides access to I-480 to the West and Eppley Airport to the East. 14th Street on the East and 15th Street on the West also provide access to I-480.

Webster Street is to the south of the site and is proposed to be a pedestrian street as per the HDR North Downtown Plan.

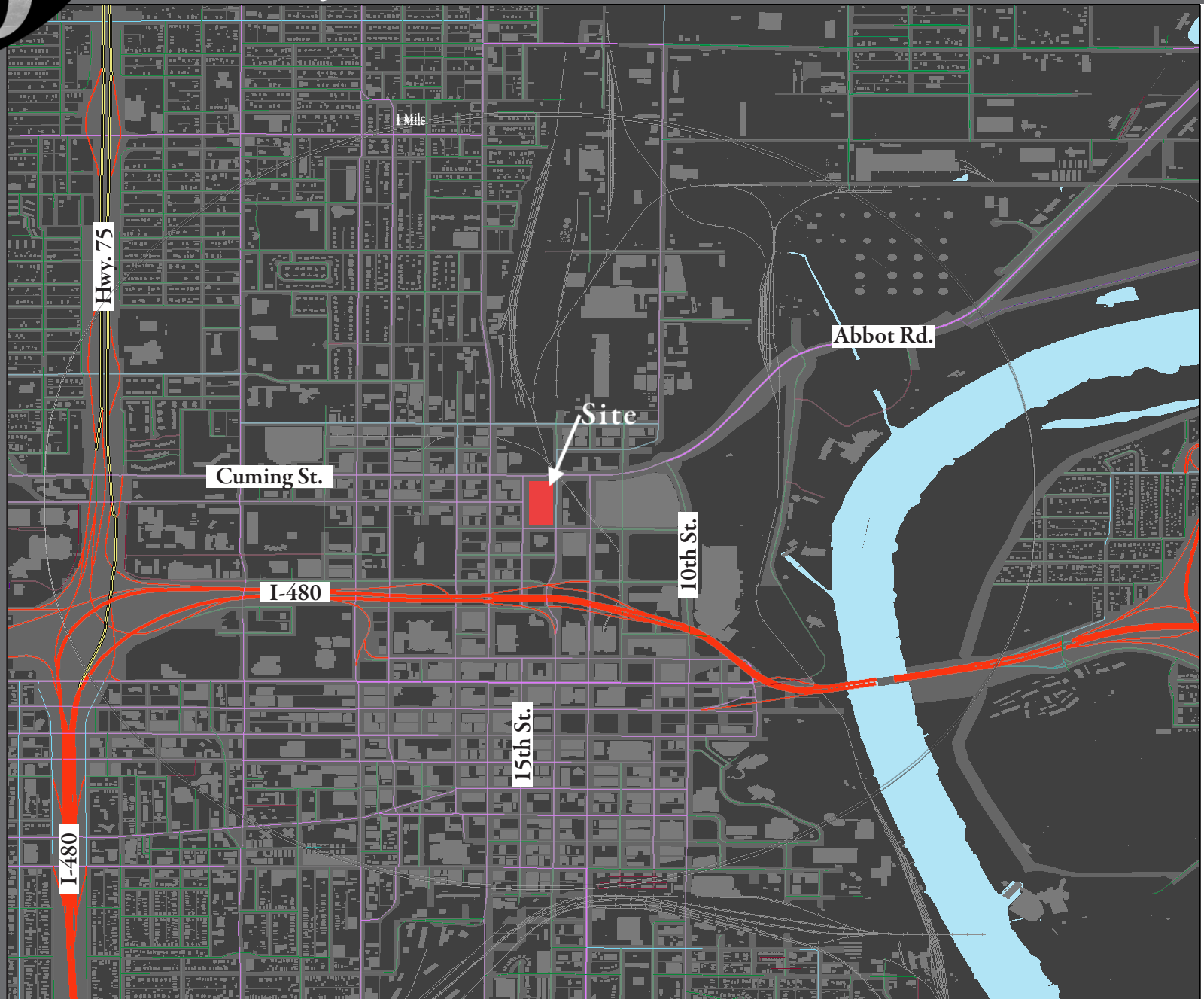


Figure 6.30 - Proximity to Major Arterials - 1 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

Proximity to Services

Major thoroughfares are important to a CCRC in the opinion of the Assisted Living Federation of America because in their opinion, nearly 11 percent of residents in CCRCs first became aware of such communities when they drove past them.

As such the proposed site is very well endowed with convenient access to major thoroughfares.

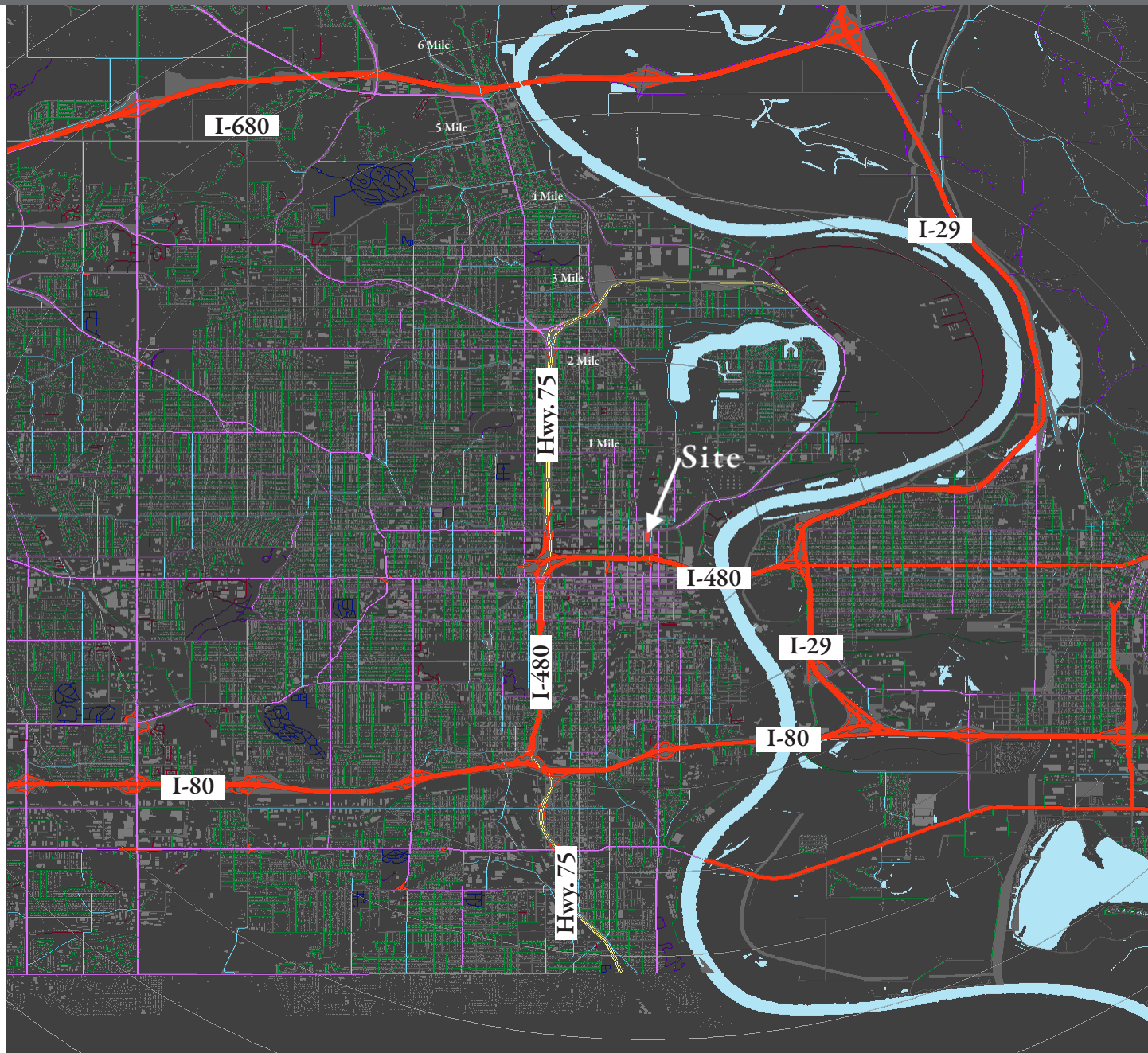


Figure 6.31 - Proximity to Major Arterials- 6 Mile Detail Level

Map projections using ArcView tend to create an apparent distortion of the circle in the map above.

It may be observed in Figures 6.32, 6.33, 6.34 and 6.35 that the site has an approximate 4 foot drop over a stretch of 260 feet across the width of the site amounting to a 1.5% slope. This renders the site very economical for site preparation and grading. The gentle slope lends itself as adequate for stormwater drainage by gravity flow to the existing city's storm sewer system.

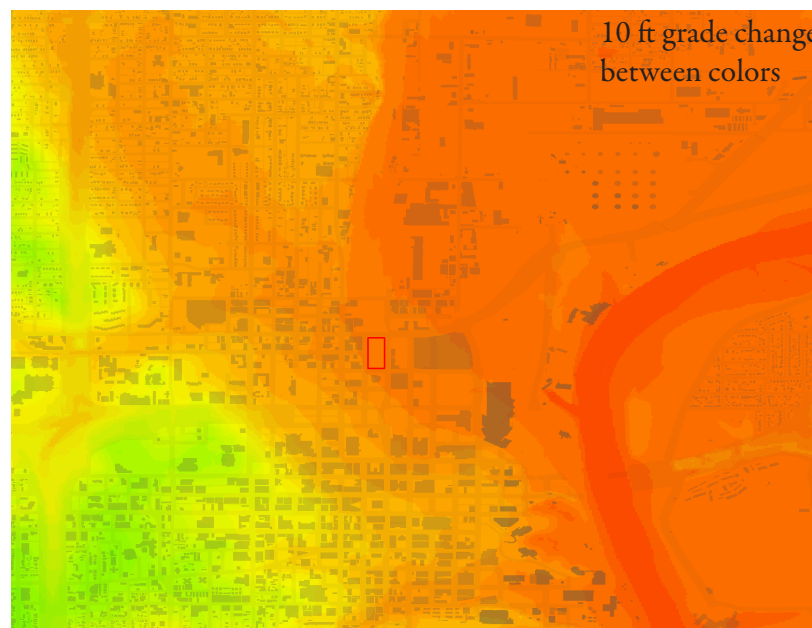


Figure 6.32 - Shaded Contour Map - 1 Mile Detail Level

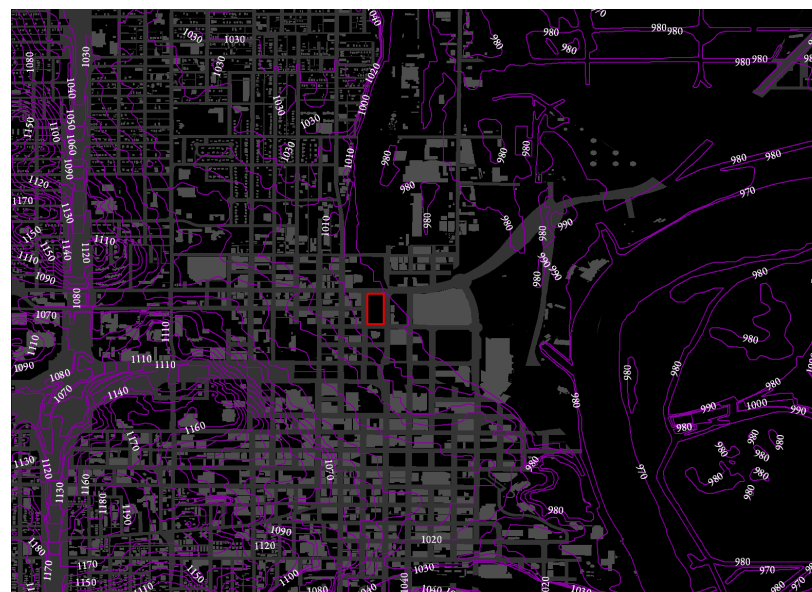


Figure 6.33 - Contour Map - 1 Mile Detail Level

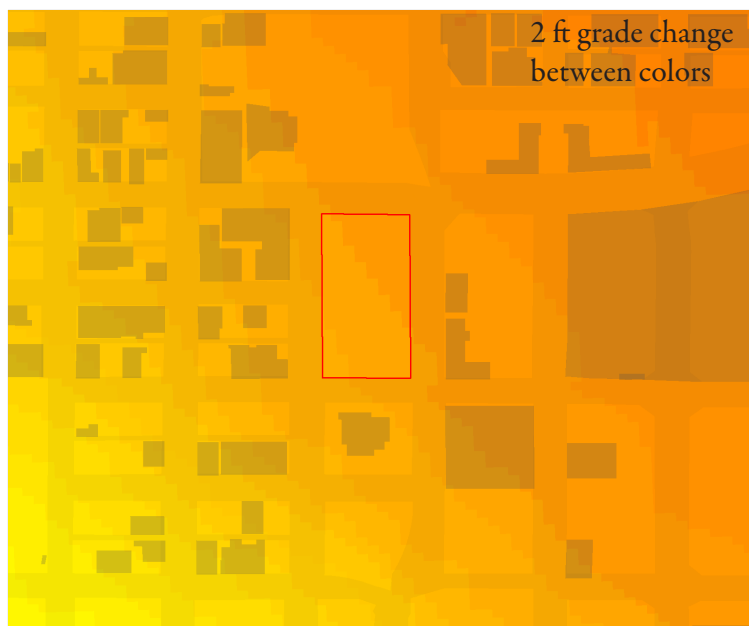


Figure 6.34 - Shaded Contour Map - 1/4 Mile Detail Level



Figure 6.35 - Contour Map - Site

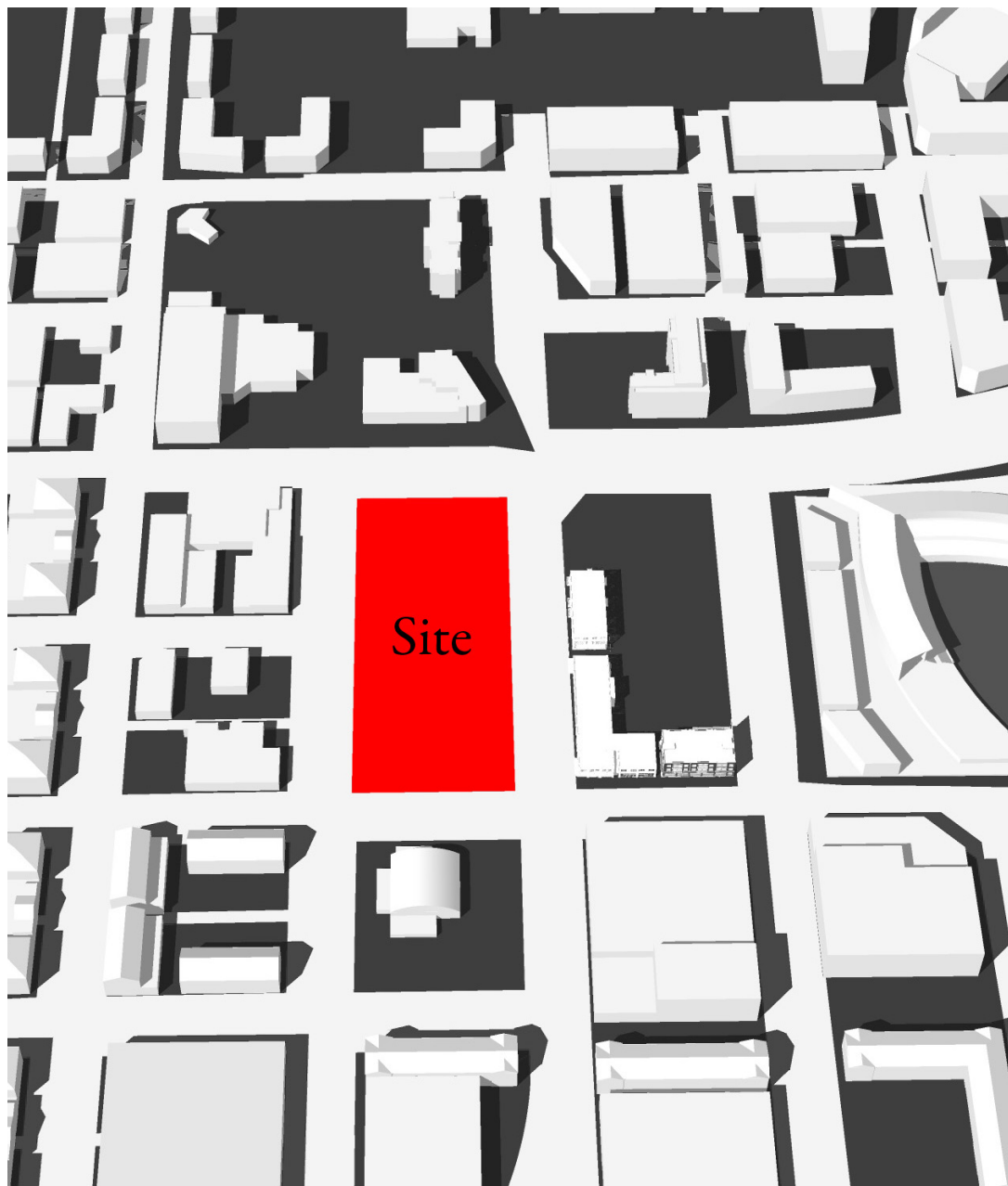


Figure 6.36 - 3D Site Context Model

Visibility analysis shows photographic images of different views to and from the selected site. These photographs were taken on October 9, 2008, at locations shown in Figure 6.37. The corresponding pictures to the locations are shown in Figures 6.38 to 6.67.

The photos allow the reader to see features within the site and around it. Factors that may affect the site are the shadows cast by adjacent tall buildings. This site does not have any buildings over 4 stories adjacent to it and shadows should not pose such a problem.



Figure 6.37 - Site Photo Location Map

See Figure 6.XX for Photo

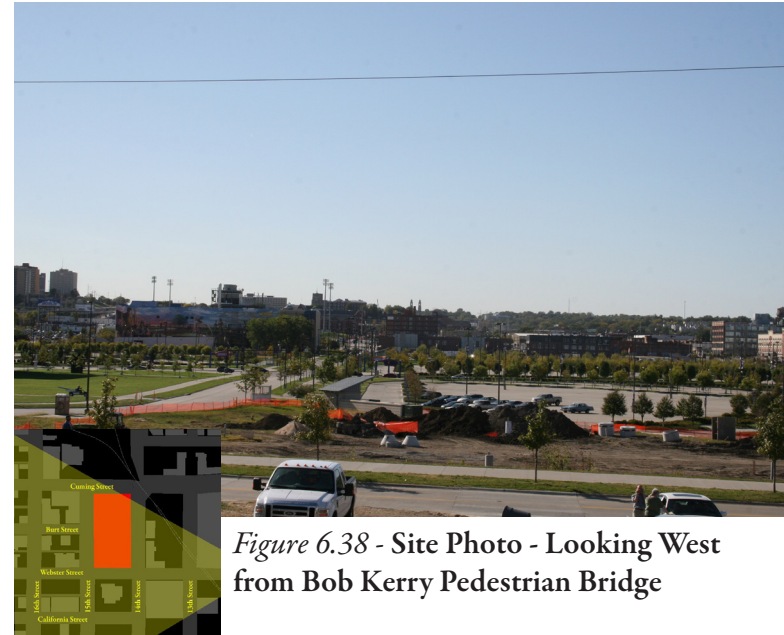


Figure 6.38 - Site Photo - Looking West from Bob Kerry Pedestrian Bridge



Figure 6.39 - Site Photo - Looking West from 12th and Webster Street



Figure 6.40 - Site Photo - Looking Southwest from 14th and Webster Street



Figure 6.42 - Site Photo - Looking North from 14th and Webster Street



Figure 6.41 - Site Photo - Looking West from 14th and Webster Street



Figure 6.43 - Site Photo - Looking East from 14th and Webster Street



Figure 6.44 - Site Photo - Looking West from 14th and Webster Street

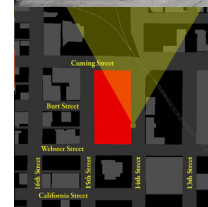
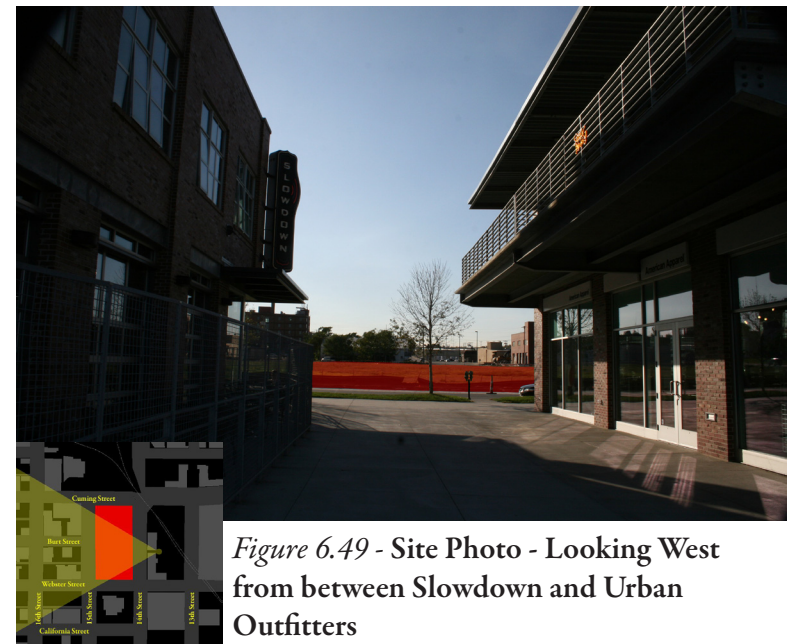


Figure 6.45 - Site Photo - Looking North on 14th Street between Webster Street and Cuming Street



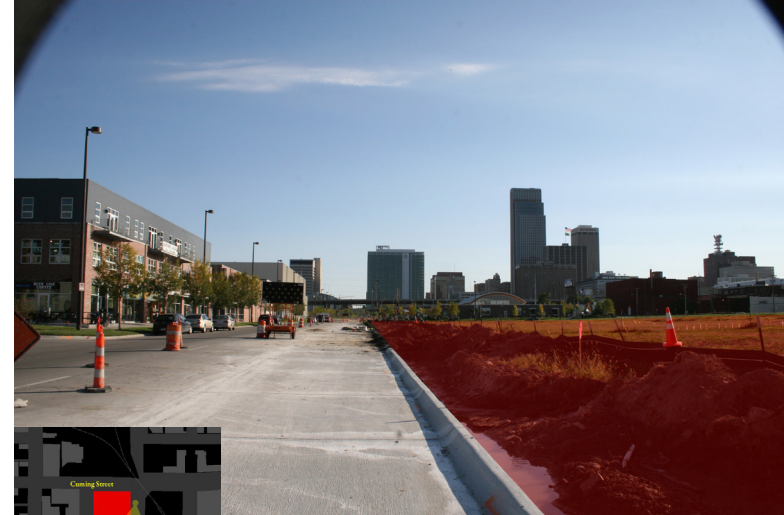


Figure 6.50 - Site Photo - Looking South from 14th and Cuming Street

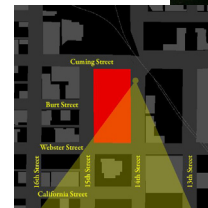


Figure 6.51 - Site Photo - Looking South from 14th and Cuming Street



Figure 6.52 - Site Photo - Looking Southwest from 14th and Cuming Street



Figure 6.54 - Site Photo - Looking South from 14th and Webster Street



Figure 6.53 - Site Photo - Looking West from 15th and Cuming Street



Figure 6.55 - Site Photo - Looking East from 15th and Burt Street



Figure 6.56 - Site Photo - Looking Northeast from 15th and Burt Street



Figure 6.57 - Site Photo - Looking Northeast from 15th and Webster Street



Figure 6.58 - Site Photo - Looking East from 15th Street between Webster and Burt Street



Figure 6.60 - Site Photo - Looking North from 15th and Webster Street



Figure 6.59 - Site Photo - Looking Northeast from 15th and California Street



Figure 6.61 - Site Photo - Looking West from 15th and Webster Street

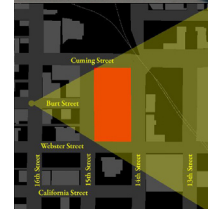


Figure 6.62 - Site Photo - Looking East at 16th and Burt Street

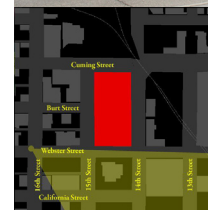


Figure 6.63 - Site Photo - Looking Southeast from 16th and Webster Street



Flood Plain

Figure 6.68b shows the FEMA Flood Insurance Rate map (FIRM) effective December 2, 2005. The site selected for the CCRC project is protected by the levee system located by the riverfront and has been determined to be outside the 0.2% annual chance floodplain as shown in the map.

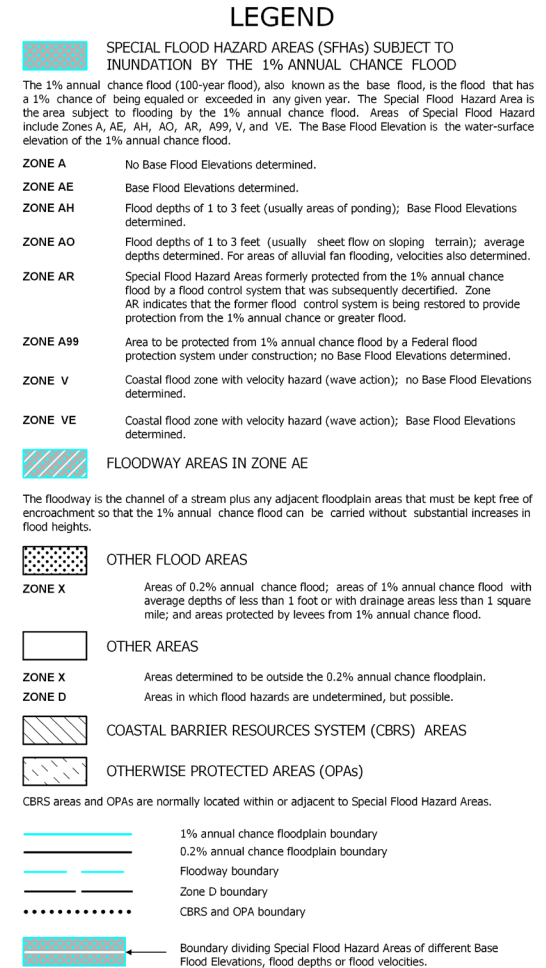


Figure 6.68a - FIRM Map Legend

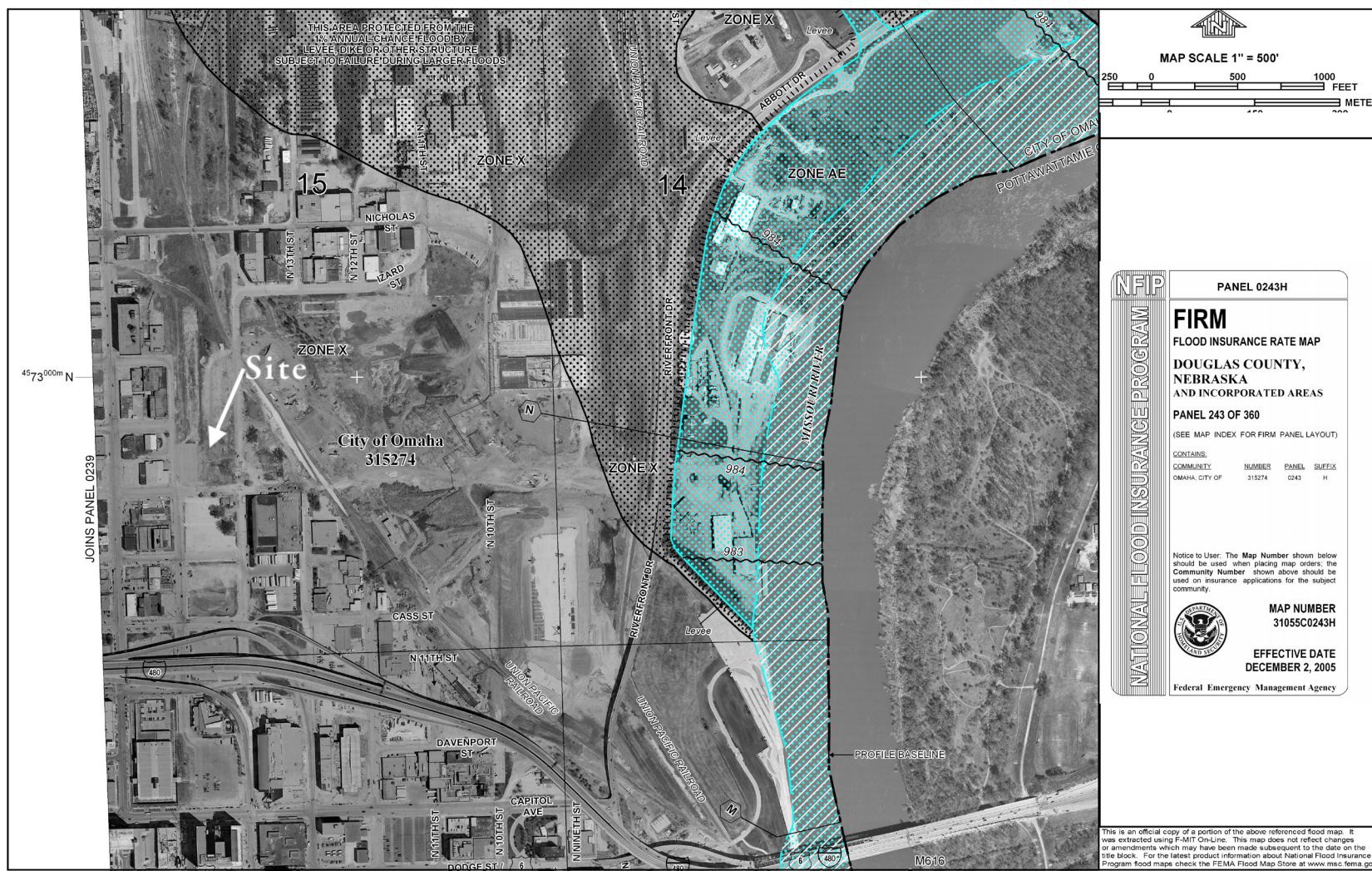


Figure 6.68b - FIRM Map



Brownfield assessment of the project area was conducted by HDR in the North Downtown Omaha's New Urban Neighborhood Study. The study identifies properties in three categories - highest, medium, and lowest potential impact. The site is not classified as a brownfield site. In total, only twelve sites near the site are considered brownfield sites. As seen on the map in Figure 6.69, there are a few medium potential impact sites located within a few blocks of the site. Most of these sites have potential subsurface environmental impairment resulting from historic leaking underground storage tanks. It is believed that remediation of these impairments are relatively inexpensive.

Lead Contamination

Lead contamination has been found on the eastern side of Omaha, along the western bank of the Missouri River. The lead contamination was produced by a factory located on the riverfront many years ago. The lead contamination was airborne and traveled in the direction that the wind blew. Most sites affected by such contamination are located more than a mile from the original factory location. Figure 6.70 shows the affected areas. The city of Omaha and developers have removed and cleaned up most of the lead in the project area. The site has been determined free from lead and no action in regards to lead contamination is needed.

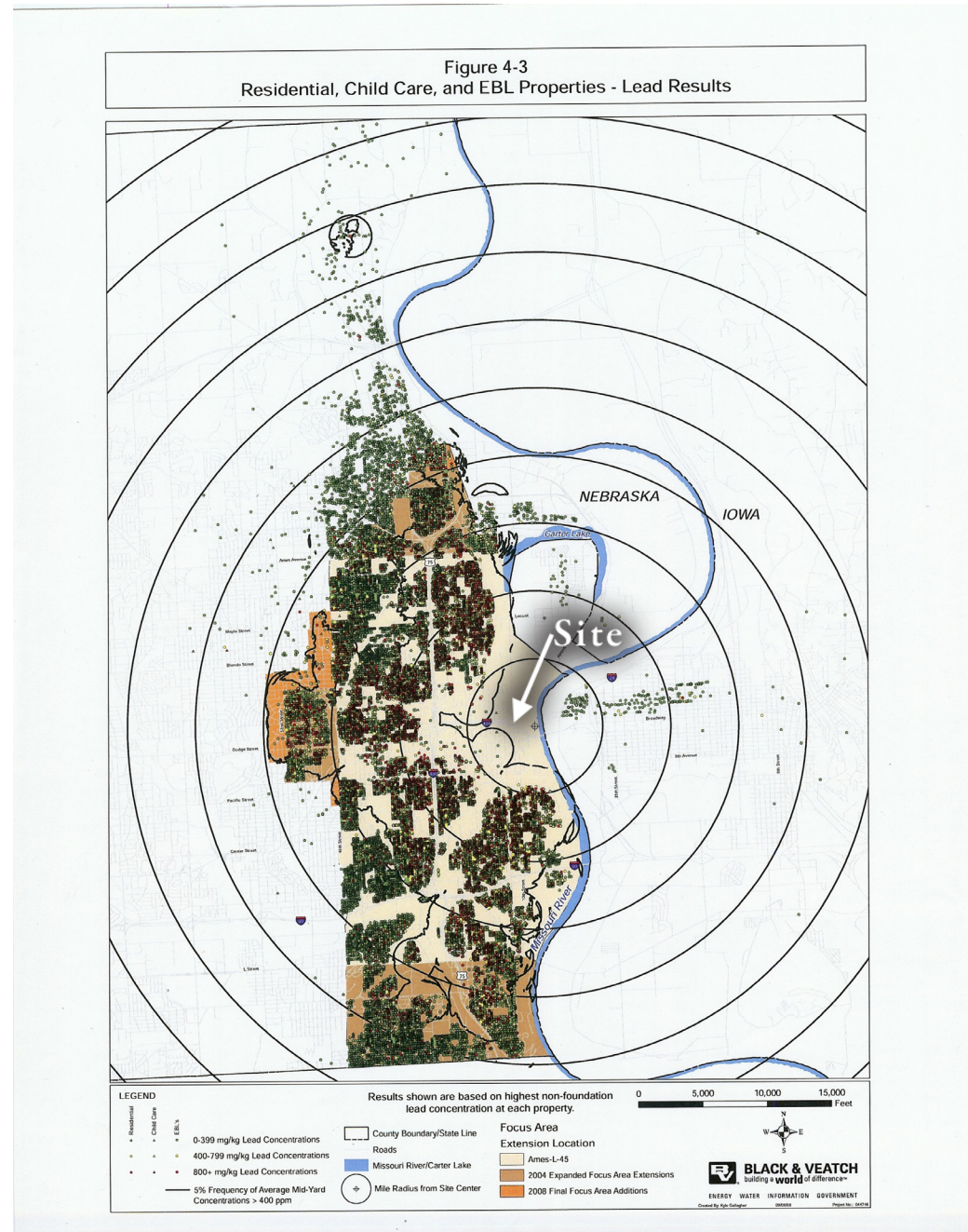


Figure 6.70 - Lead Contamination Map

Site Utilities

Appendix D. contains the maps prepared by HDR for the North Downtown Omaha's New Urban Neighborhood Study. These maps show the locations of:

- M.U.D. (water)
- Sewer (Sanitary and Storm)
- M.U.D. (gas)
- OPPD (electrical)
- Energy Systems
- AT&T
- Qwest
- MCI
- Cox Communication
- 360 Network

It has been concluded from a review of the above that the site for the proposed CCRC is well serviced by all necessary utilities and services that will be required, and no additional investment for new infrastructure will be required as a prerequisite for this facility.

Conclusion

The preceding analysis indicates that the site proposed for the CCRC possesses many of needed attributes for such a facility. This validates the suitability of the proposed site for locating a CCRC to serve the Omaha Metropolitan Trade Area and justifies its selection for the construction of this facility.

It is the findings of this site analysis that the site determined in the Site Locations Section fulfills the criteria defined in the project goals.

The recommendation of this study is that the developer should seek a variance from the Omaha Zoning Code to build a CCRC along with a permit for institutional living at the proposed site.

Precedents

Precedents are used to do internal studies of a building type. Two of the buildings that were chosen in the following section are CCRC projects, one in Chicago and the other in Lincoln. They both were chosen as examples of how different a CCRC can be. The Chicago Tower is built as a 52 story building in the heart of downtown Chicago. On the other hand, the Lincoln project was built in rural area and the city grew around it, and the building is only 5 stories tall. The third project reviewed is the Wallstreet towers, scheduled to be built in 2009 in downtown Omaha. These condos are not a retirement community but they do offer high-end housing. Finally, universal design is a very important concept for this proposed facility. The Kohler demonstration project will showcase 24 important guidelines for universal design.

Eastmont Towers Community



Eastmont Towers Community is a true Continuing Care Retirement Community. They offer 4 main levels of care, Independent Living, Assisted Living, Skilled Nursing care, and End of Life Care. They have other intermediate levels of care they offer too. They provide life care options for residents to allow the resident to enjoy life without worrying about future healthcare needs. Like a lot of CCRCs the campus started as only Skilled nursing back in the 60s then they added an independent living tower and finally they recently added a new modern assisted living wing. They also just finished a End of Life Care facility not located on CCRC campus. When this campus opened it was in a rural setting, but over the last 40 years Lincoln has surrounded it making it a Urban CCRC which causes some challenges for the facility to expand in the future.



Figure 7.1 - Aerial Photo

Photo: Microsoft Live Maps

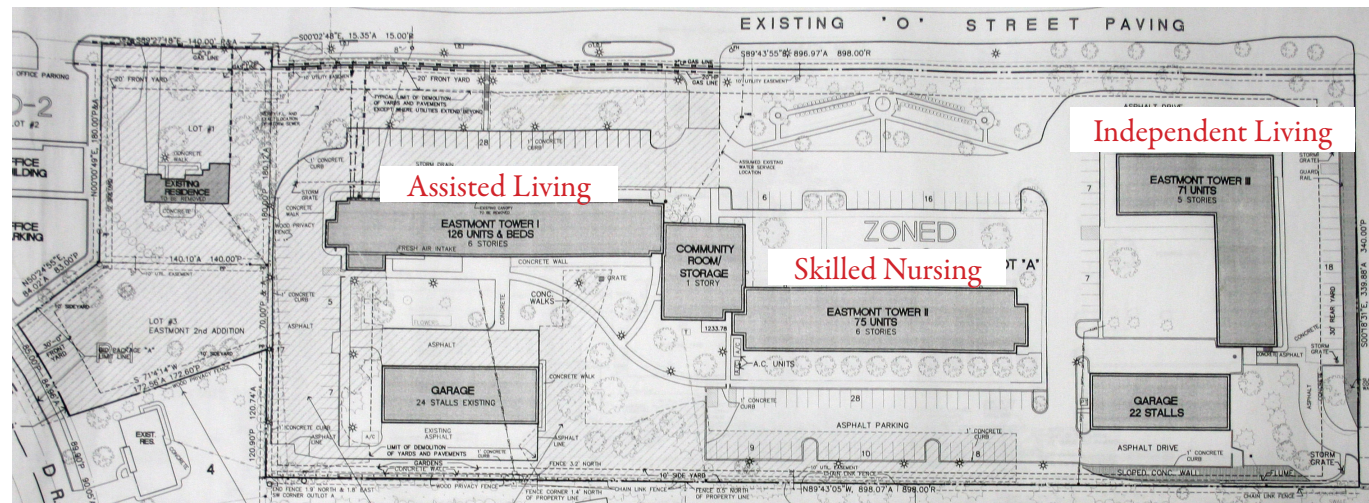
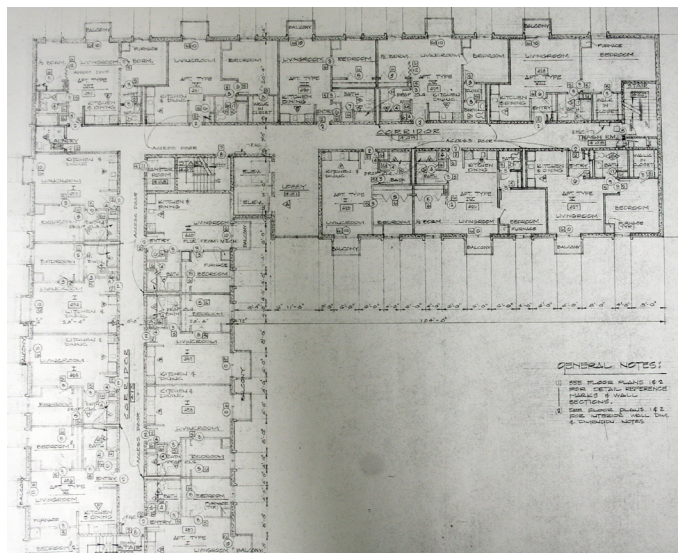


Figure 7.2 - Eastmont Towers Community Site Plan

Plan by Michael Bott and Associates 2001

Left: Overview of Facility
Right: Independent Tower of
CCRC campus



Plans by Goertzen Thiessen Architects 1974

Figure 7.3 - Independent Living Tower - Saratogo



Photo: Microsoft Live Maps

Figure 7.4 - Aerial View of Saratogo Tower



Figure 7.5 - Photo of Saratogo

Photo provided by Eastmont Towers Community

The Saratogo is a Independent Living Tower for the Eastmont Towers Community. There are 71 units on nine floors to that make up the tower. There is a dinning room and kitchen to serve the residents in the tower. The building also has common space for residents to use, like a game room and a formal living/ sitting room. Both rooms are used by residents to entertain guest and is used as an extension of their individual units. The independent living tower was built in 1974 as an additional service that Eastmont Towers could provide its residents before they entered into the skilled nursing level of care.



Eastmont Towers Community



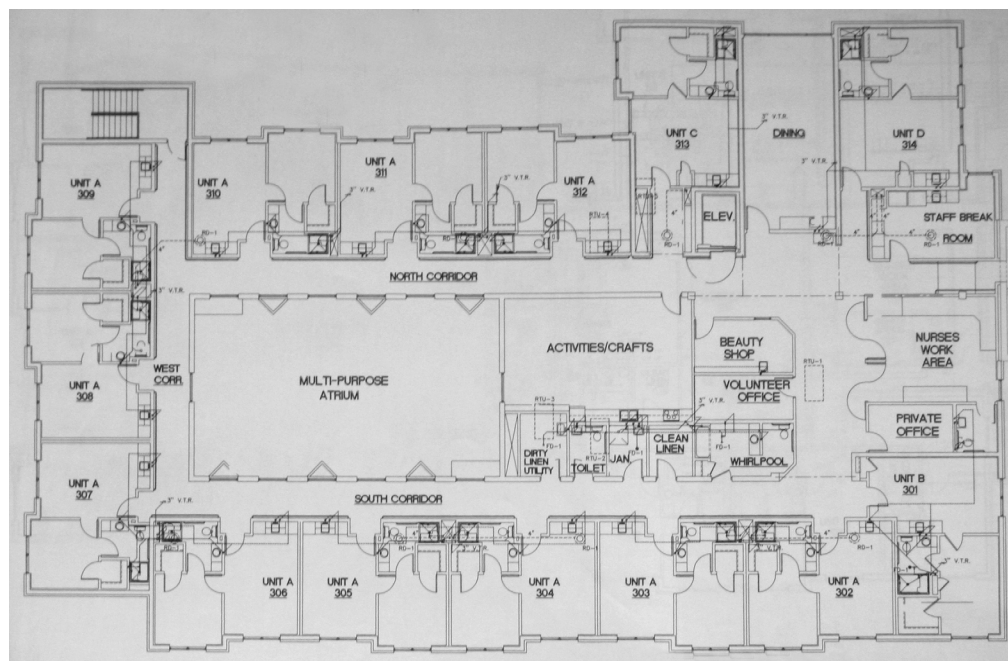
Photo provided by Eastmont Towers Community

Figure 7.6 - Assisted Living Wing - The Seasons

The Seasons is Eastmont Towers assisted living wing. It is one of the latest additions to the Eastmont Towers campus. As you walk into the entry there is a sitting room and a Ice Cream Parlor where you will find residents frequently enjoying some deserts. This wing has 126 units (beds) and is 3 stories. This facility has a multipurpose atrium, activities room, game room, barber/ beauty and a dining room on each floor, but the residents are welcome to travel to whichever floor they would like to eat with friends. The residents also have access to the main dining room.



Figure 7.7 - Entry Sitting Room/Ice Cream Parlor on the Right



Plan by Michael Bott and Associates 2001

Figure 7.8 - Floor Plan - Assisted Living Wing - The Seasons

Left and Right: Assisted
Living Facility of CCRC
Campus



Figure 7.9 - Dining Room (one per floor)



Figure 7.11 - Typical Central Bath Toilet Area



Figure 7.13 - Atrium Space/ Multipurpose Room

Both the Atrium Space and Game Room are not utilized by residents. The Atrium space has acoustic problems and residents do not like to sit in the space even though the room looks great and seems very inviting.



Figure 7.15 - Game Room open to residents



Figure 7.10 - Typical Residential Corridor



Figure 7.12 - Typical Shower Unit in Residential Units



Figure 7.14 - Typical Whirlpool in Central Bath



Figure 7.16 - Main Dining Room
Open 3 meal a day, Serves both Assisted Living and Independent Living

Eastmont Towers Community



Photo provided by Eastmont Towers Community

The Skilled Nursing Tower has been servicing Lincoln since 1968 and has 48 licensed beds. Since this building was designed in the late 60s it was great design in that time, but shortly after visiting the facility you will notice how it has been overcome with the technology used in nursing homes today. The facility also still has double occupancy rooms which the new norm is now single resident rooms. When walking through the facility you will notice the amount of residents hanging out in the halls and elevator lobby due to a lack of common space. Most of the resident rooms do not meet ADA requirements. The facility does however meet current requirements for Skilled nursing but it is not an ideal setting. For what the facility lacks the current residents feel they receive high quality care from the staff.

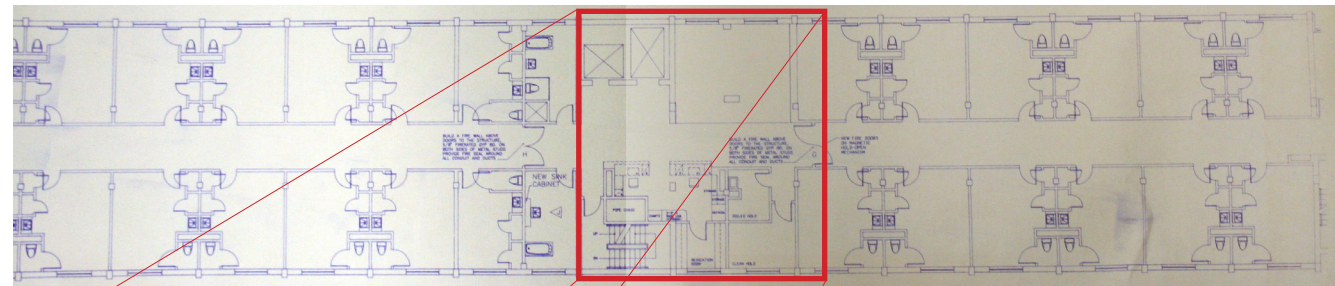
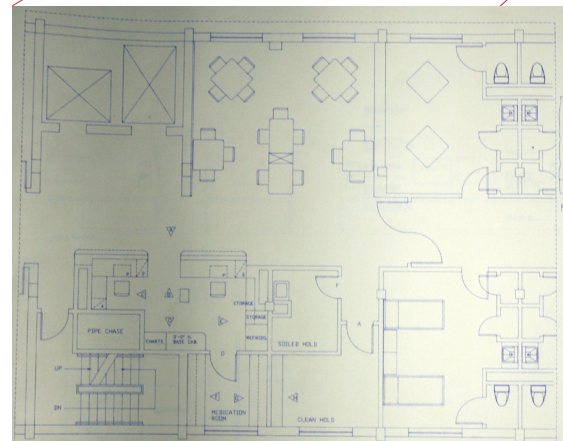


Figure 7.17 - Typical Floor Plan - Skilled Nursing Tower

Plan by Kirkham Michael and Associates 1969



Plan by Kirkham Michael and Associates 1969

Figure 7.18 - Skilled Nursing Services Area
Typical Each Floor



Figure 7.19 - Skilled Nursing - Dining Room

Left: Skilled Nursing of
CCRC Campus
Right: End of Life Care of
CCRC campus



Figure 7.20 - The Monarch

Photo provided by Eastmont Towers Community



Figure 7.22 - The Monarch

Photo provided by Eastmont Towers Community

“The Monarch is a freestanding facility with primary emphasis on hospice to enhance the continuity and quality of hospice care delivered to terminally ill people in the community.” from Eastmont Towers website

This type of facility is designed for End of Life Care also known as palliative care or hospice care. It is designed to give residents a home like feel and The Monarch works with area hospice agencies to provide the level care a resident may need. The focus of a hospice care is to give people with a terminal illness the quality of life and dignity they deserve.



Photo provided by Eastmont Towers Community

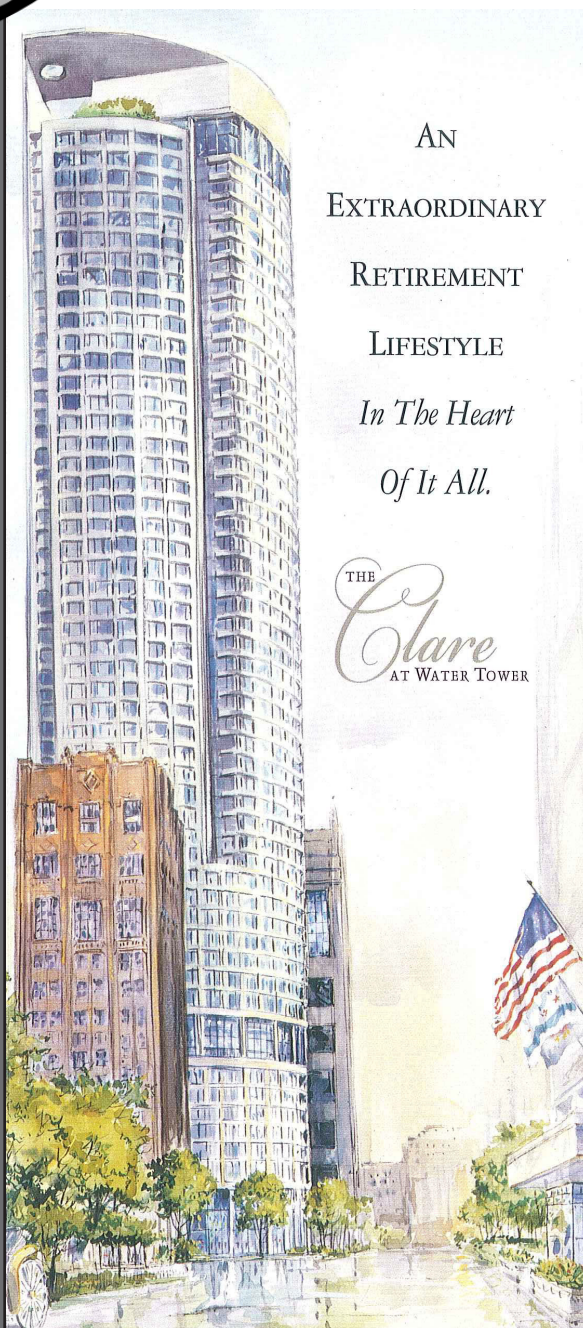
Figure 7.23 - The Monarch



Figure 7.20 - The Monarch - Bedroom

Photo provided by Eastmont Towers Community

Eastmont
Towers Community
Lincoln's Only Continuing Care Retirement Community
6315 "O" Street - Lincoln, NE - 68510



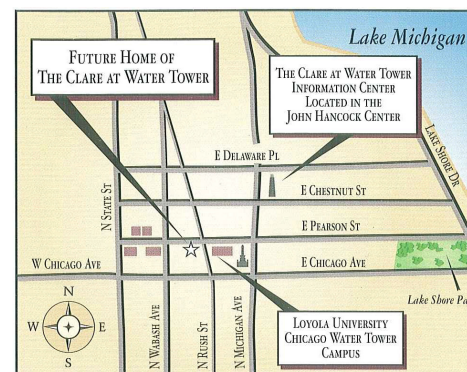
Provided by The Clare at Water Tower Marketing Department

Figure 7.24 - The Clare at Water Tower Rendering

The Clare is one of the first-of-its-kind retirement community and is located in the heart of Downtown Chicago. Most CCRCs are only a few stories and are not typically located in dense downtown areas. This CCRC is designed for an elegant lifestyle that has been compared to resort-like living. On the facing page you will see a plethora of services and amenities that this facility offers. The CCRC also shares its site with Loyola University Chicago which allows the residents easy access to continuing education and lifelong learning. The residents also will gain priority access to the University's activities and events, which could include concerts, lectures, performances, and forums with community.

The residents will have great access to Chicago's Theatre District, Symphony Center and exclusive shopping, dining, and entertainment. An interesting fact is that most of the residents that are moving to The Clare are currently living within a mile of the facility. Most of the residents already live this type of lifestyle and do not want it to change as they age.

The Clare is a not-for-profit community, meaning that all profits will be reinvested into the community. There will be financial benefits due the tax-exempt status which will in return add up to greater savings and tax benefits for the residents.



Provided by The Clare at Water Tower Marketing Department

Figure 7.25 - Location Map



With an unsurpassed attention to detail, The Clare at Water Tower's lifestyle will deliver a host of amenities promoting health and happiness. From concierge services to dining venues that rival some of the city's most renowned restaurants, optimal comfort and convenience will be right at your doorstep.

As a model in sophisticated senior living communities, The Clare will merge metropolitan living with the ultimate accommodations — spacious, maintenance-free apartment homes with breathtaking lake and city views. Each residence will feature the latest in modern conveniences to meet your highest standards.

Within this exhilarating setting and location, you can pursue the best of downtown Chicago — museums and art galleries, five-star restaurants, the nearby Cathedral District and more. Or enjoy enriching activities and lifelong learning opportunities, available on site through Loyola University Chicago.

Providing a framework for your future will be our innovative Life Care concept. Your one-time, 90% refundable entrance fee and predictable monthly service fees will provide independence, security and true peace of mind with guaranteed access to long-term health care options, should they be needed.

The Clare is being designed to satisfy today's progressive Chicago seniors. Part of the Franciscan Communities family, The Clare benefits from more than a century of tradition, along with a mission-driven, values-based vision for the future. Additionally, an affiliation with Loyola University Chicago provides opportunities for shared resources and unprecedented personal growth.

Now you can discover this extraordinary lifestyle in the heart of it all. Call The Clare at Water Tower at (312) 951-5690 or toll-free (866) 951-5690 to explore this exciting new opportunity emerging for your rich, rewarding future.

Provided by The Clare at Water Tower Marketing Department

Figure 7.26 - Marketing Material

Resident Services Include:

- Flexible meal plans in your choice of fine dining venues
- Complimentary continental breakfast
- Weekly housekeeping
- Weekly flat linen service
- Scheduled transportation
- Concierge services
- Banking and postal center
- Controlled access, 24-hour security and doorman
- Planned social events and activities
- Lifelong-learning opportunities
- Access to Loyola University Chicago classes, libraries and special events
- Healthy living activity programming
- All utilities included (except telephone)

Community Amenities Include:

- Fine dining including formal, private and casual venues, as well as a bistro café & juice bar
- Indoor aquatic center
- Barbershop, beauty salon and day spa
- Fitness center
- Landscaped courtyard with walking path
- Social lounge and living room
- State-of-the-art business center
- Performance center
- Creative arts studio
- Formal library
- Art gallery
- Media and computer center
- Serene chapel
- Social club room and rooftop terrace

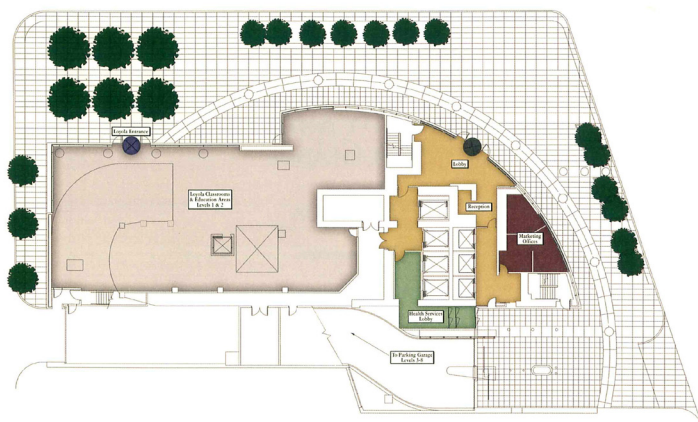


Common Floors

The Clare at Water Tower has 5 floors dedicated for Common Spaces to be used by its residents. The First Floor (Entry Level) is used by Loyola University Chicago and it provides a lobby for the CCRC. The ninth floor has a Fitness Center, Refreshing indoor aquatic center, beauty salon, barbershop, and day spa. This floor provides an outdoor space with a beautifully landscaped terrace.

The seventeenth floor is designed for socializing, it has a social lounge, and private and main dining rooms. As you continue up the tower the nineteenth floor provides residents a state-of-the-art business center, Performance center, Elegant, formal library, arts and crafts studio, media center, and a Serene Chapel. And finally on the fifty-third floor you can go and relax on the roof terrace or enjoy a cocktail in the club room overlooking the city of Chicago.

COMMONS ENTRY LEVEL - *Continuing Education & Lobby*



COMMONS LEVEL NINE - *Spa, Fitness & Garden Areas*



COMMONS LEVEL SEVENTEEN - *Dining Venues & Social Lounge*

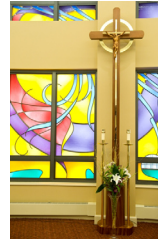


COMMONS LEVEL NINETEEN - *Performance Center, Library & Chapel*



Left: Common Space Levels
Floor Plans
Right: Photos and Renderings
of Common Spaces.

Figure 7.27 - Common Space Floor Plans



THE
Clare
AT WATER TOWER
RUSH AND PEARSON

All Photos are from The Clare at Water Tower
Website. (www.theclareatwatertower.com)



Figure 7.28 - Interior Photos of Common Spaces



*Independent
Living*

Total Independent Living Units The Clare at Water Tower

Unit Name	Unit Description	Floors	# of Units	Sq Ft.	Total SQ Ft/Type	% of Unit/Type
The Versailles	One Bedroom w/ Balcony	21-27	7	774	5,418	4.9%
The Leeds	One Bedroom	21-27	7	822	5,754	4.9%
The Whitehall	One Bedroom w/ Balcony	21-52	32	858	27,456	22.5%
The Inveraray	One Bedroom	21-52	32	872	27,904	22.5%
The Balmoral	One Bedroom w/ Den	21-52	32	935	29,920	22.5%
The Winsor	One Bedroom w/ Balcony	28-52	25	1,078	26,950	17.6%
The Warwick	One Bedroom w/Balcony	21-27	7	1,183	8,281	4.9%
The Kensington	Two Bedroom w/ Balcony	21-52	32	1,209	38,688	33.3%
The Buckingham	Two Bedroom w/ Balcony	21-52	32	1,297	41,504	33.3%
The Stirling	Two Bedroom	21-52	32	1,387	44,384	33.3%
The Hampton	Three Bedroom w/ Balcony	28-52	25	1,709	42,725	100.0%

Figure 7.29 - Chart of Units

	# of Units	% of Total	Accumulated SQ FT
Total One Bedroom	142	54.0%	131,683
Total Two Bedroom	96	36.5%	164,953
Total Three Bedroom	25	9.5%	200,703
Total Units	263	100%	497,339

Figure 7.30 - Chart of Unit Percentage in Facility

Floors 21-27



Figure 7.31 - Residential Floor Plan Floors 21-27

Floors 28-52

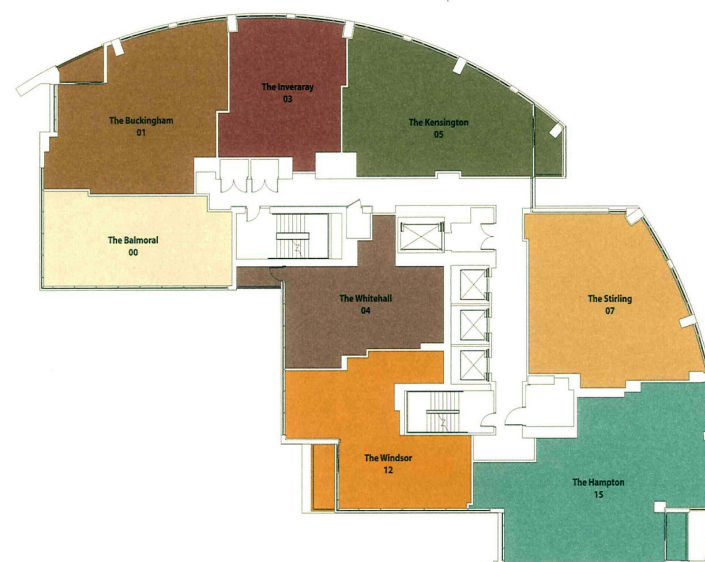


Figure 7.32 - Residential Floor Plan Floors 28-52

*Left: Independent Living
Condo Floor Plans
Right: Independent Living
Condo Unit Floor Plans*

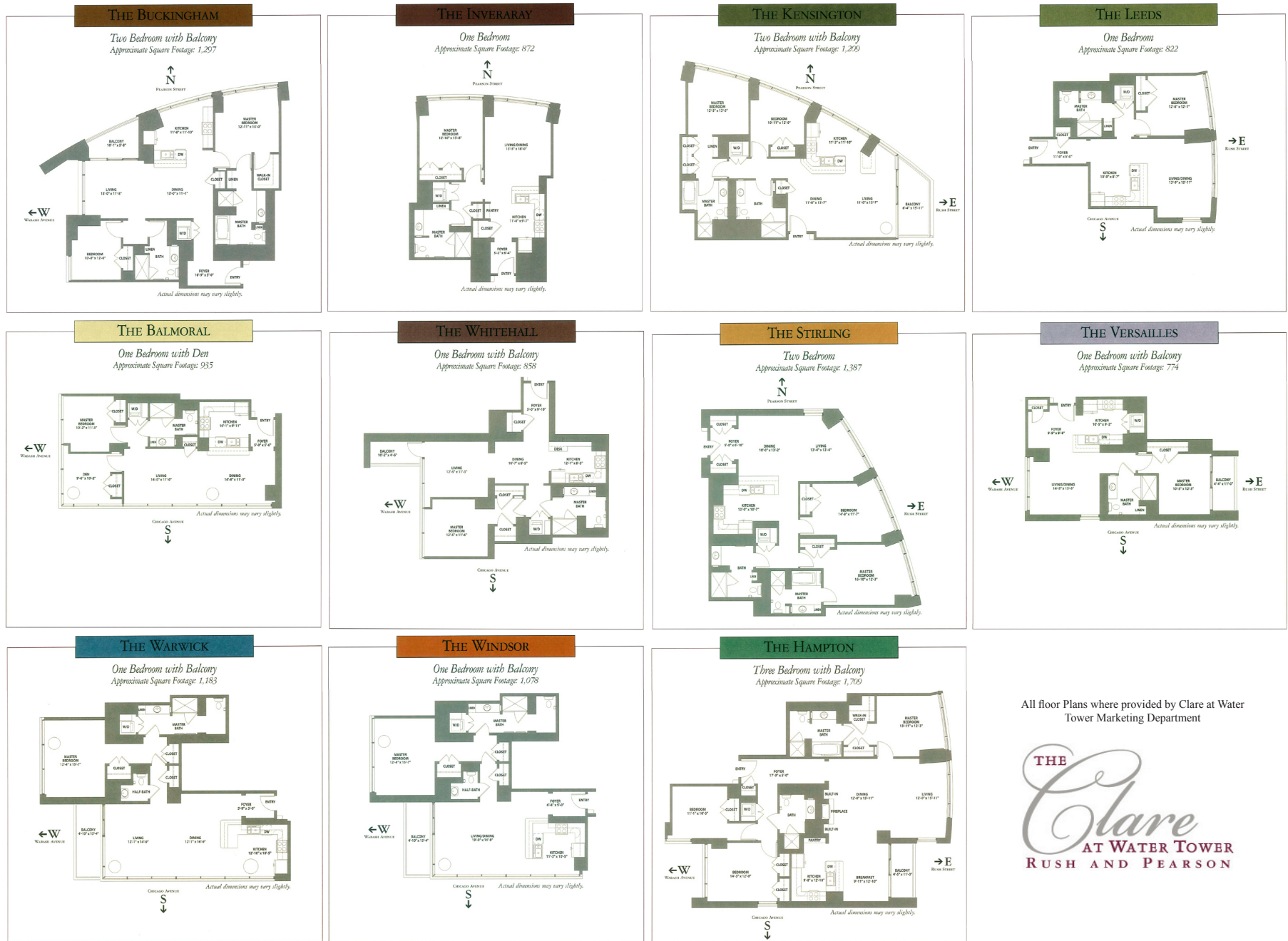


Figure 7.33 - Residential Unit Floor Plans

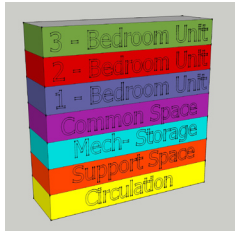


*Independent
Living*



*Left: Independent Living
Condo Interior Photos
Right: 3D model of unit
distribution in CCRC*

Figure 7.34 - Residential Unit Interior Photos



THE
Clare
AT WATER TOWER
RUSH AND PEARSON

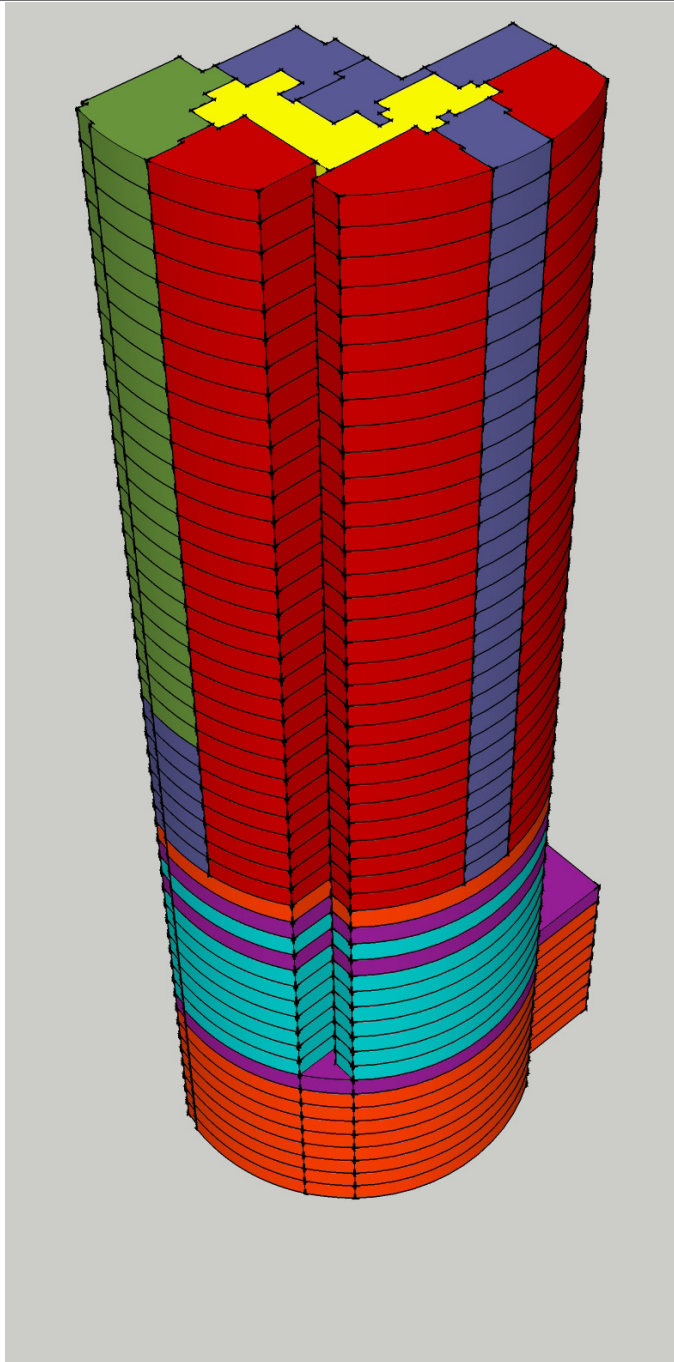


Figure 7.35 - Unit Distribution - North Side of Building

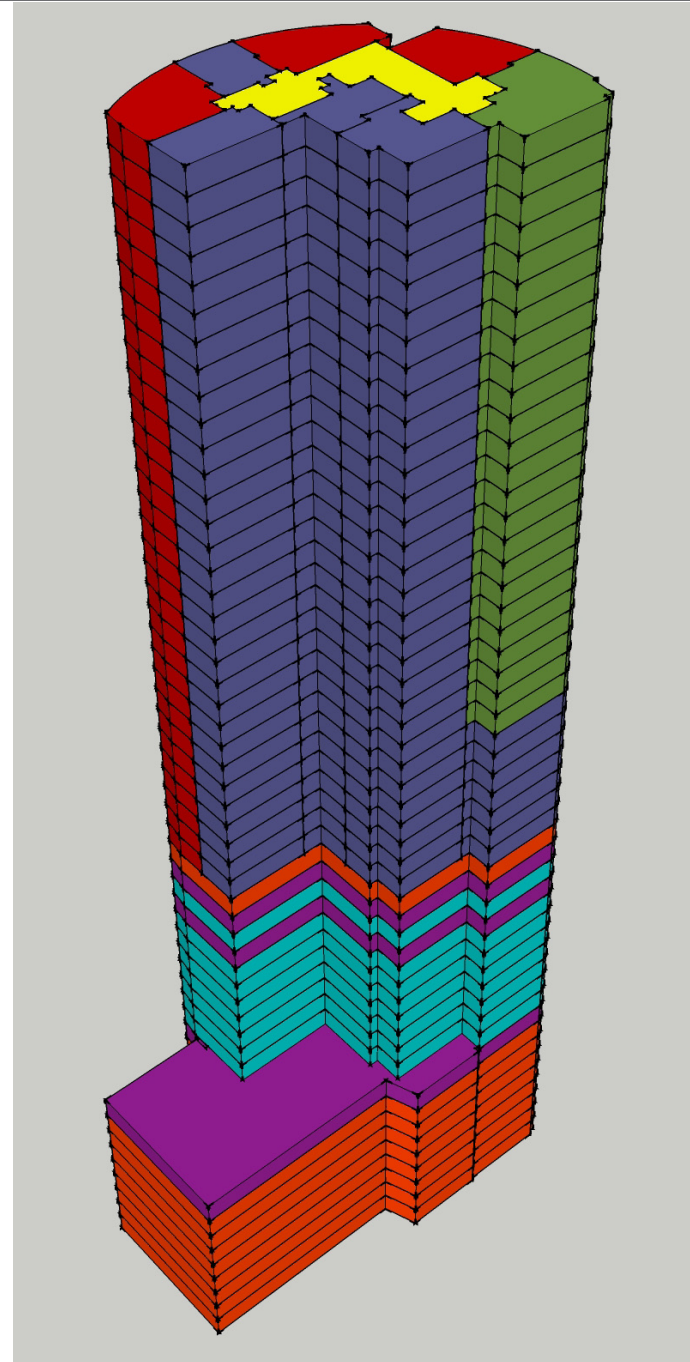


Figure 7.36 - Unit Distribution - South Side of Building



The Wallstreet Tower is a high-end luxury condominium tower. This facility is not a CCRC. This facility was reviewed to gain an understanding of what people are looking for in regards to housing the Omaha downtown area.



Figure 7.37 - Artistic Rendering



Figure 7.38 - Artistic Rendering



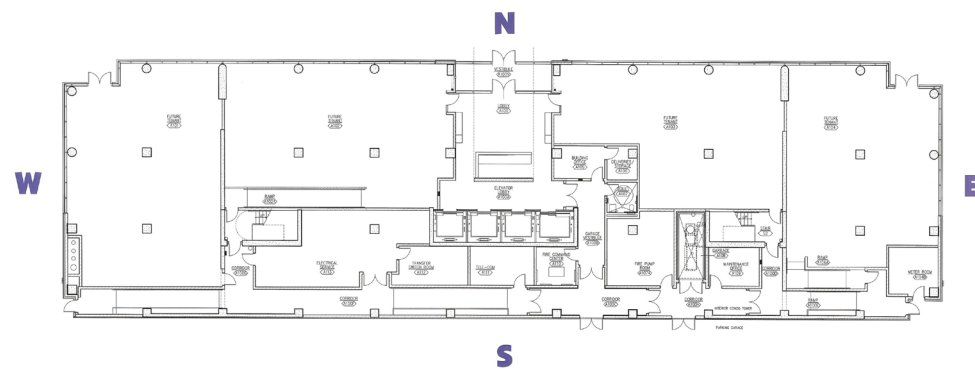
A New Level of Living.

All Photos are from WallStreet Tower Website
(www.wallstreettoweromaha.com)

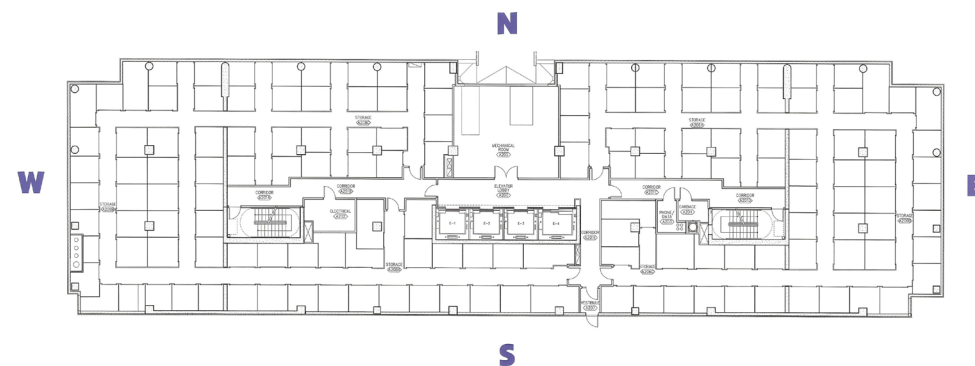
Figure 7.39 - Interior Photos of Units



1ST FLOORPLATE



2ND FLOORPLATE



3RD FLOORPLATE

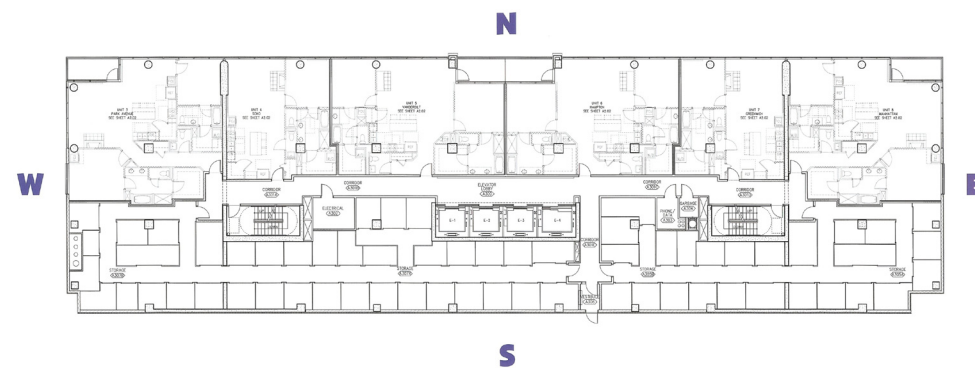


Figure 7.40a - Tower Floor Plans

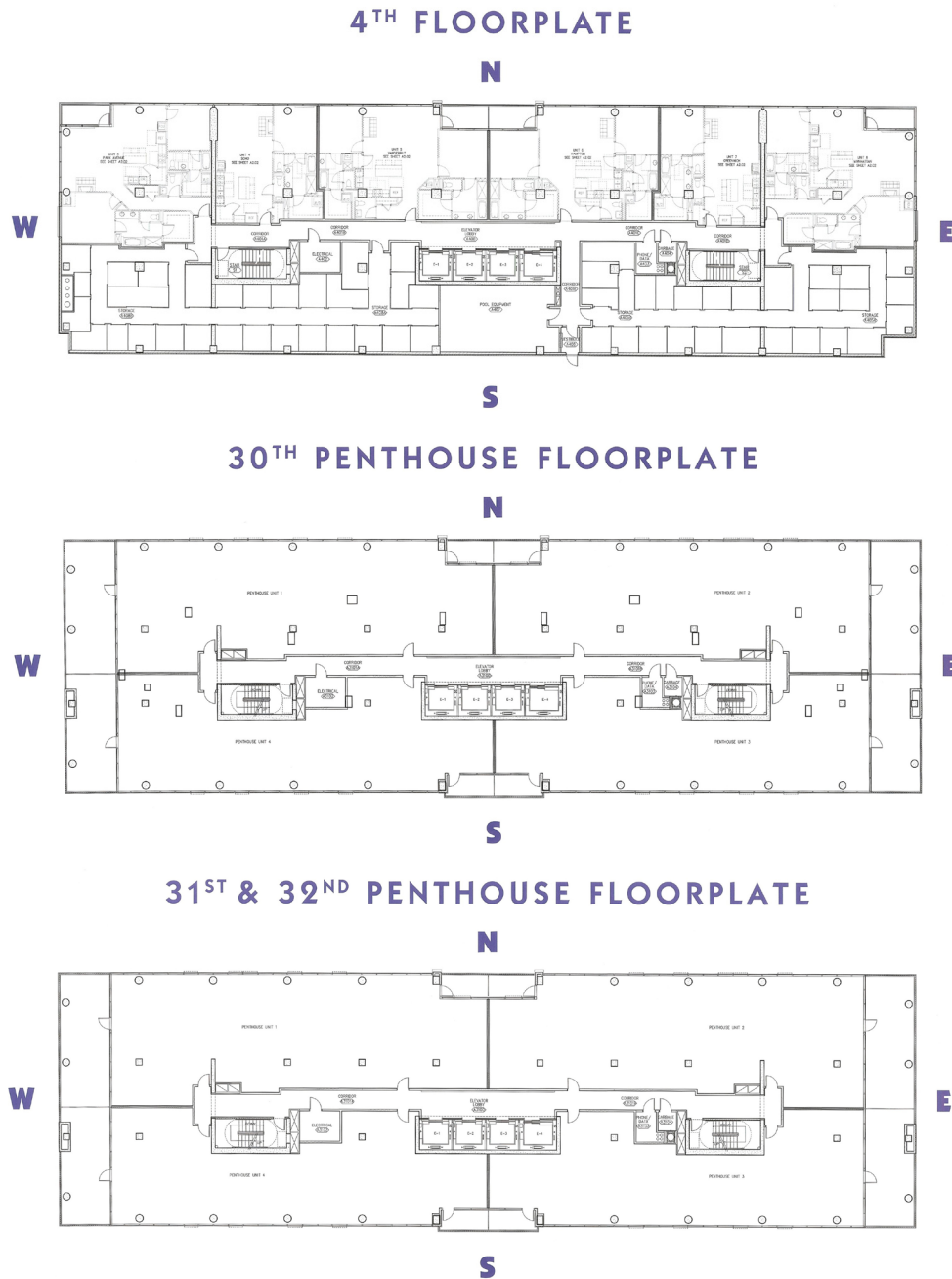
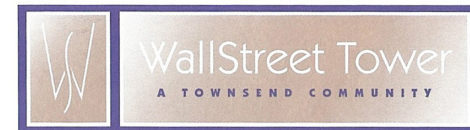


Figure 7.40b - Tower Floor Plans



Figure 7.41 - Artistic Rendering



A New Level of Living.

All floor Plans where provided by WallStreet
Tower Sales & Marketing Center



6TH-29TH FLOORPLATE

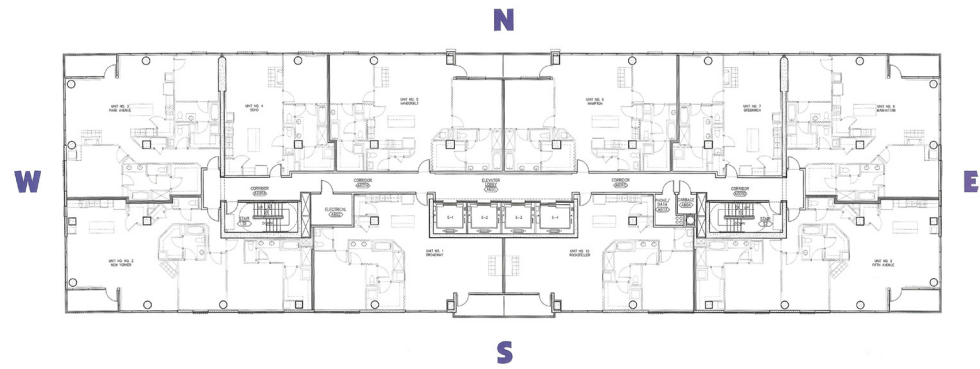


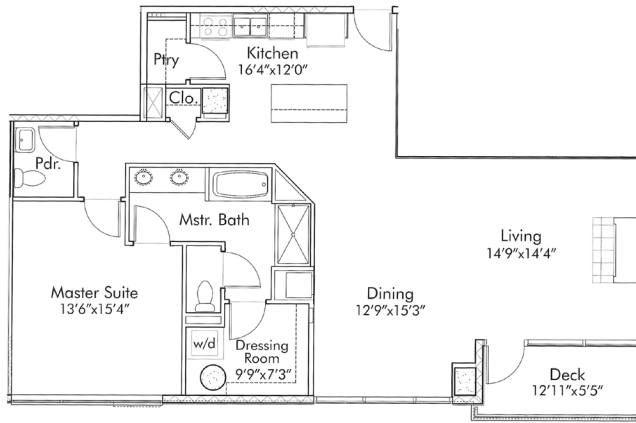
Figure 7.40c - Tower Floor Plan



Figure 7.42 - Interior Photos of Units

BROADWAY 01

1 BEDROOM, 1 1/2 BATH - 1,245 SQ. FT.



NEW YORKER 02

2 BEDROOM, 2 1/2 BATH - 1,642 SQ. FT.

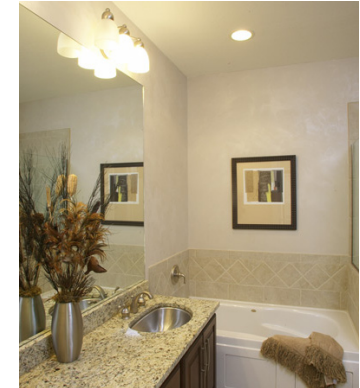
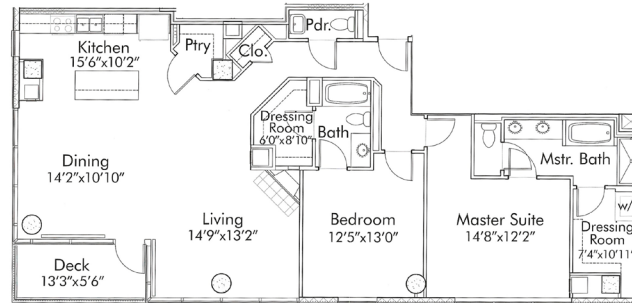


Figure 7.44 - Interior Photo



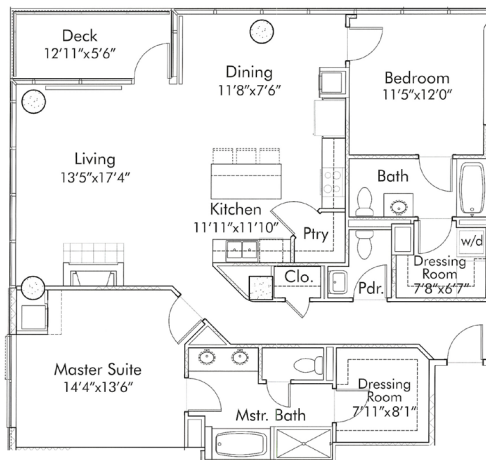
A New Level of Living.

All floor Plans were provided by WallStreet Tower Sales & Marketing Center

All Photos are from WallStreet Tower Website (www.wallstreettoweromaha.com)

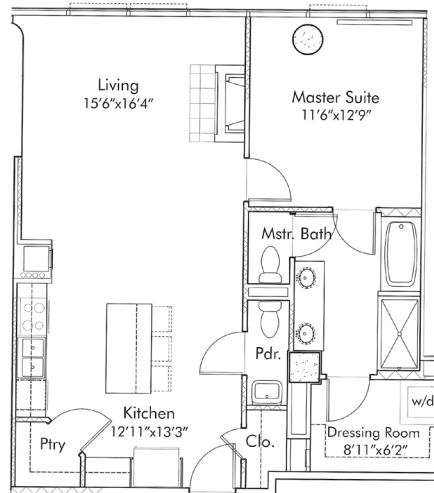
PARK AVENUE 03

2 BEDROOM, 2 1/2 BATH - 1,506 SQ. FT.



SOHO 04

1 BEDROOM, 1 1/2 BATH - 870 SQ. FT.



VANDERBILT 05

2 BEDROOM, 2 1/2 BATH - 1,401 SQ. FT.

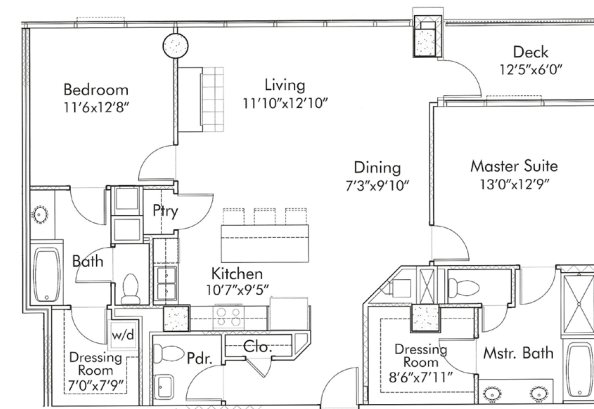


Figure 7.43 - Unit Floor Plans

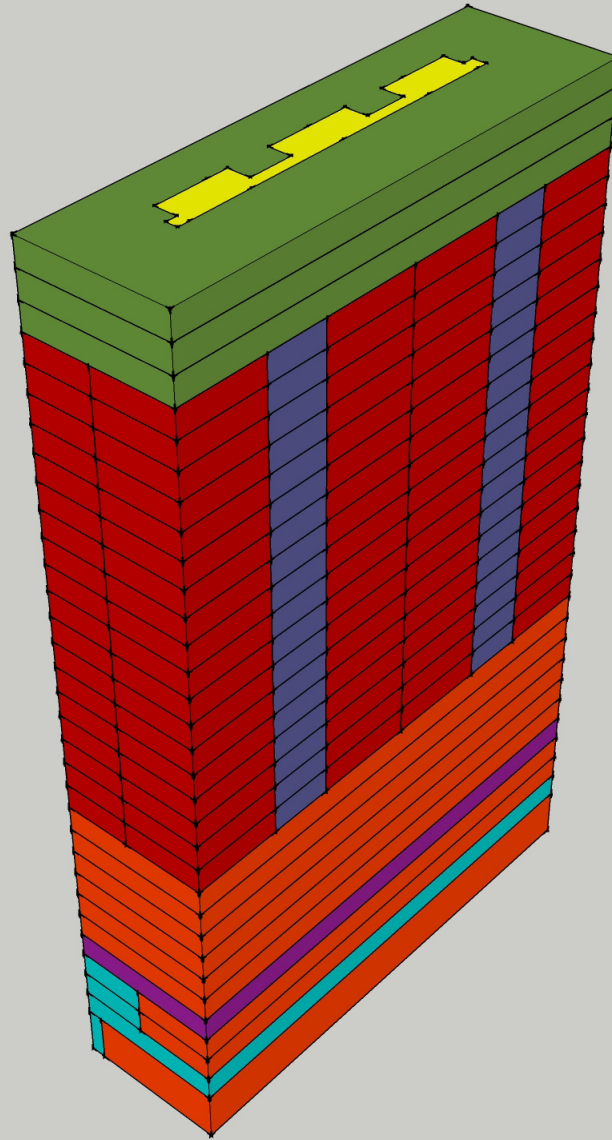


Figure 7.45 - Unit Distribution - North Side of Building

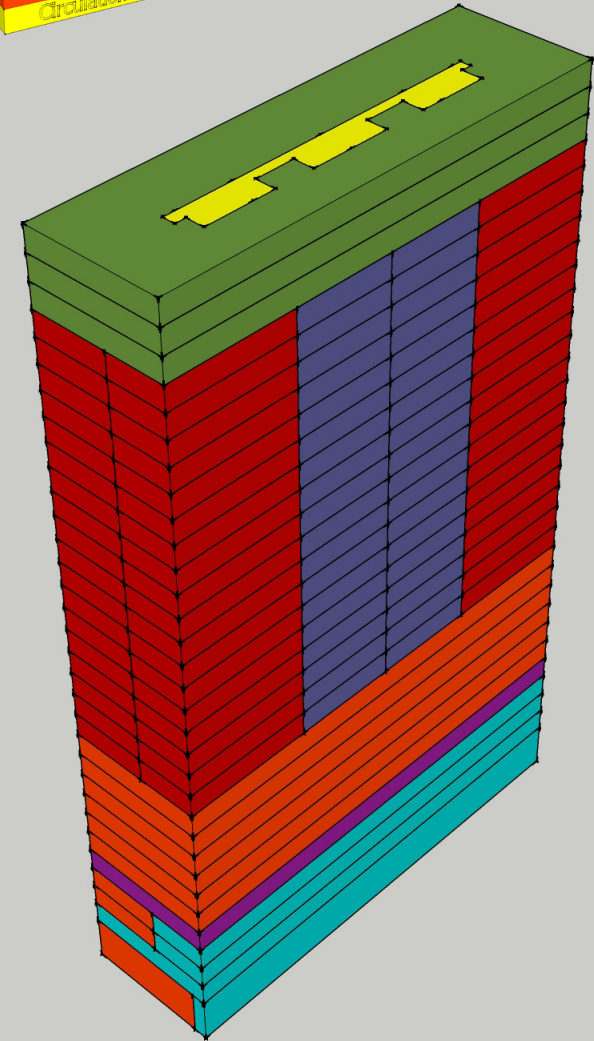
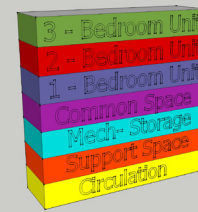


Figure 7.46 - Unit Distribution - South Side of Building

Kohler Demonstration Project

In June 1998, a universal bathroom exhibit was completed at the Kohler Design Center. Designed by Cynthia Leibrock and Mary Beth Rampola, It offers hands on universal design training to 150,000 participants each year. The universal bathroom addresses a lifetime of needs, the future of each visitor to the Kohler Design Center as well as the future of interior design and architecture. It responds to the diversity of our population and our changing needs in each season of life. When we design for the average user, we accommodate only a few people well. Universal design acknowledges that one size does not fit all and that a bathroom must meet the needs of children, people who are tall, wheelchair users, and adults of shorter stature. It must accommodate people who use an assistant, a walker, a scooter, or a stroller. It addresses changes in hearing and vision and, compared to standard bathrooms offers older people increased lighting levels, lower ambient noise levels, ergonomically designed products, and safety features that accommodate reduced reaction times. Most important, the universally designed bathroom prevents institutionalization by facilitating home health care and aging in place.

The exhibit demonstrates that universal design is also invisible, never stigmatizing its users or pointing out their physical differences. Listed below are features that were visually integrated into the design:

1. Turnaround space: (shown by a graphic in the floor). A 60- by 60-in. turnaround space provides enough room to maneuver with strollers, scooters, crutches, canes, walkers,

and guide dogs.

2. Transfer space. Clear floor space adjacent to the toilet allows parents room to help children. Attendants use the space to help older family members, and people in wheelchairs use the space to transfer to the water closet.

3. Lavatory area. The lavatory and mirror are installed outside of the shower area to keep the mirror from fogging or being sprayed by the handheld shower. For children in wheelchairs, a 36- by 48-in. clear floor space extends under the lavatory. Children have less coordination and actually need more room to maneuver than do adults, who need only a 30- by 48-in. clear floor space. A vanity stool can be used in this space by ambulatory family members who prefer to sit while using the lavatory. A lightweight stool on legs with glides is more stable than a stool on casters.

4. Adjustable-height lavatory. With this installation, the counter can be adjusted between 25 in. and 42 in. a.f.f. to meet the needs of tall users, adults of shorter stature, children, and seated users. The flexible waste and supply pipes are positioned to prevent burns. No sharp or abrasive surfaces that could injure a seated user project below the lavatory. Clearance for wheelchair footrests extends the full depth of the lavatory. For people with allergies or chemical sensitivities, solid-surface vanity tops are preferable to laminates adhered to pressboard or particle board, which may off gas formaldehyde. The horizontal finishes were chosen in light colors to increase ambient

light levels, thereby improving visual acuity. For people with vision differences, the edge of the lavatory area is identified by a handrail. The handrail also provides support for standing users, a grip for people repositioning a wheelchair, and a place to hang towels.

5. Lavatory controls. The levers can be easily controlled with one hand. They are cued with large markings in red and blue to identify water temperature. Aerating nozzles on taps reduce ambient noise levels; water pressure can be reduced to further quiet the flow. Quieter faucets serve people with a wide range of hearing abilities. People with speech differences who need to be clearly heard and people with reduced vision who depend on their sense of hearing also appreciate lower ambient noise levels.

6. Mirrors. The mirror, at 40 in. a.f.f., can be used by a seated user or an adult of shorter stature. A tilted mirror should not be specified because it distorts the image of the user.

7. Removable cabinets. Each cabinet under the counter is designed as a totally removable freestanding unit. Removable cabinets make the home easier to sell by offering access to a wider market, including people who use mobility aids. A movable cabinet under the sink can serve as a cart between the counter and tub or toilet, perhaps to store equipment for the bowel and bladder program.

When the cabinet is moved out, the space under the counter is clear for seated users and the top of the cart can serve as extra counter space. The cabinet has locking casters and a top rail to prevent items from sliding off. Dividers are added to the cabinet for people who are blind, who are

helped by having specific places to put each item. Each storage area is labeled so sighted people can put things back correctly. Medications are stored in a locked drawer that is within reach of wheelchair users but not accessible to children. On all drawers, (-grip handles are horizontal and centered.

8. Toilet and shower grab bars. Grab bars are installed at 33-36 in. a.f.f. on all sides of the roll-in shower. For the easiest approach to the toilet, grab bars are located behind it and on one side. The grab bars will not chip or injure users with sharp or abrasive edges. They do not rotate within their fittings. A textured finish is applied for a sure grip.

9. Bathtub grab bars. A grab bar is often used by bracing the forearm between the bar and the wall for support. For this reason, install the grab bar exactly 1>1 in. from the wall to prevent the entire arm from slipping through the gap. One horizontal grab bar is installed at the foot of the tub when a tub seat is used at the head. Two horizontal grab bars are placed on the long wall, one 9 in. above the tub and the other 34 in. a.f.f.



Photo: Kohler Co. Designers: Cynthia Leibrock, Easy Access, and Mary Beth Rampola, Eva Maddox Assoc.

Figure 7.47 - Kohler Universal Bathroom

10. Shelving. Upper shelves are of tempered glass or clear plastic to make the contents more visible by children, wheelchair users, and adults of shorter stature. Four heights of hooks are installed adjacent to the shelves.

11. Accessible shower. A shower is quicker, easier, and safer to use than a bathtub (see Details on pages 165 and 227). This shower can be used from a shower wheelchair or by a standing user. The corner shower is open on two sides to allow access from more than one direction. The wheel-in 'shower floor is sloped rather than curbed, as a curb may block wheels or become a tripping hazard. A 2 percent slope to the drain is sufficient; a steeper slope makes it too difficult to maneuver a shower wheelchair or gurney. The many joints of the ceramic mosaic floor tile reduce slippage.

12. Shower control. The shower system features temperature and surge controls that ensure a safe flow. The water can be set so that it will not burn a child if the control accidentally bumped. The pressure-balancing feature prevents a surge of hot water that could burn a person with sensation limitations.



Photo: Kohler Co. Designers: Cynthia Leibrock, Easy Access, and Mary Beth Ramo, Eva Maddox Assoc.

Figure 7.48 - Kohler Universal Bathroom

13. Handheld shower adjacent to the toilet. The fixture is ideal for use from a shower wheelchair or for cleanup after using the toilet. It can also be clipped to an adjustable height bracket for use as a conventional shower

by a tall standing user, person of shorter stature, or child. The vertical adjustment does not obstruct the grab bars. The valve will not catch the shower hose and requires only one hand to regulate water flow and set the desired temperature.

14. Towel bars are offered in four heights and should be reinforced to withstand emergency use as grab bars. Bathroom walls should be reinforced from floor to ceiling with $\frac{1}{2}$ -in. plywood or with wood blocking installed between the studs.

15. Shower wheelchair. After one transfer to a shower wheelchair, the user can roll into the shower, under the lavatory, or over a toilet.

Multiple transfers to a seat in the shower or to the water closet are not required. With the wheels locked over the toilet, the chair can also be used by a standing person with strength limitations who needs an

elevated toilet seat with arms. There is a gap between the two seats and an opening in the front for digital manipulation or for emptying a leg bag. Shower wheelchair storage is also discreetly provided.

16. Shower curtain. The shower is planned with curtains rather than doors, which take up floor space. ceiling-mounted shower curtains have a clean appearance, especially when they curve around two sides of the shower.

17. Shower caddy: To prevent soap, shampoo, and accessories from slipping out of reach, a shower caddy is used. It drains easily and will not rust. A second caddy is installed at a height suitable for children or people of shorter stature.

18. Bathtub. The bathtub has a gently sloping flat (not rounded) bottom for stability. The floor of the tub is slip resistant. The handles can be grasped for entry or exit. The color contrasts with the surroundings to improve visual acuity, and the vertical stripe visually bends at the surface of the water to assist people with vision limitations.

19. Bathtub controls. The lever-type faucet and drain control are easy to operate. Controls are installed toward the approach side.

20. Bathtub seat. A soak in the bathtub relieves pain for many people,

but standard bathtub design can make entry and exit difficult. For this reason, a seat is installed at wheelchair seat height, but a standing user can also transfer from it. The edge of the seat is installed flush with the top of the tub; this makes it easy to slide slowly into the tub from the seat with the help of the adjacent grab bars.

21. Handheld shower adjacent to the tub. This shower can be used from the seat for a quick cleanup, to help shave legs and wash hair, and by people who do not have the strength to lower themselves into the tub. It can assist all bathers with washing and rinsing, and can be used to bathe a child in a child seat or on a bathing table.

22. Toilet. An elongated toilet installed at a 17-in. height makes transferring or aligning with the shower wheelchair easier than other toilet types. A wheelchair user can also transfer directly at this height, and the flush lever is on the approach side. The quiet toilet serves people with a wide range of hearing abilities. People with speech differences who need to be clearly heard and people with reduced vision who depend on their sense of hearing also appreciate lower

ambient noise levels. For a quiet water flow, specify pipes with as large a cross section as possible.

23. Toilet seat. The flat lid is more comfortable to lean against than one that is crowned or dished. The toilet seat is securely installed, but it



Photo: Kohler Co. Designers: Cynthia Leibrock, Easy Access, and Mary Beth Rampola, Eva Maddox Assoc.

Figure 7.49 - Kohler Universal Bathroom

can always be replaced by an elevated seat if necessary. The seat must not be sprung to return to a lifted position, but it should remain up independently when raised. Men with hemiplegia or one hand only do not have a free hand to hold up the toilet seat while using the toilet.

24. Toilet tissue dispenser. One dispenser is installed at least 19 in. a.f.f. and yet low enough so that grab bars do not interfere with its use. It is installed 7 in. in front of the toilet. The toilet tissue holder must permit continuous paper flow and be usable with one hand. Dispensers that require users to reach into a hole to initiate paper flow must be avoided, and no dispenser should have a sharp or serrated edge. A second tissue dispenser is provided for a constant supply and lowered for use by children (2 to 6 in. above the toilet seat). The cover protects the tissue from the handheld shower.

Kohler Demonstration Project is from Design Details for Health: Making the Most of Interior Design's Healing Potential by Cynthia A. Leibrock

Conclusion

Precedents are used to do internal studies of a building type. Two of the buildings that were chosen in this section are CCRC projects, one in Chicago and the other in Lincoln. They both were chosen as examples of how different a CCRC can be. The Chicago Tower is built as a 52 story building in the heart of downtown Chicago and gives a resident resort-like living. On the other hand, the Lincoln project, Eastmont Towers, was built in rural area and the city grew around it, and the building is only 5 stories tall. This is a typical project with a 1960s nursing home and as the years go by they add new services and levels of care. Eastmont Towers is now a full CCRC and has some issues with staying competitive with facilities like the one in Chicago.

The third project reviewed is the Wallstreet tower, scheduled to be built in 2009 in downtown Omaha. These condominiums are not a retirement community but they do offer high-end housing and were used as a basis for the type of condominium design seniors moving into the downtown area would want. Finally, universal design is a very important concept for this proposed facility. The Kohler demonstration project showcased 24 important guidelines for universal design that should be incorporated in all bathrooms and kitchens. Some of the Universal design aspects like grab bars can be planned for now and added at a later time when the resident is ready to have them in place.

Each precedent had findings that were used to design the proposed facility. The first precedent reviewed was Eastmont Towers Community and as seen in Figure 7.2 this is a CCRC campus, there are multiple buildings each having its own functions and housing a different level of care. Some findings are:

- The assisted living facility was the newest addition to the campus; they had a few spaces that were under utilized by the residents. For example, the Game Room (Figure 7.15) and the Atrium Space (Figure 7.13) are said to be rarely used. The later space had acoustic problems and residents did not want to occupy the space.
- The assisted living facility had the typical functions like the Central bath (Figure 7.11) and Whirlpool (Figure 7.14)
- The assisted living facility has an Ice Cream Parlor and was said to be fairly popular with the residents.
- The Independent living building, the Saratogo, was an early addition to the campus and is starting to show its age with older interior spaces that are in a need of updating. This building is very similar to a typical apartment low-rise building. There are very few rooms in this building that suggest that this is an independent living facility and not just another apartment complex. Some of the differences is that there are a dietitian and medical offices on the lower floor and also a kitchen and small dining room.
- The Nursing home part of the campus is the oldest building which was built in the 1960s. The patient's rooms are still dual occupancy and it is increasingly harder to fit all of the new medical technology into the patient rooms.
- The nursing home had no common spaces for residents to go to, the facility converted on unit into a lounge for the residents but it is barely ever used.
- The Monarch was finished in 2003 and is an End of Life care facility. The benefit of this facility is that the Monarch is furnished to feel like home and was to design to residents with terminal illnesses the quality of life and dignity they deserve.

The second facility reviewed in the precedents section is The Clare at Water Tower. This facility was chosen because of its building type and location within the city of Chicago.

- This facility has five floors dedicated to common space for the residents (Figure 7.27) some of the included spaces are a state-of-the-art business⁰⁹

center, Performance center, formal library, arts and crafts studio, media center, and a Serene chapel. (Figure 7.28)

- The facility offers great views of downtown Chicago as seen in Figure 7.34.
- The Clare at Water Tower has eleven different independent living units. (Figure 7.33) In Figure 7.29 a chart of how many of each unit and the size is listed. This chart was used to help determine the size of the proposed facility's units. Figure 7.30 is a chart of the percentage of units per type in the unit.
- The facility is said to be resort like living with great amenities both offered within and outside the facility.
- This facility is like typical CCRCs and has separate floors for the different levels of care and the resident is forced to move to different floors as their level of care changes. Floors 21-52 are designated as independent living and the lower floors are setup as either Skilled nursing or Assisted living.
- The unit distribution was modeled in Figures 7.35 and 7.36. This was used to help determine the distribution of the units in the proposed facility.

The final building reviewed in the precedents section was the Wallstreet Tower. This building is currently under construction in downtown Omaha and is promotes as high end luxury condo living. This building is not a retirement community.

- The building is 32 stories and has five different spacious units (Figure 7.43).
- The building was reviewed to get an understanding of what residents moving to downtown Omaha are looking for.
- The unit layout and distribution (Figures 7.45 and 7.46) was review and used to help determine the distribution of the unit layout in the proposed facility.

Finally the last precedents study was not a building but guidelines for building universal design bathrooms. The project that is demonstrated is Kohler's Universal Design Bathroom. All 24 features are important to consider when designing a universal design bathroom:

- Turnaround Space
- Transfer space
- Lavatory Area
- Adjustable Height Lavatory (Figure 7.47)
- Lavatory Controls
- Mirrors
- Removable Cabinets
- Toilet and Shower grab bars
- Bathtub grab bars
- Shelving

- Accessible Shower
- Shower controls
- Handheld Shower adjacent to the toilet
- Towel bars - reinforced to withstand emergency use as a grab bar
- Shower wheel Chair
- Shower Curtain in lieu of shower doors
- Shower Caddy
- Bathtub design, Controls, and Seat
- Toilet, Seat, and Toilet Tissue dispenser

Architectural Program

The architectural program has been developed by using information from the earlier study and assessment of a CCRC in the Omaha Area. Multiple factors influence the architectural program; for example, the number of units the facility could sustain had to be determined by the feasibility study. Since the study determined with a minimal risk that there could be at least 5% of the trade area could be considered as potential residents for the proposed CCRC, allowing the facility to have 200 units.

The precedents served as a basis to figure out how many units of each type should be located in the facility and how to distribute the units throughout the building. The distribution pattern is shown in the unit distribution models in the precedents section pages 95 and 102. The distribution was transferred to a table (Figure 7.29) to show how many units of each type and the percentage (Figure 7.30) of the building composed of that unit. Those percentages were then used to distribute the 200 units for the proposed facility, thus formulating the numbers found at the top of the table on the right page. The rest of the square footage and number of rooms needed were based on experience with this project type and reviewing guidelines like that AIA Design Guidelines for Healthcare Facilities. The Architectural program will give the architect an outline to what should be included in the building.

CCRC Architectural Program

Residential Living Units

Apartments	# of Units	Sq. Ft.	AREA (sq. ft.)
One Bed	108 @	840	90,707
Two Bed	73 @	1,092	79,720
Three Bed	19 @	1,680	31,939
Subtotal	200		202,367
Total (Gross)	@	1.3	263,077

This 1.3 factor is standard for this building type and construction, and includes mechanical, electrical, communications, trash/recycling, and vertical and horizontal circulation spaces required.

Common Areas

Public Areas			
Lobby	1 @	800	800
Vestibule	1 @	150	150
Reception	1 @	100	100
Public Toilets	1 @	450	450
Mailboxes/ Package Room	1 @	300	300
Subtotal			1,800

Resident Areas

Dining for	400 @	16	6,400
Private Dining	40 @	20	800
Multipurpose Room	1 @	2,400	2,400
Gathering Lounge	1 @	1,200	1,200
Coatroom	1 @	75	75
Gift Shop	1 @	400	400
Store	1 @	200	200
Snack Bar/ Grill	1 @	800	800
Meeting Rooms	1 @	600	600
Library	1 @	600	600
Barber/Beauty Salon w/ Toilet	1 @	500	500
Billards/ Game Room	1 @	350	350
Activity/ Art Room	1 @	350	350
Health Spa/ Exercise	1 @	600	600
Pool/ Changing	1 @	2,800	2,800

Architectural Program

Greenhouse	1 @	150	150
Workshop	1 @	400	400
Resident Council Room	1 @	600	600
Resident Bank	1 @	600	600
Guest Suite	4 @	550	2,200
Misc. Toilets	1 @	300	300
Subtotal			22,325

Ambulatory Clinic

Reception/ Nurse Office	1 @	300	300
Exam Room	4 @	100	400
Specialty Exam/Treatment	2 @	150	300
Medical Director	1 @	150	150
OT/PT Suite	1 @	1,200	1,200
Toilets	4 @	50	200
Lab/Workroom	1 @	300	300
Records/ Workroom	1 @	300	300
Subtotal			3150

Central Administraton

Executive Director	1 @	250	250
Assistant Director/ Nursing Home Admin	1 @	150	150
Dir. Of Social work. Admissions	1 @	125	125
Dir of Finance	1 @	125	125
Dir. Of Development	1 @	125	125
Dir of Housing	1 @	125	125
Chaplain	1 @	125	125
Waiting	1 @	100	100
Business Office	1 @	200	200
Secretaries	1 @	225	225
Marketing Office	1 @	150	150
Marketing reception/ waiting	1 @	150	150
Human resources office	1 @	100	100
Human Resources waiting	1 @	150	150

Workroom/ Copy/ supplies	1 @	150	150
Conference	1 @	200	200
Staff toilet	4 @	50	200
Subtotal			2,650

Service/ Support

Kitchen	1 @	3,200	3,200
Dir of Food Service and Asst. Food Service	1 @	175	175
Dir of Housekeeping	1 @	125	125
Training	1 @	300	300
Plan Manager/ Asst. Plant Manager	1 @	200	200
Maintenance Shops	1 @	600	600
Central Storage	1 @	800	800
Resident Storage	1 @	3,000	3,000
Staff Locker Room	2 @	300	600
Staff Lounge/ Cafeteria	1 @	500	500
Housekeeping	1 @	600	600
Res. Floor Med Storage	9 @	200	1,800
Med Support (1/Res. Floor)	9 @	350	3,150
Body Holding	1 @	100	100
Cart Wash	1 @	100	100
Trash Holding	1 @	150	150
Recycle Holding	1 @	150	150
Central Laundry	1 @	800	800
Mechanical	1 @	3,000	3,000
Subtotal			19,350

TOTAL Commons Net Area 49,275

TOTAL COMMONS (Gross) 1.40 68,985

BUILDING TOTAL Net Area 251,642
 BUILDING TOTAL (Gross) 332,062

This 1.4 factor is standard for this building type and construction, and includes mechanical, electrical, communications, trash/=-, and vertical and horizontal circulation spaces required.

Conceptual Design

Conceptual Design

The site concept as pictured in Figure 9.1 by HDR, Inc suggests the north downtown Omaha area will be a mixed use area with entertainment district, office district, Artist live-work district, mixed-use district, Riverfront development, and a connection to Creighton University. The rendering in Figure 9.4 shows a vision for Cumming Street which will help slow the destination traffic to and from Epply Airport and the Interstate through the area. Cumming Street is proposed to be the heart of North Downtown and will be known for its multiple storefronts, sidewalk cafes, streetscape amenities and active street life.

Webster Street is proposed to be a pedestrian corridor linking Creighton University to the Riverfront and Bob Kerry Pedestrian Bridge. Webster Street as depicted in Figure 9.5 will link Creighton's soccer field with the new College World Series Ball Park and the Riverfront with enhanced streetscape amenities. This will encourage, street-level retail, restaurants, and entertainment related uses. As seen in Figures 9.2 and 9.3 street sections the buildings adjacent to the proposed site are expected to be 3-4 stories. This is why it will be important to step back the building facades after it reaches above 3-4 stories.

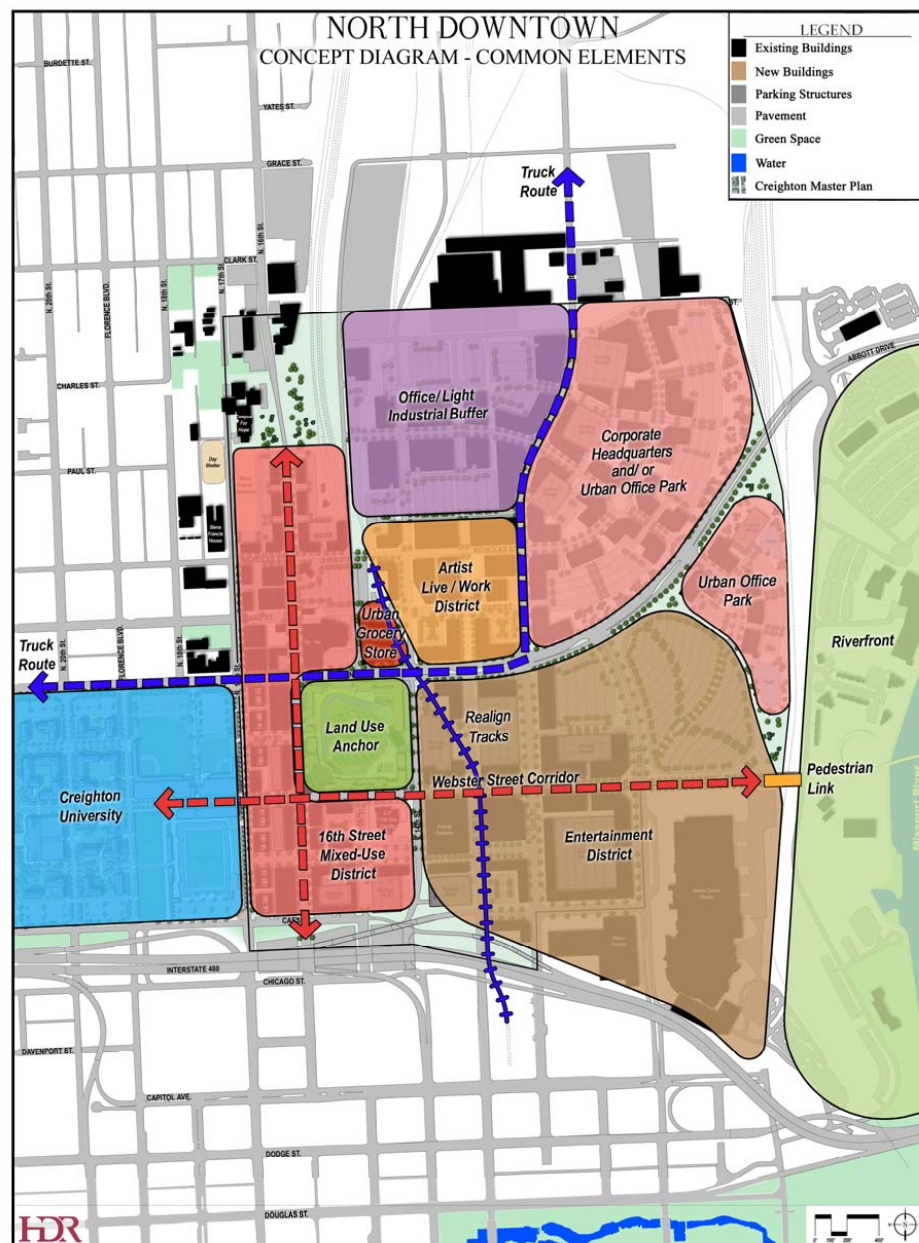
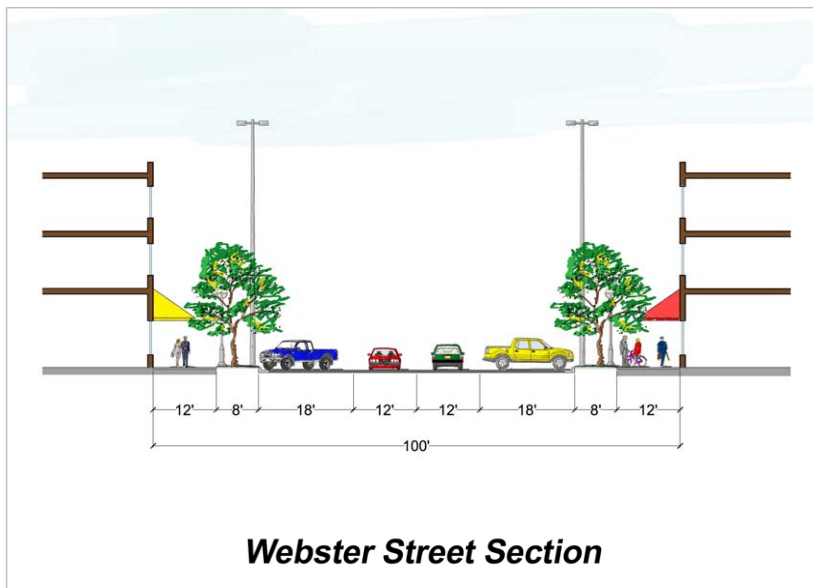


Figure 9.1 - North Downtown Concept Diagram

Map by HDR, Inc.



Webster Street Section

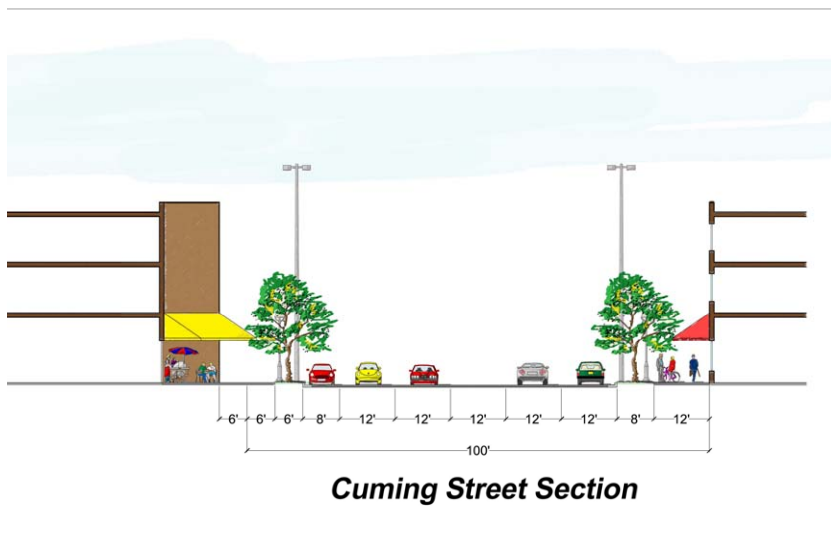
Figure 9.2 - Street Section

Graphic by HDR, Inc.



Figure 9.4 - Proposed Rendering for Cumming Street

Rendering by HDR, Inc. From North Omaha Downtown Masterplan



Cumming Street Section

Figure 9.3 - Street Section

Graphic by HDR, Inc.



Figure 9.5 - Proposed Rendering for Webster Street

Rendering by HDR, Inc. From North Omaha Downtown Masterplan

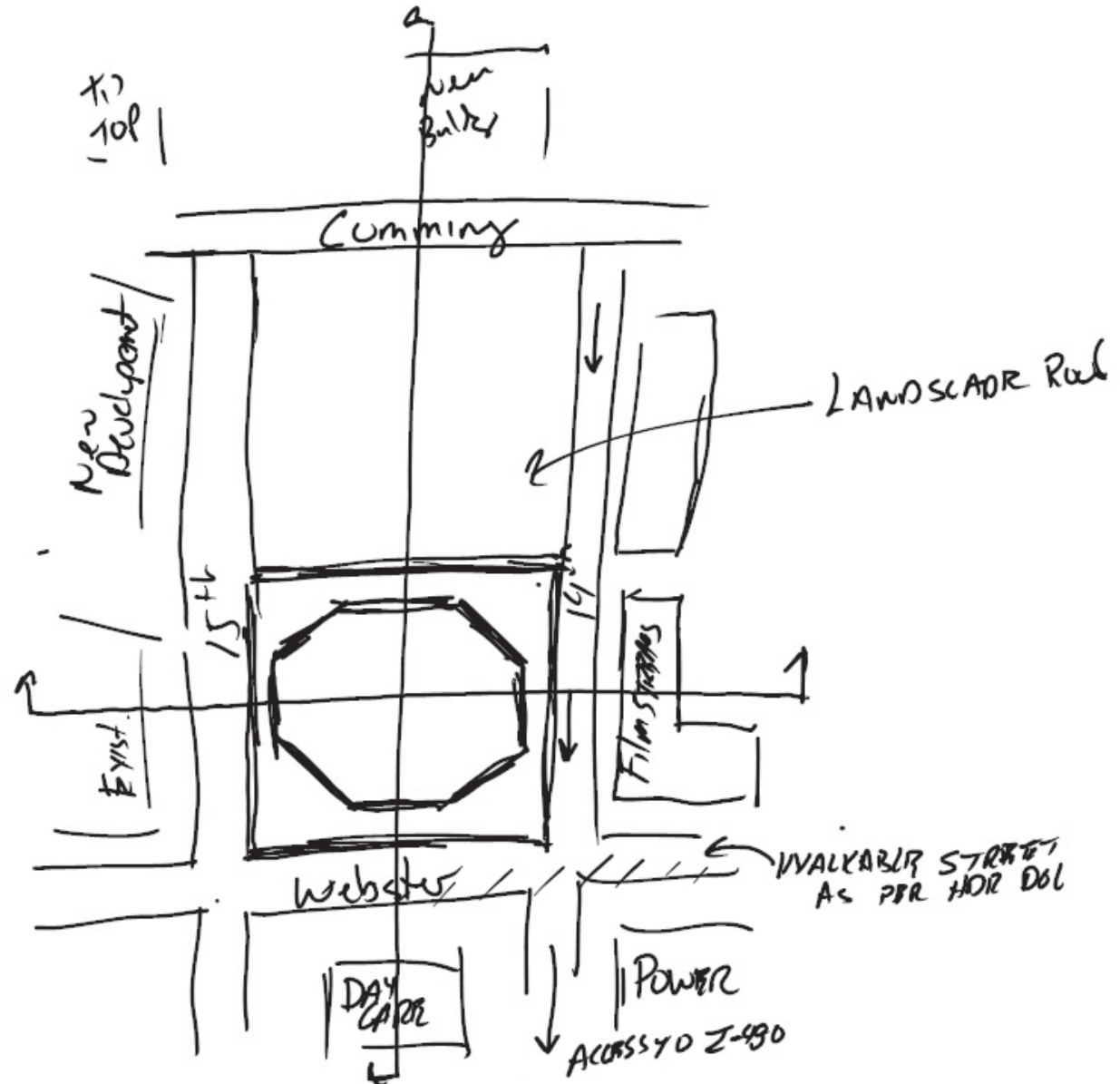


Figure 9.6 - Building Napkin Sketch - Site Plan

The initial design sketches for the site are shown in Figures 9.6 and 9.7. These sketches depict what the designer first envisioned for the site. The first idea was to locate the main entrance for the residents on Webster Street due to it being a pedestrian corridor. All of the vehicle traffic would enter from or nearby the Cuming Street side. In Figure 9.7 two sketches of sections through the site reveals the designers intent to step back the building to give the illusion to pedestrians that the building is only 3-4 stories tall.

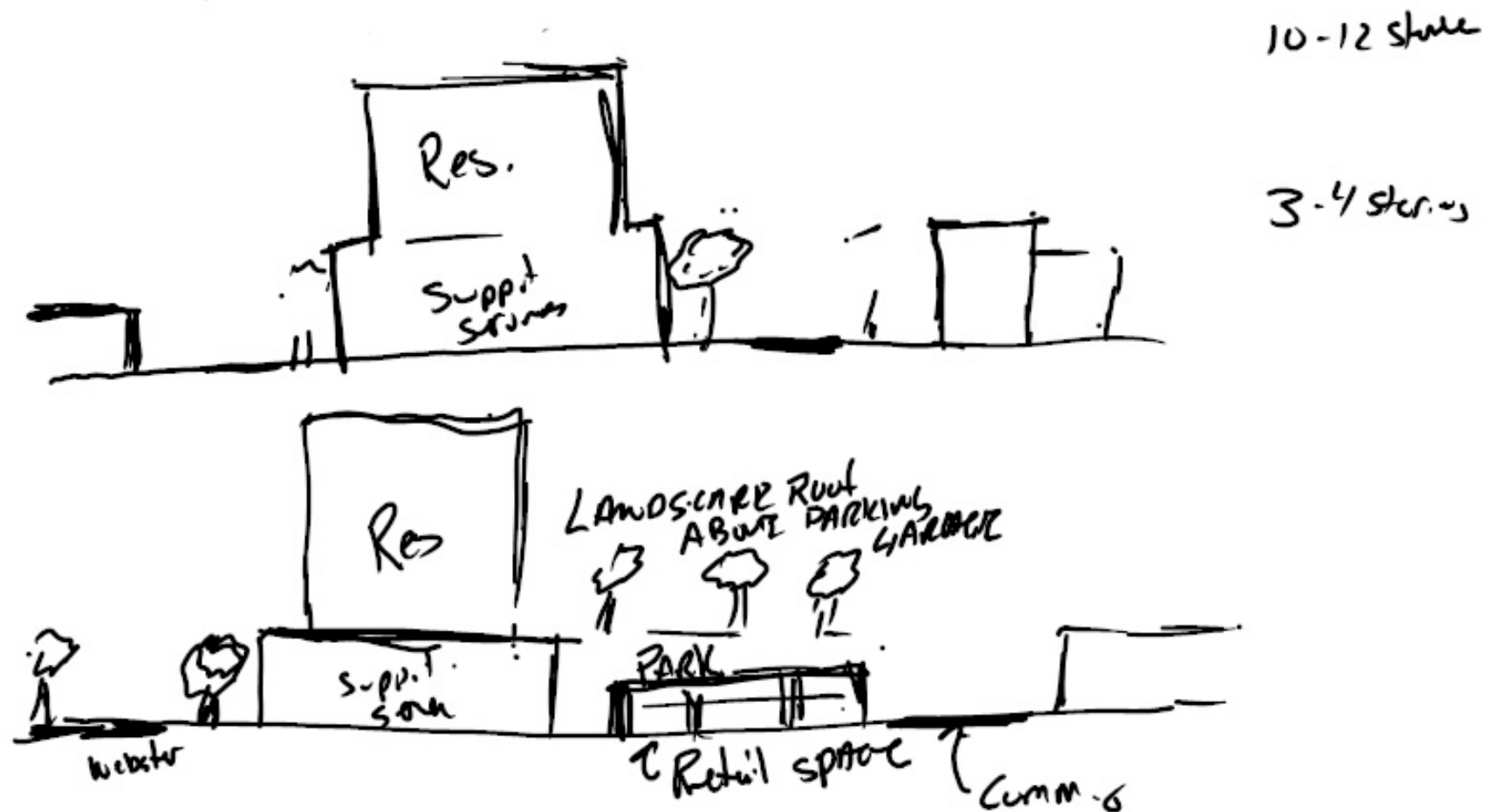


Figure 9.7 - Napkin Sketch - Sections

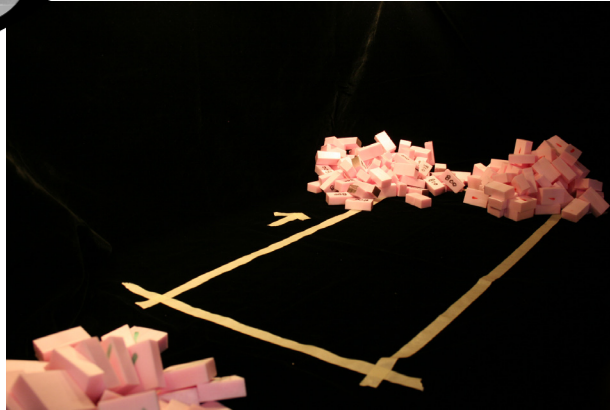


Figure 9.8 - Massing Study

Massing study of dwelling unit layout.

Using foam blocks cut to three different sizes representing the average unit sizes for a one, two, and three bedroom dwelling unit. The blocks were stacked in different configurations. In Figure 9.8 is the outline of base of the building. Building is expected to be built with zero setbacks. There were dozens of different layouts explored. The flowing schemes are few that were considered for the final design.

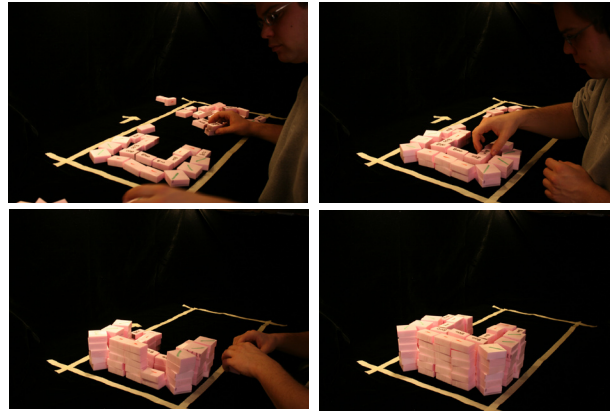


Figure 9.9 - Massing Study - Scheme 1

Scheme 1 - Building was configured similar to a standard nursing home wing layout. As this may be an efficient layout however it creates spaces like the courtyard on the North side without direct sunlight. This layout also has flexibility for extra wings to be added at a later time.

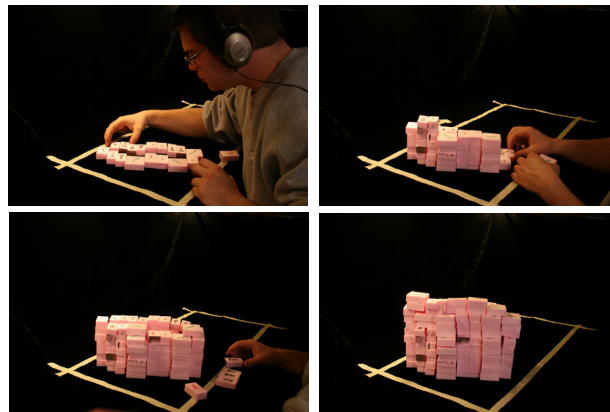
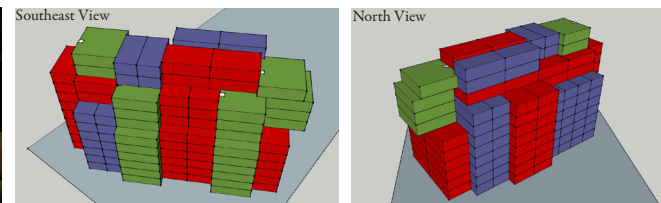


Figure 9.10 - Massing Study - Scheme 2



Scheme 2 - Building was oriented to give a large amount of dwelling units both views of the riverfront and the downtown skyline. This layout also meant half the units didn't have a view of the downtown or riverfront, both very important views from site.

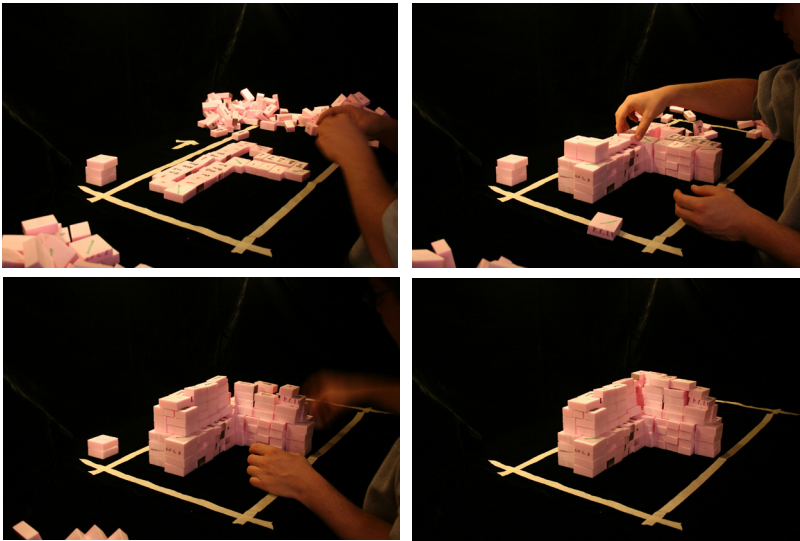


Figure 9.11a - Massing Study - Scheme 3

Scheme 3 - The configuration was to try to maximize the most views from the dwelling units. This layout also provides a large courtyard on the southwest side of the building. The courtyard has direct sunlight through the day and is partly shaded in the evening. The layout has multiple wings providing shorter corridor lengths for residents to navigate to their units. Most of the units have terrace balconies where the building steps back. The units were distributed to give a wide range of different unit sizes at different levels to maximize views. In a typical residential condo tower the higher end usually larger units are located in the prime locations in the building and closer to the top. Since this is a CCRC the units have been distributed to allow residents that want a one bedroom unit to still be able to choose the prime locations. Residents in a CCRC do not always want the biggest unit, they would like a unit size that meets their needs and wants. The precedent studies were used to determine how the units should be distributed. The Clare at Water Tower demonstrates how they distributed the units with good success with most of the building already occupied according to their sales department.

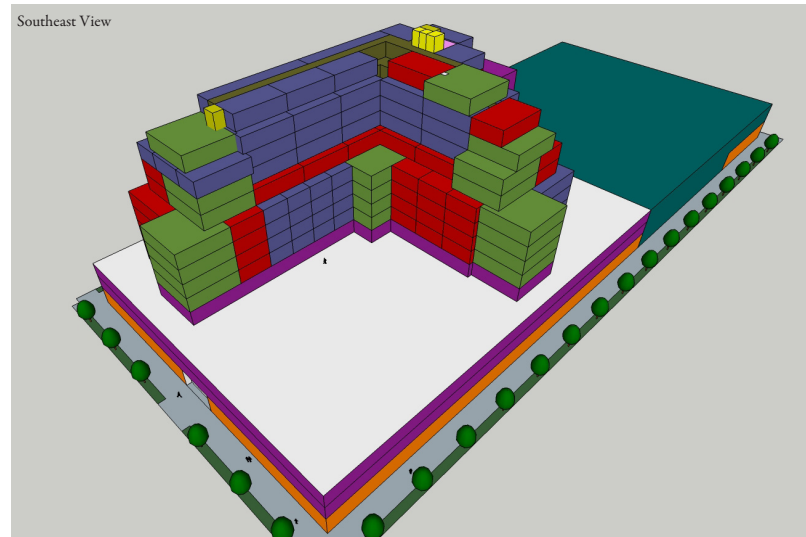


Figure 9.11b - Massing Study - Scheme 3

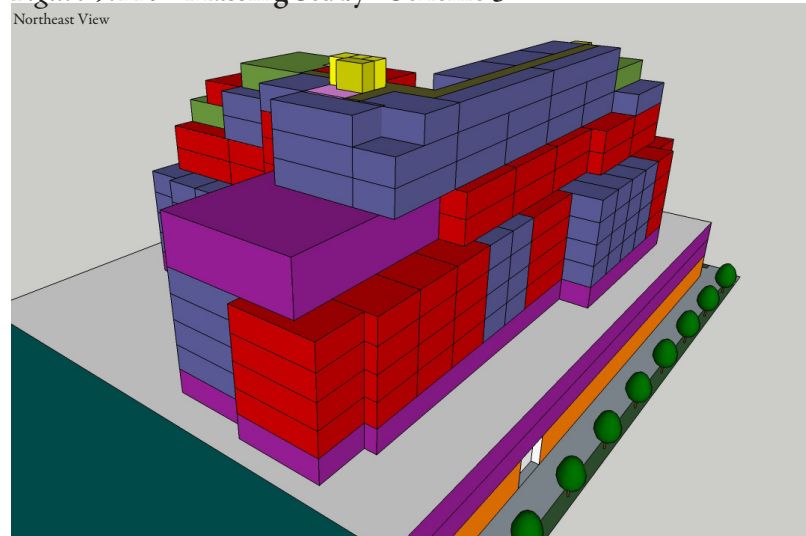
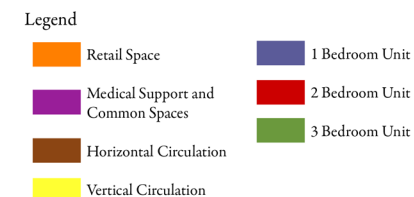


Figure 9.11c - Massing Study - Scheme 3



Massing Model

Scheme 4 - This scheme is very similar to Scheme 3 but with some minor changes. This scheme has been further developed due to it being chosen for the final design. Some of the most noticeable changes is at the base of the building. The first floor is proposed to have retail and is at the pedestrian level. The goal was to allow pedestrians to walk along the building facade and not feel intimidated. Also the pedestrian level is protected by the building overhang to give the pedestrians some shelter from the elements. The base also has a two story courtyard cut into

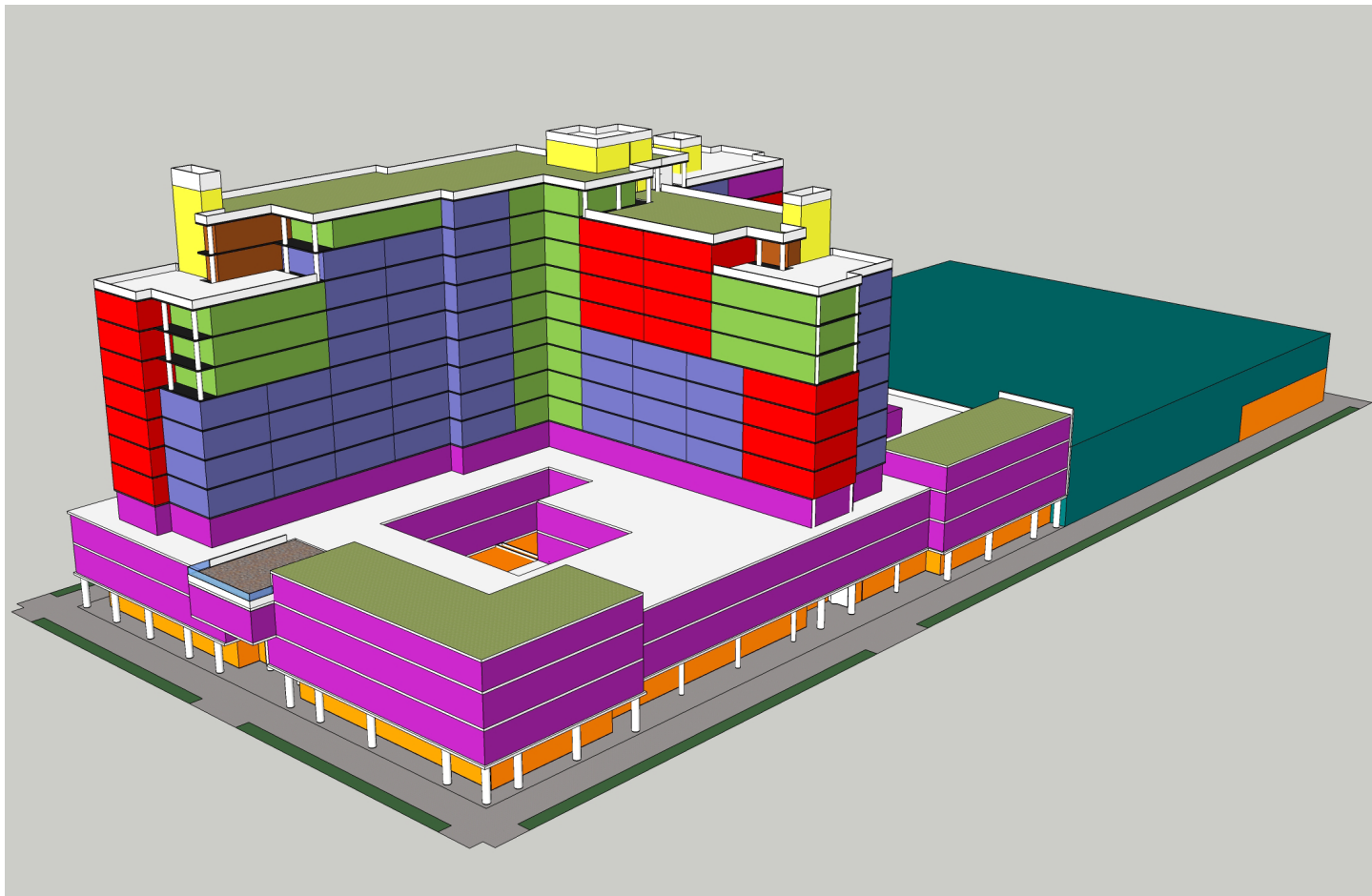


Figure 9.12 - Massing Study - Scheme 4 - Southeast View

the middle allowing light to reach the first floor and also providing much needed light into the second and third floors. The residential tower has been modified from the previous scheme to make the building sleek without a lot of terrace space for individual dwelling units. Each unit would be given and internally set patio space. On the North side of the site is a proposed parking garage with some retail space on the lower floor on the north end. This parking garage will server the CCRC community, retail, and medical services. The parking garage roof will be a green roof space that is usable by the residents. This space also allows the CCRC facility to expand to the north with another building when the time come for the facility to grow.

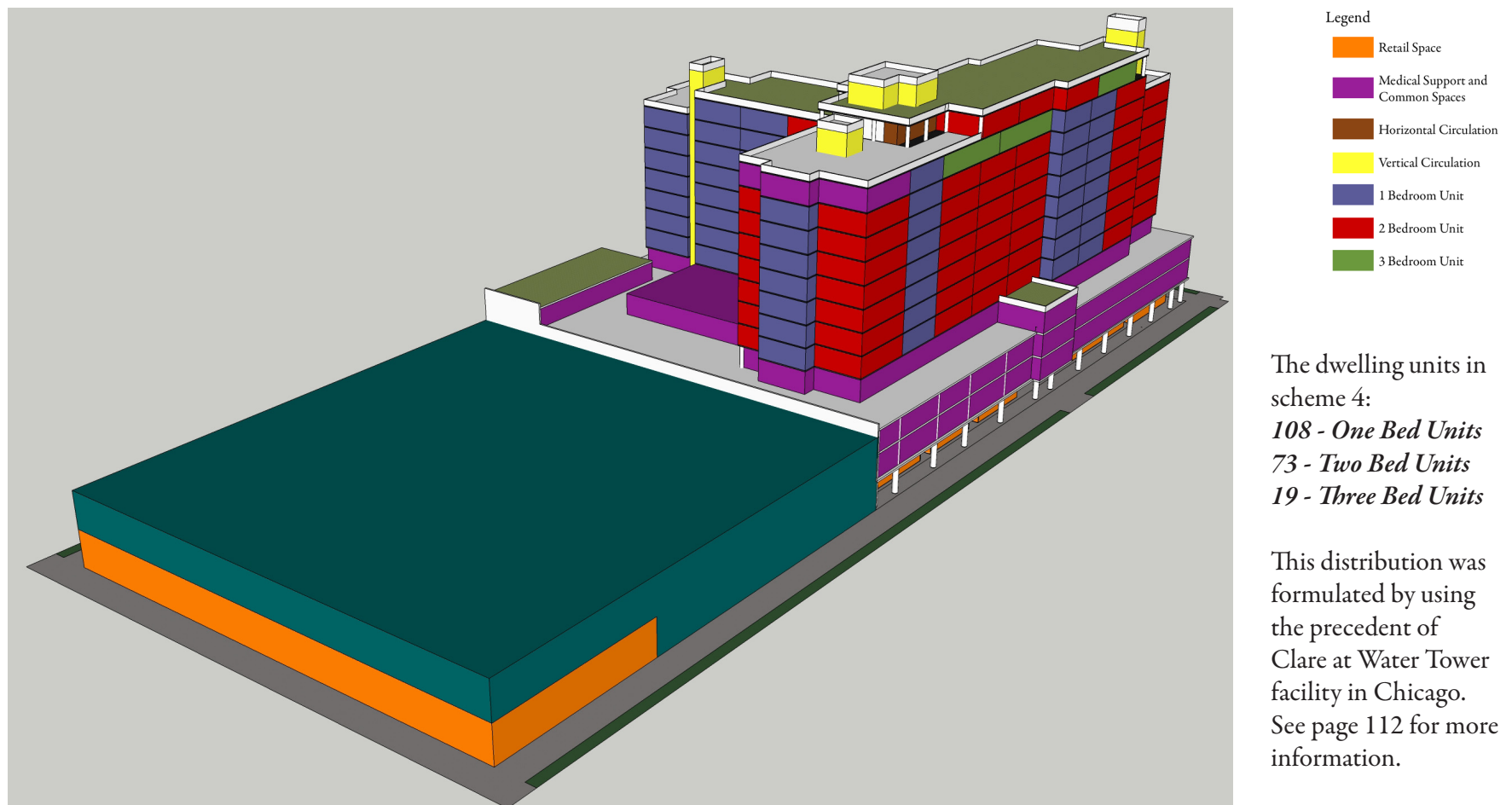


Figure 9.13 - Massing Study - Scheme 4 - Northwest View

Solar Orientation

Solar orientation is very important to building not only to the initial cost of the building but also the energy consumption over the life of the building. Attention to sun angles is important to review to maximize shading in areas that will need shade and also designing with the sun where there is a need for sun like in a garden area. The goal of this project was to keep the building energy efficient by the use of sun shading and the use of different curtain walls systems. See Facade Concepts in the design concepts section for more information on the louver and glazing systems.

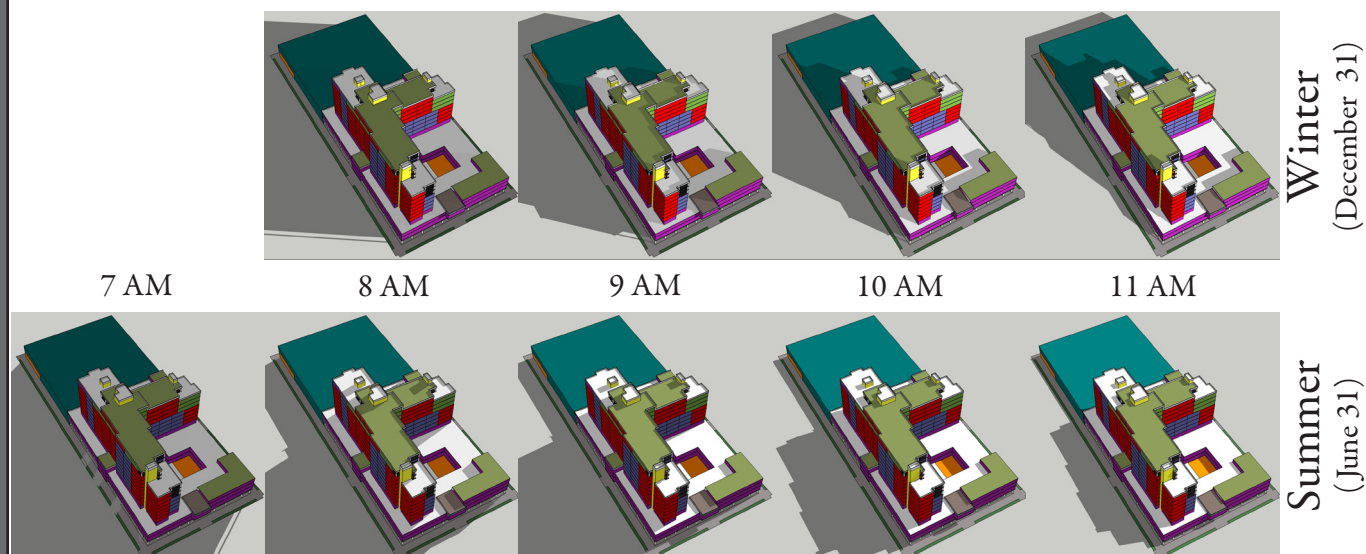


Figure 9.14a - Shadow Study

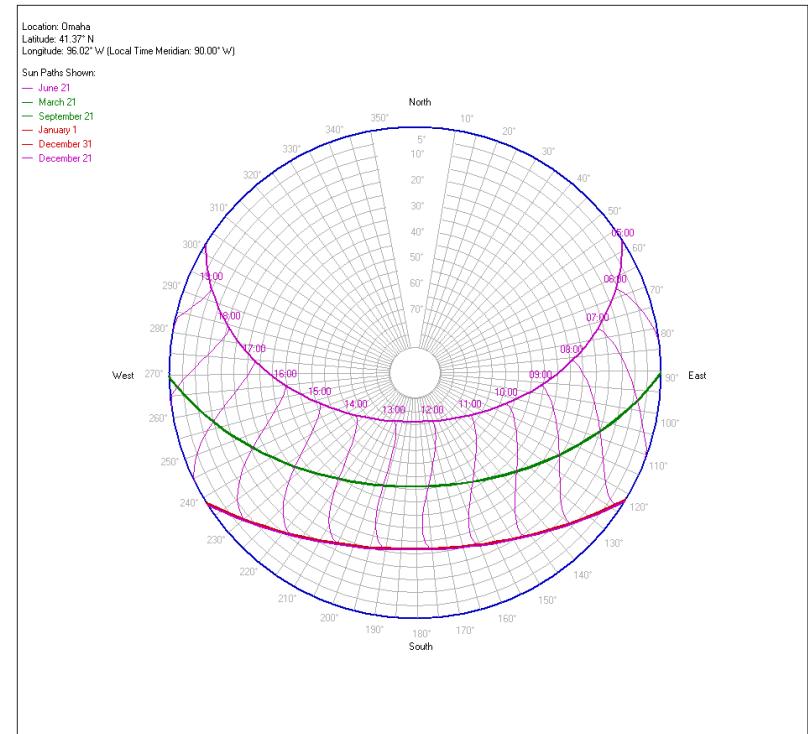


Figure 9.15 - Sun Angle Chart

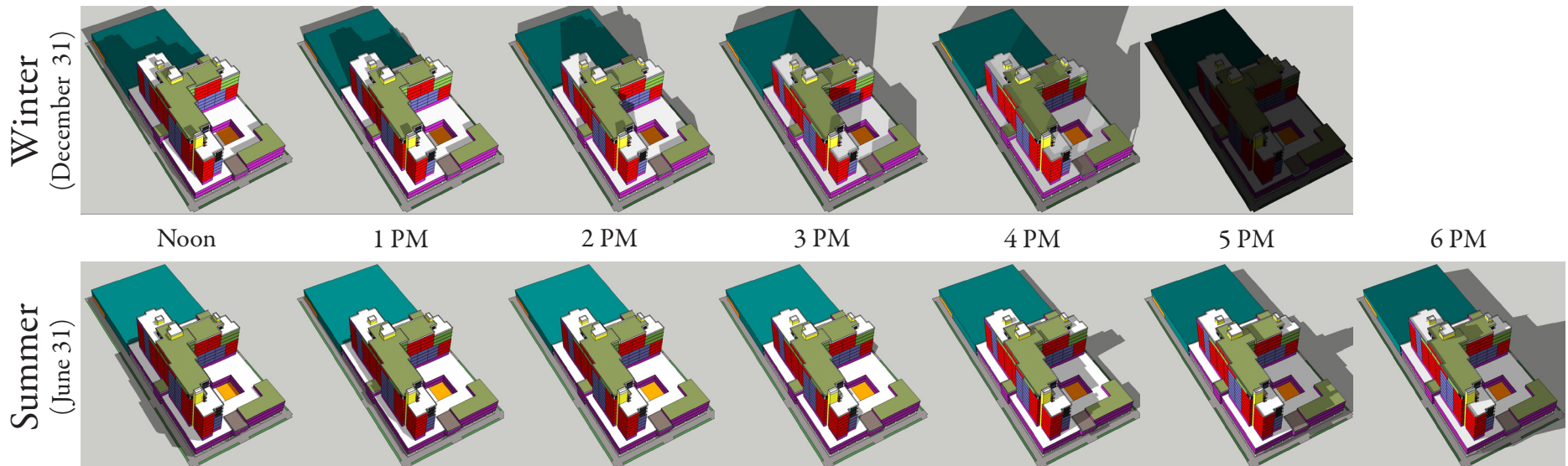


Figure 9.14b - Shadow Study

Dual Corridor Concept

An initial concept was to create a CCRC facility to have two corridors one to serve the public and another to be used by the medical staff. This would allow residents to walk down the corridor and not feel like they were in a nursing home seeing the medical equipment and staff. This dual corridor system would be similar to courthouse designs. As seen on the plans on the right page, the shaded hallways are private hallways and the rest of the corridors are for public use. The private corridors are for the staff and judges to use. This CCRC is would be laid out similar to a courthouse, the units be the courtroom and the medical support services by the judge's chambers. This concept was looked at as shown below with dozens of layouts but on major issue kept coming up. How can there be a corridor on two sides of a unit and still keep outside windows in the unit? One way to accomplish this was to have each unit be two stories and on every other story is either a public or private corridor. This creates a new issues and how could one justify having stairs in each unit when a majority of the residents will have some mobility issues.

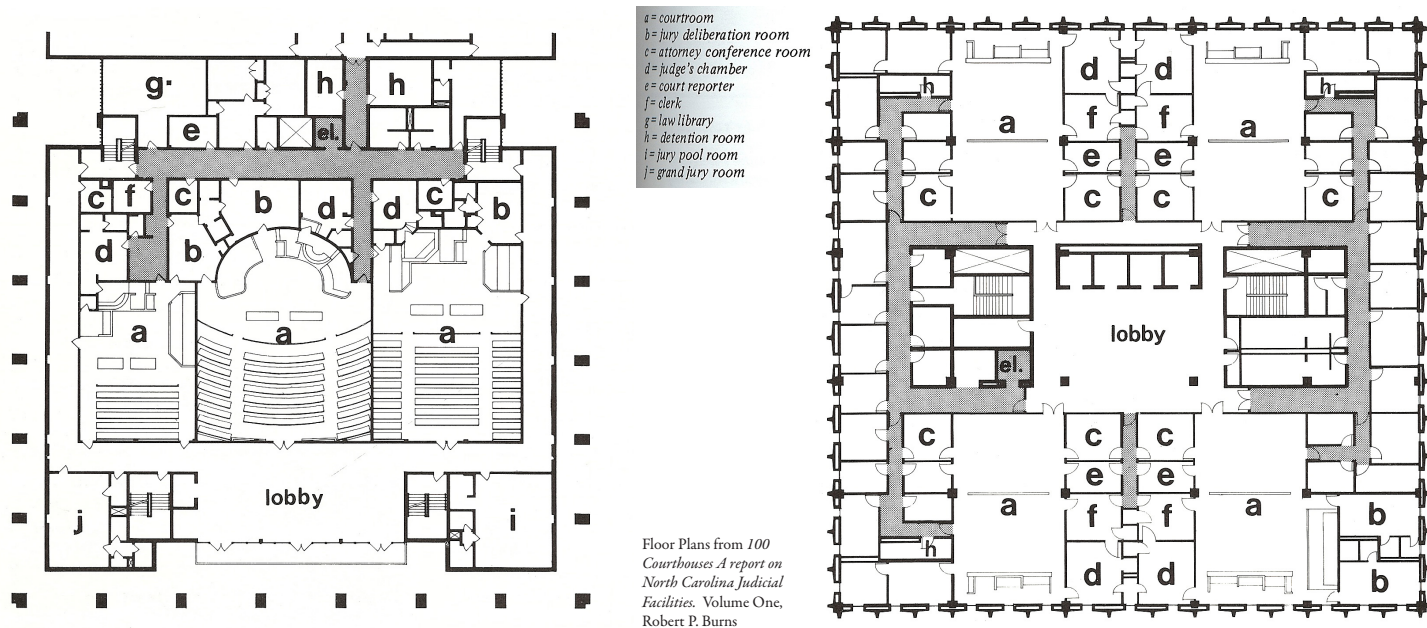


Figure 9.16 - Courthouse Dual Corridor System

Private Corridors are shaded.

After a fairly extensive review of this concept, the concept had to be modified. Instead of focusing on a dual corridor system horizontally it was decided to make it vertical. Each floor the medical staff will share a common corridor, but there will be two vertical circulation cores. One core will be for the residents to use and the other will have a large elevator located in the nurse station room located on each floor. When for instance a resident need to be taken for treatment that could not be done in their room they would be taken out of their unit dressed in their daily clothing and brought to the nurse station room and then transported vertically to the healthcare services floor to receive treatment. This decision to have a shared corridor on the residential floors affected the unit design too. Each unit is to have a closet inside the unit located near the entry door for medical supplies and equipment and will be discussed more the unit design section.



Figure 9.17 - Sketch of a Dual Corridor Plan

This plan has 10 units per floor and it would require three Medical service corridors and three elevator stacks. Each elevator stack would include 1 medical elevator, 2 public elevators, and 1 stair tower.



Figure 9.18 - Sketch of a Dual Corridor Section

Sketch of a section (Figure 9.18) through units with a exterior public corridor and an internal Medical corridor. The three issues with this design would be that there are no direct exterior windows for the resident in their unit. The next issue would be the extra high ceilings to provide the clearstory windows at each unit. And the final issue would be the amount of floor space this would require. Single loaded corridors on the exterior and double loaded on the interior.

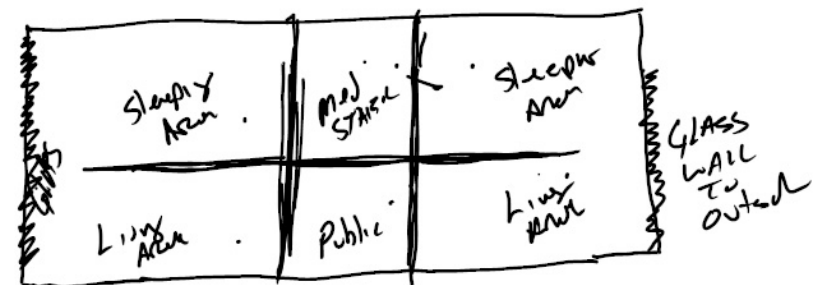


Figure 9.19 - Sketch of a Dual Corridor Section

Sketch of a section (Figure 9.19) through units with an alternating corridor. Each unit would have to be two stories. The public would access the unit on the units lower floor and the Medical staff would enter on the upper floor. The issue with this scheme is that there would have to be stairs and an optional elevator located in each unit.

Design Concepts

Louver System Design

Responsible design in regards to sustainability is not a choice today but a necessity to reduce the energy costs during the building's life. To help reduce the heat loads on the building a louver system was designed to shade the second, third and parts of the fourth floor. This system has louvers strategically placed to block direct sunlight during the summer months but to allow sun to penetrate the louver system in the winter. The louver pattern is interrupted twice to allow the building occupants to look through the louver system. The voids in the louver system are at standing and sitting heights. See design diagram below (Figure 10.1) for the recommended heights.

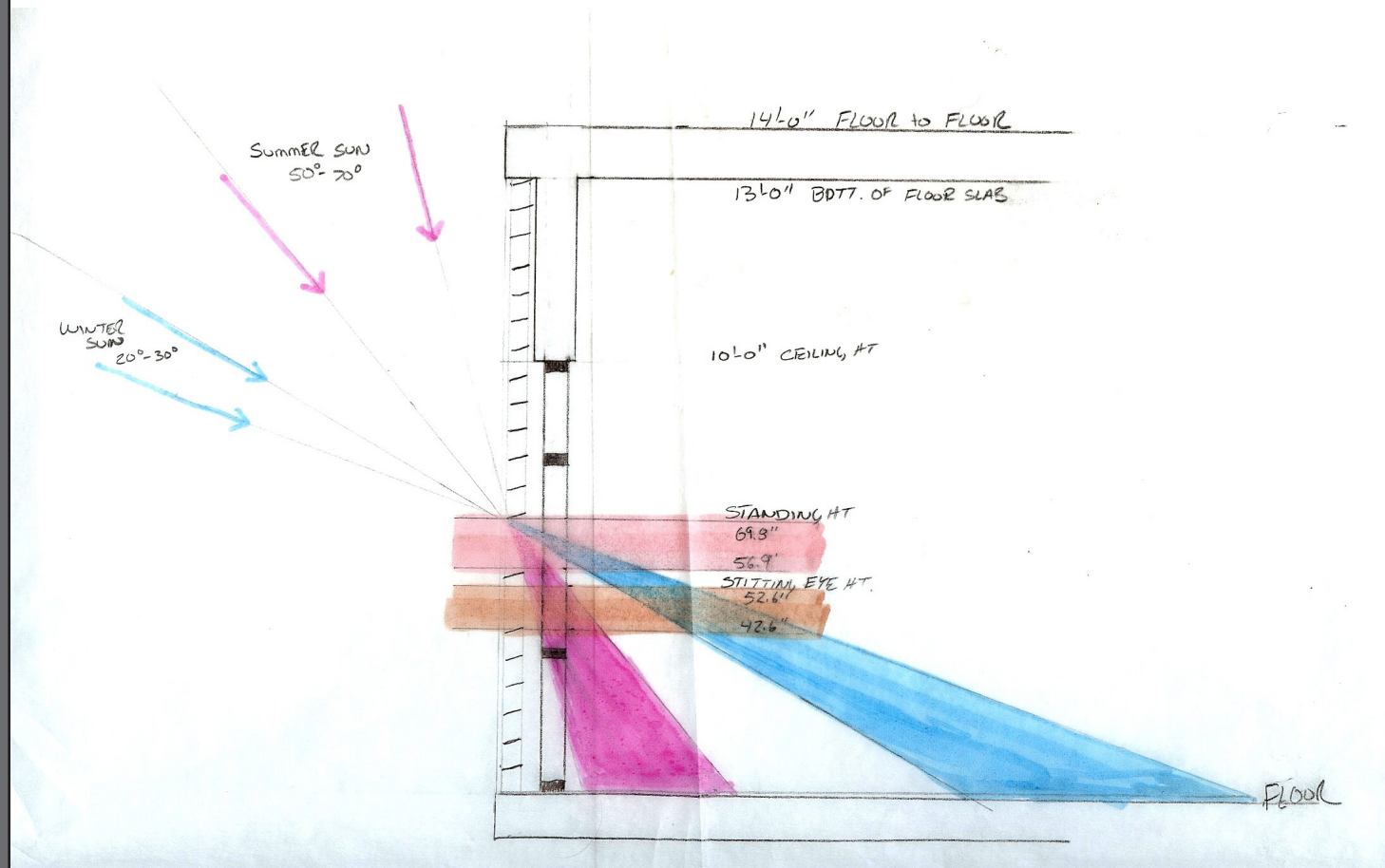


Figure 10.1 - Louver Design Diagram

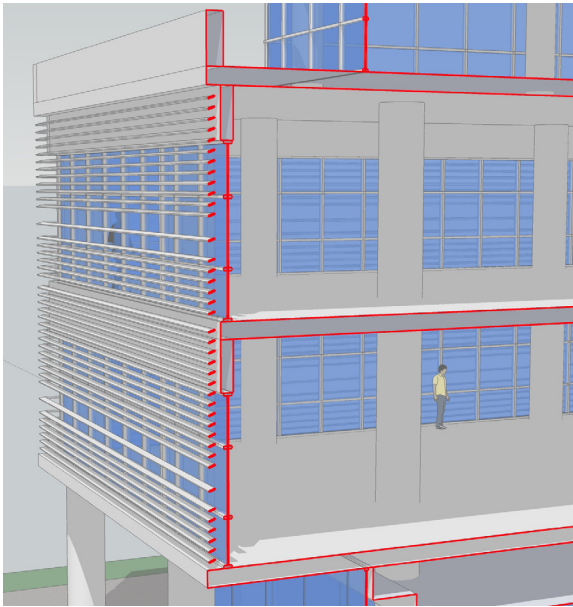


Figure 10.2a - Louver System on a Summer Day - 11am

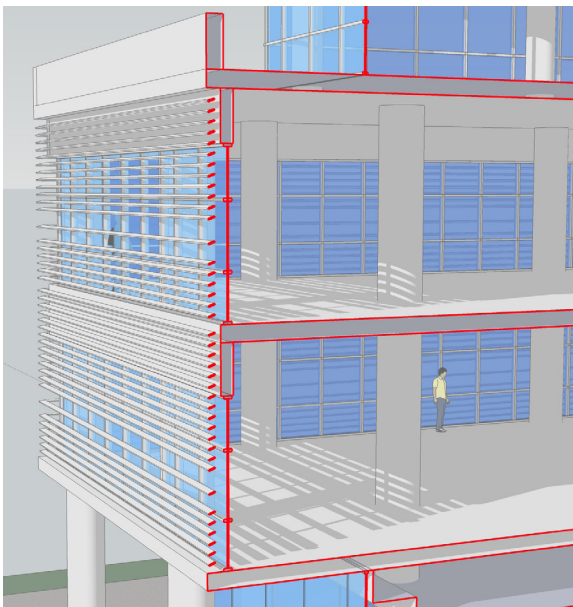


Figure 10.2b - Louver System on a Winter Day - 11am

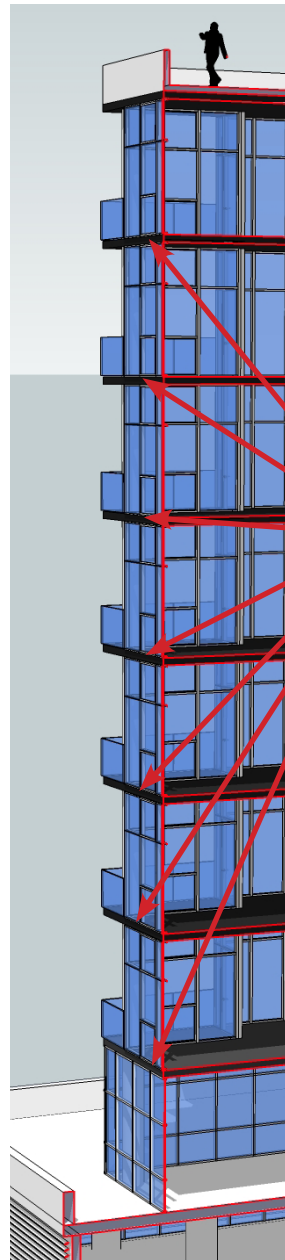


Figure 10.3 - Wall Section - Residential Floors

Solar Panels

Photovoltaic panels will be used to help offset the buildings energy use. These panels will be incorporated into the building facade between floors and will be used instead of spandrel panels in the facade which is typically used to cover the end of a floor plate or other systems that the architect does not want seen from outside. The detail sketch below (Figure 10.4) shows how the photovoltaic panel will be added to the facade. The photovoltaic panels will be located starting between the 4th and 5th floors and every floor above as shown in Figure 10.3.

Photovoltaic Panels located on upper floors.

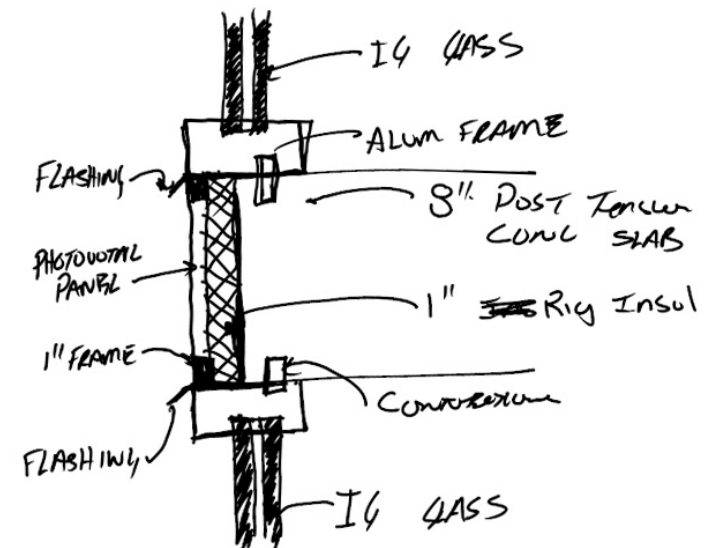


Figure 10.4 - Photovoltaic Panel and Window Facade Detail

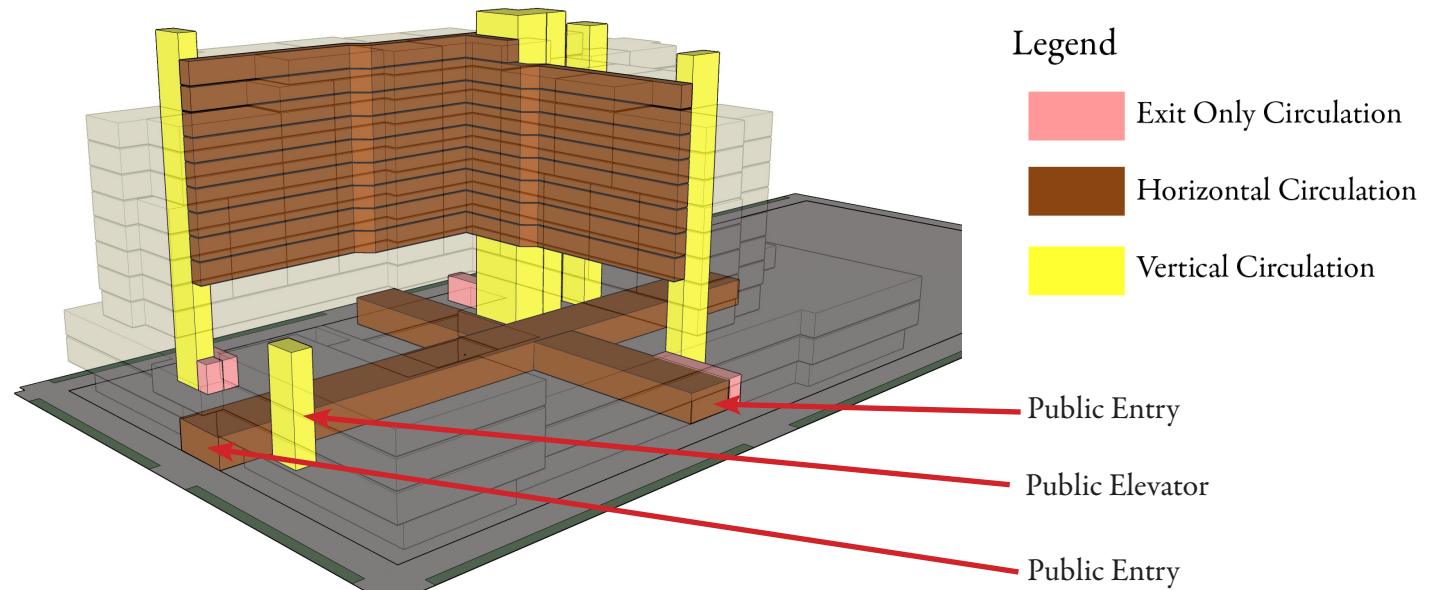


Figure 10.5a - Building Circulation - Looking from the Southeast

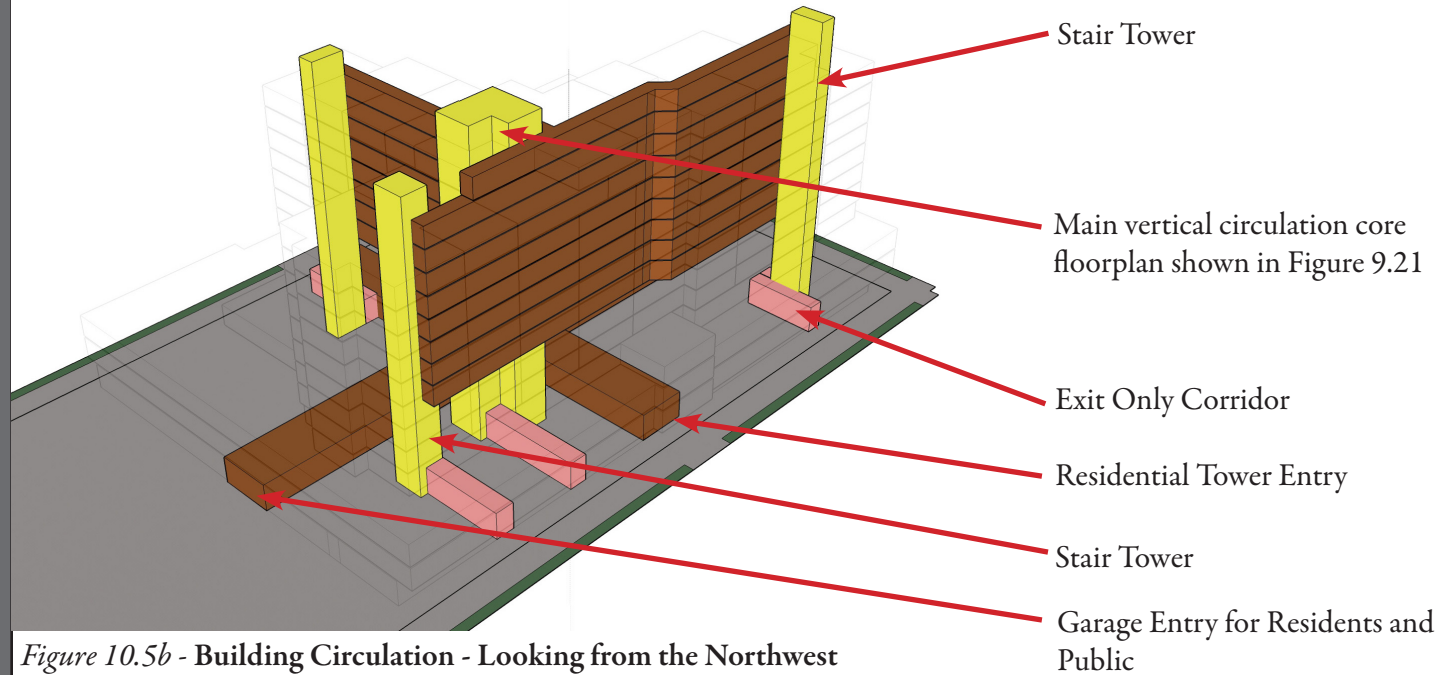


Figure 10.5b - Building Circulation - Looking from the Northwest

Building Circulation

Creating corridors that felt more like a high-end condo in lieu of a nursing home was a design concept. The design of the building was originally thought to have a dual corridor system similar to what is found in a courthouse, but with further research this was not an efficient way to layout a building of this type and it produces a few issues. (See the Dual Corridor Concept in Conceptual Design section, pages 128 and 129) The building circulation was designed to have a vertical dual circulation system. The goal of this system is to minimize the amount of time a resident receiving treatment will be in a public hallway on the residential floors by having shared horizontal circulation but splitting the vertical in to a public circulation and a medical purpose circulation. An example of how this system would work is if a resident needed medical treatment that was not possible within their unit they would be escorted out by the staff in their daily clothing and taken to the resident medical support on that floor. In the resident medical support there is a Medical/ Staff Elevator that will take the resident to the proper floor to get the treatment. Also to keep with the goal of not being a typical nursing home corridor there will not be any medical equipment allowed in the residential corridor. All equipment must be moved via the medical elevator then immediately taken to the patients dwelling unit and stored if need be in the medical closet in that unit.

The main vertical circulation core has on the public side a large area of refuge which is required by the International Fire Code 2006 for this building type. (See Appendix E.) There are two public elevators that serve the residential tower. Both elevators are on a battery backup system that will allow them to run during a fire or other emergency. This is in accordance with IFC 2006 section 1007.2.1. The residential elevator lobby and area of refuge have direct access to a stair tower. The whole core is rated as a two hour separation as stated in section 1020.1.7 in the IFC 2006. The medical side of the corridor is also designed to be used during an emergency too. The medical elevator lobby has direct access to the stair tower. The medical elevator is accessible only through the resident medical support room. The residents will not have access to this elevator unless they are with a staff and receiving medical attention.

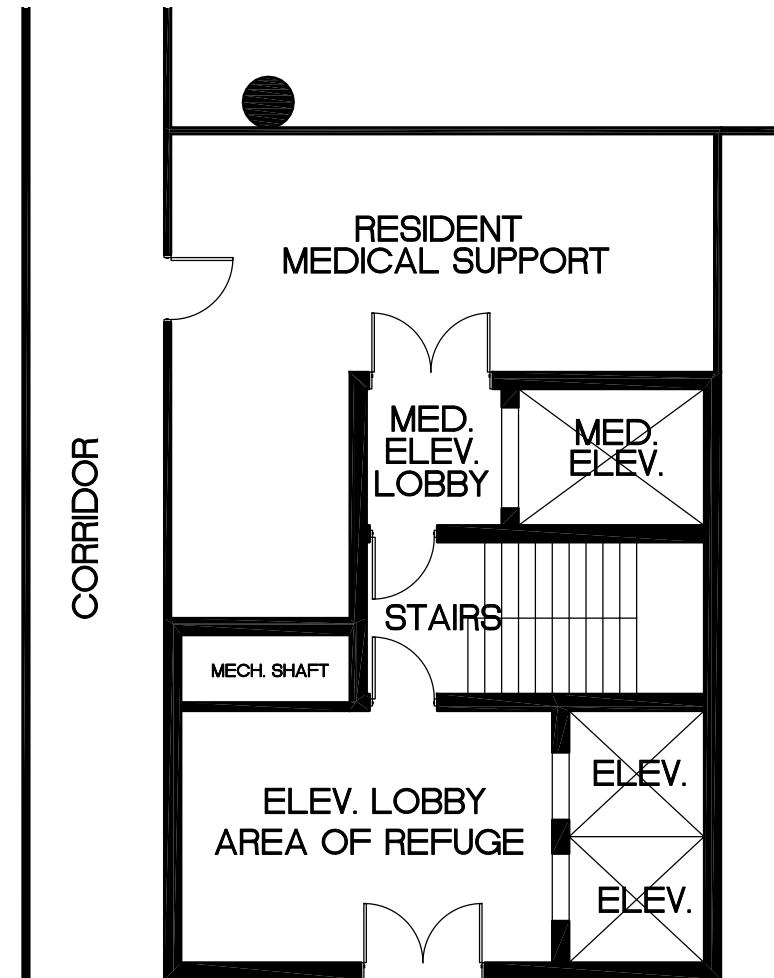
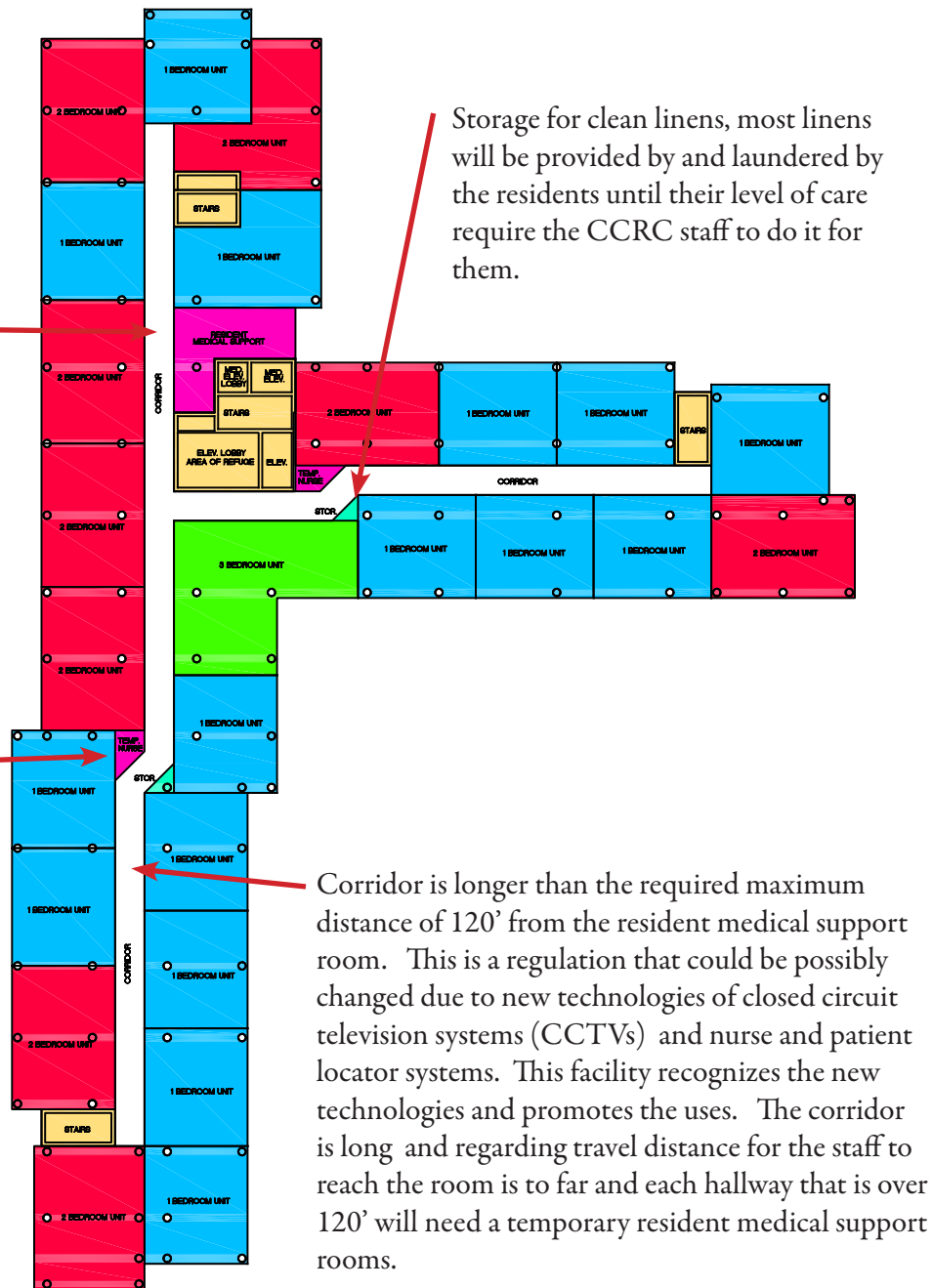


Figure 10.6 - Main Vertical Circulation Core

All corridors in the facility are 8 foot wide. This is a requirement for nursing homes. The reason behind having large corridors is because during an emergency you may need to get a bed down the hall and you need to be able to bypass another bed. Also if during an emergency and for some reason the bed needs turned around then you would have enough room to achieve that function.

Temporary resident medical support room is dedicated for nurses and nursing assistants to monitor patients in that wing. This provides the care of a patient within 120' of the resident medical support allowing a staff member to reach a patient in a timely manor. This resident medical support is labeled temporary because if there is no patients in that wing that need the skilled nursing care then there would not be a nurse stationed there. This is like a office more than a typical nurse station you would see in a typical nursing home.



Legend

- Medical Services
- Vertical Circulation
- 1 Bedroom Unit
- 2 Bedroom Unit
- 3 Bedroom Unit
- Storage

Figure 10.7 - Typical Residential Floor Plan Layout

Design Concepts

Wall sconces located on both sides of each unit alcove. These lighting fixtures provide two important things. One is a fully functional light providing more illumination for the corridor. Second, it has a red light that flashes when a resident in the unit needs assistance, thus providing the "Nurse Call System" while avoiding ugly lights hanging from the ceiling. This is a secondary system to the nurse and patient locator system installed in the building

Acoustical ceiling tile to help keep noise at a manageable level.

Indirect lighting reduces glare. Light coves located on both sides of corridor bounce light off ceiling giving the space an adequate amount of ambient light.

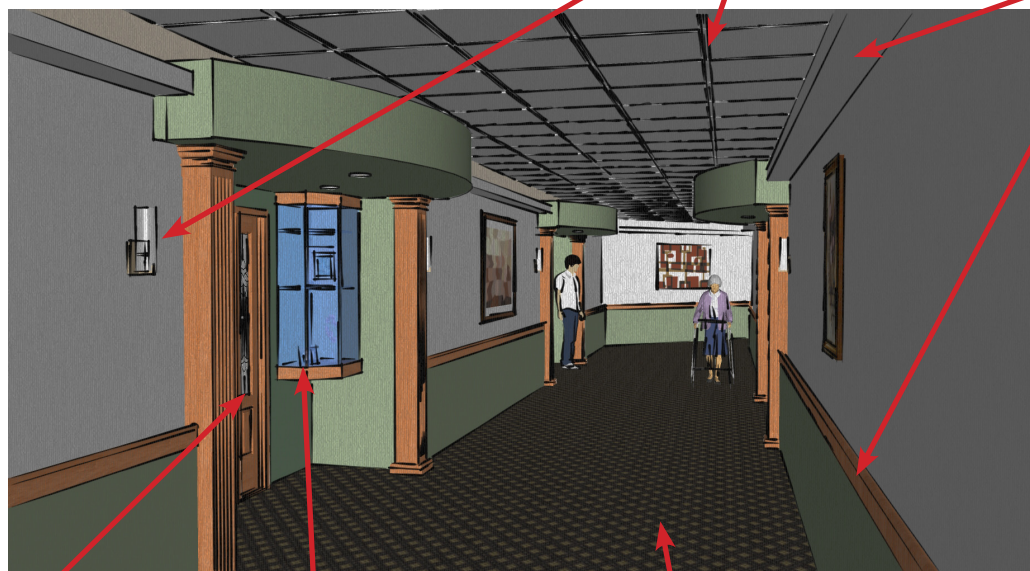


Figure 10.8 - Typical Corridor Design Concepts

Unit entrance alcove, provides a break in a long corridor and to help give residents a visual reference while traveling down the corridor

Optional resident display case - This is designed to allow residents to display personal articles like photos and knic knacks in locked display case. This is also helpful for Alzheimer patients to be able to find their rooms.

Simple Carpet Patterns, no large complicated designs. Busy carpet patterns can be distracting to a resident and be a hazard.

Indirect light coves located at base of walls will help seniors differentiate between the floor and wall surfaces. (Note these are not shown in Figures 10.11a and 10.11b)

Handrails along walls are recessed to make them appear as wainscoat trim but remain functional. The handrail is also backlit to provide contrast for the resident.

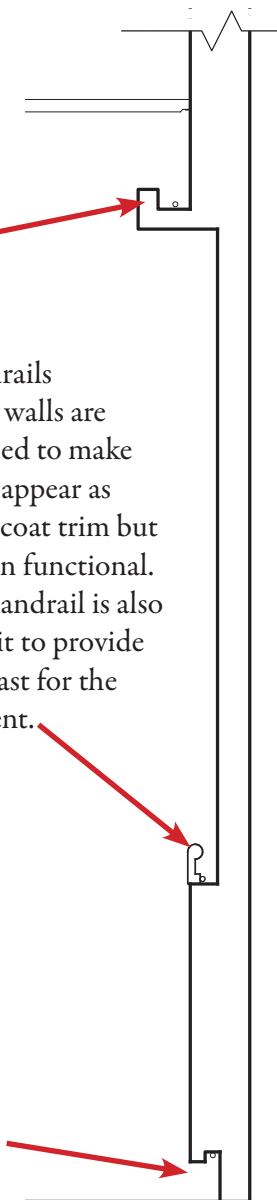


Figure 10.9 - Corridor Partial Section

Nurse call light systems are extremely important in a nursing home. This dual purpose fixture allows for the features of a nurse call system with an aesthetically pleasing light fixture. When a resident needs assistance a red light will flash on both sides of the unit alcove.



Figure 10.10 - Nurse Call Light



Figure 10.11a - Corridor Light Sample



Figure 10.11b - Corridor Light Sample during Overnight Hours



Figure 10.12 - Pull Down Cabinets
Upper cabinets are fitted with pull-down shelves that can be used by a resident in a wheelchair or a senior that can't reach the top shelf. This will help reduce the falls in the kitchen and keep seniors off the step stools. Pull-down unit shown in Figure 10.12



Figure 10.13 - Drawer Pull-outs



Figure 10.14 - Typical Kitchen Design Concept

Base Cabinets have slide out drawers for easy access to everything in the cabinet. As shown in the Figure 10.13.

Under toe kick Rope lights to help with visual acuity.

15" Storage drawer located in the toe kick area to allow for extra storage. If and when a resident needs the kitchen adapted for wheelchair use, the toe kick area is designed to be removed and replaced with a standard 9" toe kick dropping the counter to wheelchair height.



Figure 10.15 - Rendering of Typical Unit Kitchen

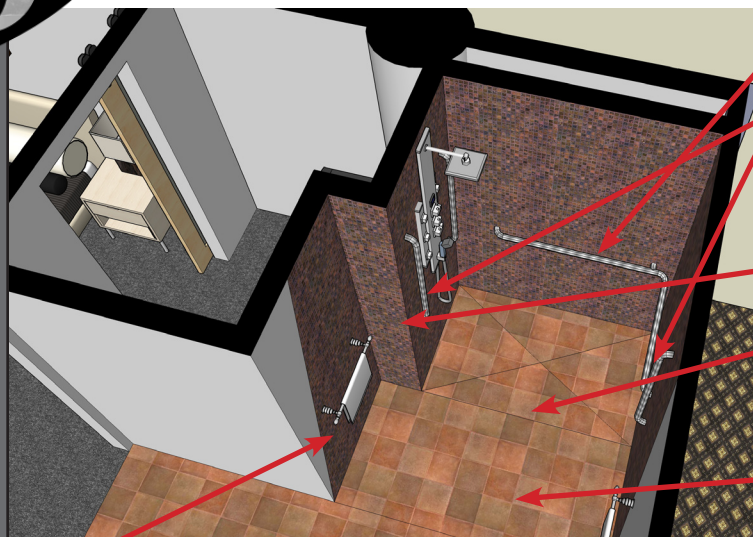


Figure 10.16 - Typical Shower Design Concept

Decorative grab bar for towel rod. For safety reasons towel rods are mounted at a similar height as grab bars since they will support the same weight as a standard grab bar.

Tankless toilet to allow more maneuverability around the toilet. Also will allow a more diverse selection of potty chairs if need.

Fold-up adjustable grab bars. (Figure 10.17) Allows grab bar height to be adjusted to the height of the user and will fold out of the way when not needed. Supporting brackets are removable.



Figure 10.17 - Grab bar

Standard horizontal grab bar

Vertical grab bars to allow residents to pull themselves up. One located on each side of the shower head and each side of the shower entry.

At least 18" allowed for side access to controls.

No threshold shower. Also no need for shower curtain unless resident wants one.

Wet zone with floor sloping towards shower drain.

NOTE: All of the grab bars are optional, but there will be required blocking in all locations. This will allow the resident to choose if they want grab bars and add them when they require them.

Dual sinks, front of cabinet is removable to accommodate wheelchair access. Mirror and shelves are within reach of a person in a wheelchair.



Figure 10.18 - Typical Bathroom Design Concept



Figure 10.19 - Typical Bathroom Rendering



Final Design



Figure 11.1 - Ground Level Rendering - Southwest Perspective

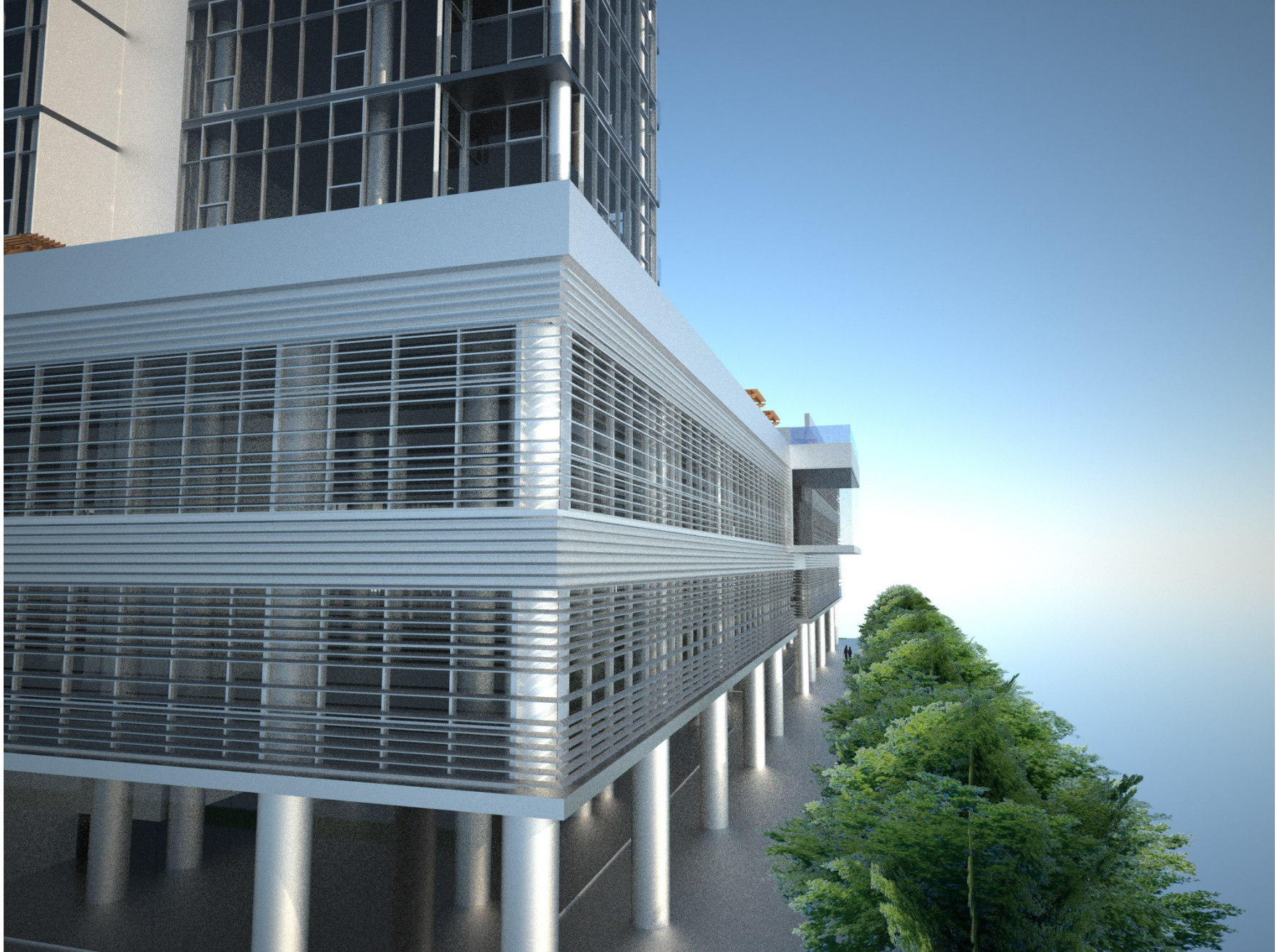


Figure 11.2 - Southwest Perspective Rendering



Figure 11.3 - Southwest Exterior Perspective



Figure 11.4 - Northeast Exterior Perspective



Figure 11.5 - Southwest Exterior Perspective

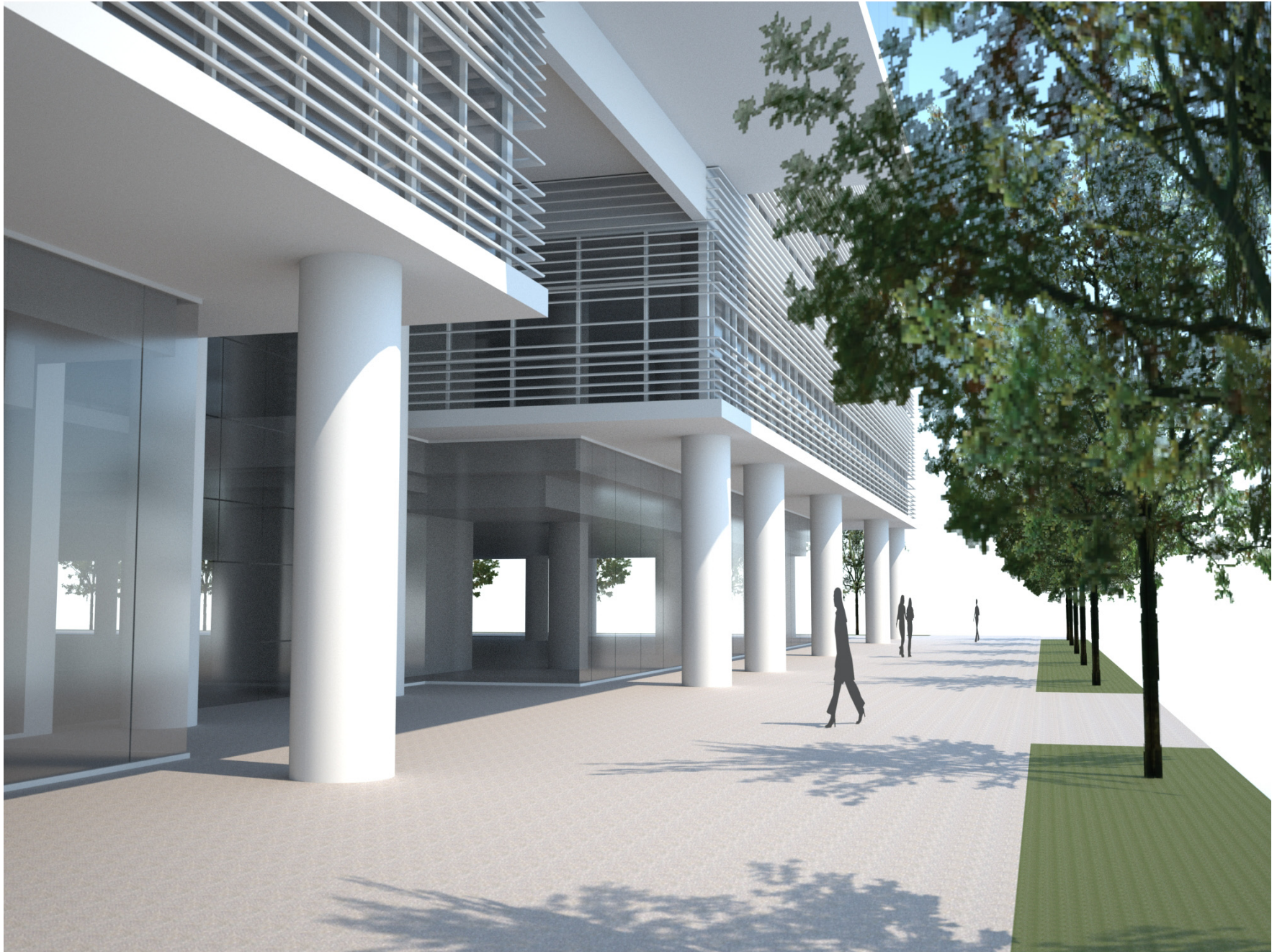


Figure 11.6 - Public Entrance Perspective



Figure 11.7 - Residential Entrance Perspective



Figure 11.8 - Roof Garden Perspective





Figure 11.10 - Garden Path Perspective



Figure 11.11 -Fire Pit - Lounge Area



Figure 11.12 - 12th Floor Rooftop Terrace

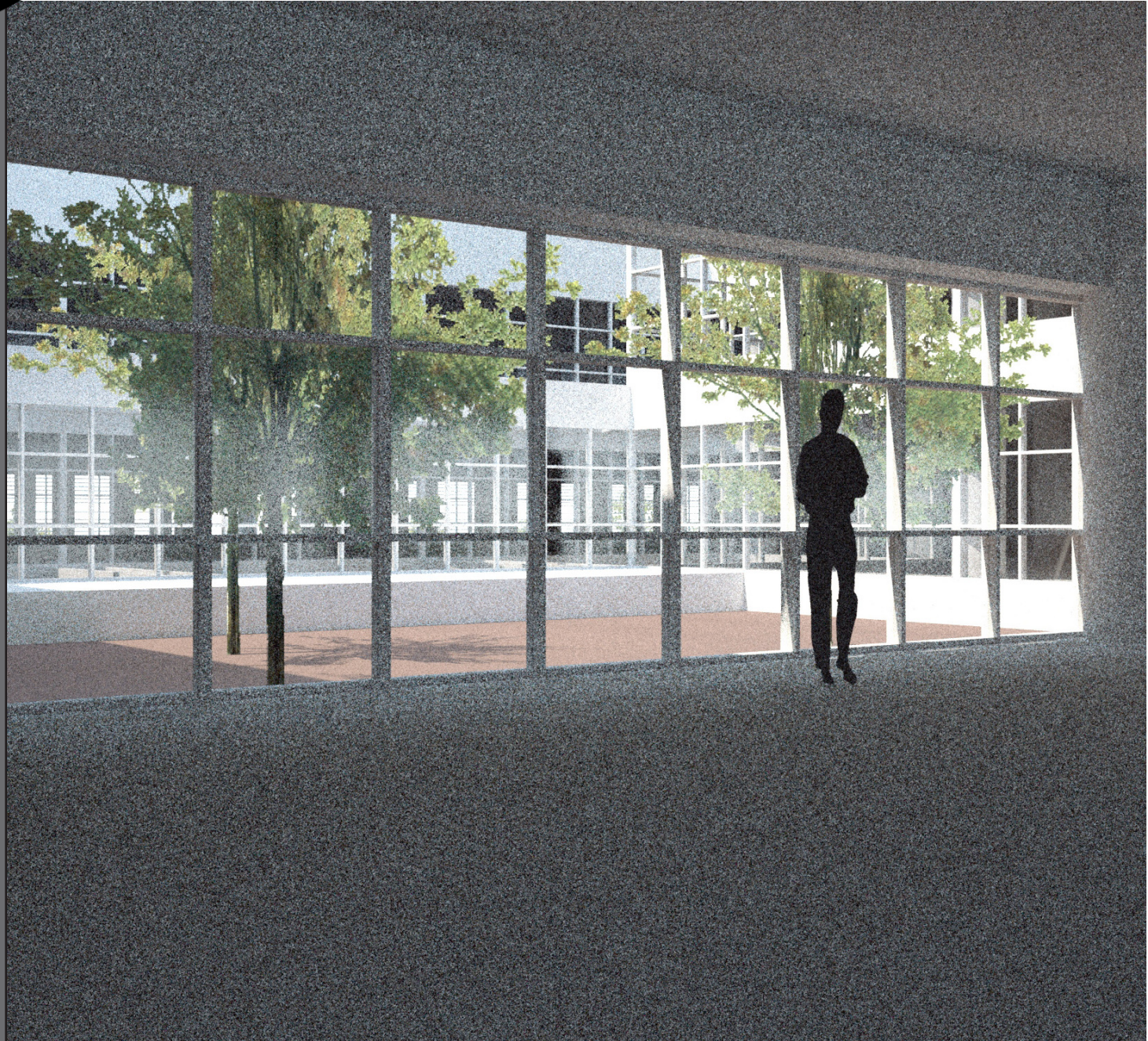


Figure 11.13 - View of Courtyard from Second Floor



Figure 11.14 View from Third Floor through Louver System

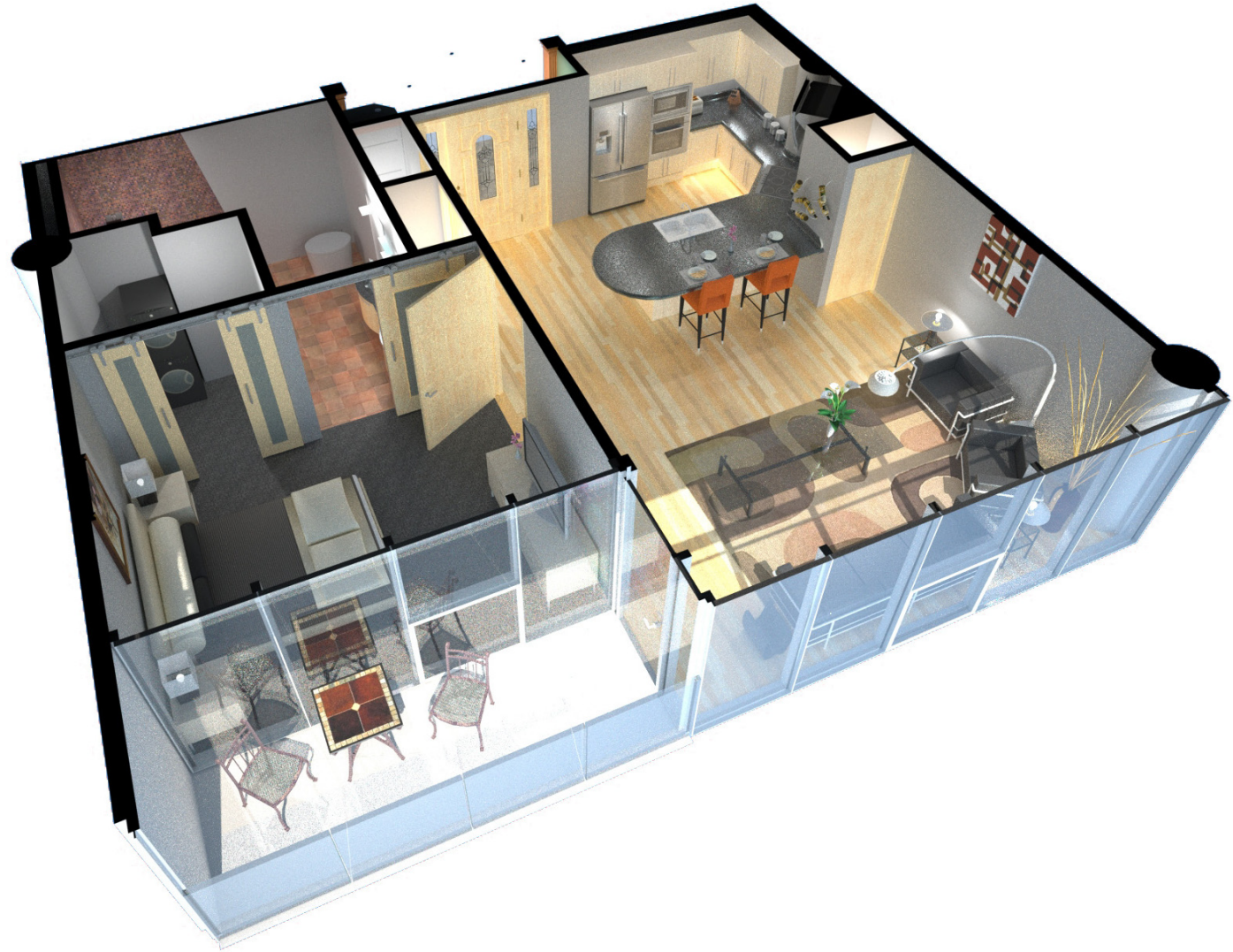


Figure 11.15 - One Bedroom Unit - 3D Floor Plan



Figure 11.16 - View from Entry Door towards Living Room

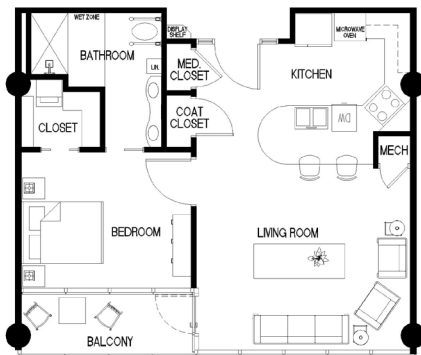


Figure 11.17 - Floor Plan - 1
Bedroom Unit

This one bedroom unit provides a resident with a luxurious space to live and play. This spacious one bedroom unit is approximately 840 square feet including an outdoor balcony. High ceilings allow for large floor to ceiling windows providing breath taking views of Omaha's skyline. The bathroom is ADA compliant and has a roll in shower with wet zone. See the Unit Bathroom Design Concept in the Design Concepts Section. The kitchen is designed to adjust to the needs of the resident. The unit has an electronic key entry for ease of access by residents and by nursing staff when the resident requires that level of care. There is also a medical closet located near the door to provide the Nursing staff a place to store medication for the patient. This room is locked and only accessible by the nursing staff.



Figure 11.18 - Two Bedroom Unit - 3D Floor Plan



Figure 11.19- Floor Plan - 2 Bedroom Unit

This two bedroom unit provides a resident with a luxurious space to live and play. This spacious two bedroom unit is approximately 1,092 square feet including an outdoor balcony. High ceilings allow for large floor to ceiling windows providing breath taking views of Omaha's skyline. Both bathrooms are ADA compliant and one has a roll in shower with wet zone and the other had a bath tub. The kitchen is designed to adjust to the needs of the resident which can be seen by visiting the Unit Kitchen Design Concept in the Design Concepts section. The unit has a electronic key entry for ease of access by residents and by nursing staff when the resident requires that level of care. There is also a medical closet located near the door to provide the nursing staff a place to store medication for the patient. This medical room is locked and only assessable by the nursing staff. All bedroom doors in this unit are 3'-8" doors, typical in a nursing home. This will allow for easy movement if resident need to be moved by bed. Both the one bedroom and this unit has a stacked washer and dryer in the master bedroom closet



Figure 11.20 - Living Room Rendering



Figure 11.21 - Three Bedroom Unit - 3D Floor Plan

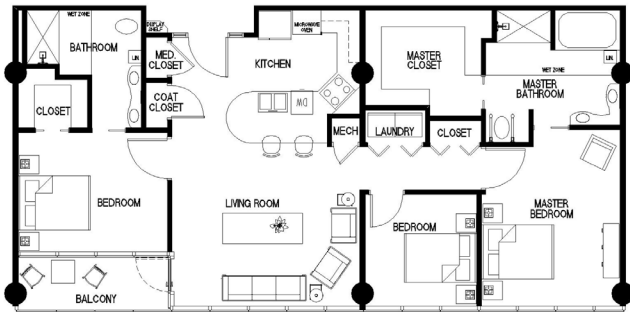


Figure 11.22 - Floor Plan - 3 Bedroom Unit



Figure 11.23 - Master Bedroom Rendering



Figure 11.24 - Master Bathroom Rendering

This spacious two bedroom unit is approximately 1,680 square feet including an outdoor balcony. This unit is similar to the one and two bedroom units, except this unit has a large master bath and a large walk-in master closet. Both bathrooms are ADA compliant and have a roll in shower with wet zone. The master bathroom also features a whirlpool tub. The kitchen is designed to adjust to the needs of the resident. This three bedroom unit has a separate closet for the laundry. The unit has a electronic key entry for ease of access by residents and by nursing staff when the resident requires that level of care. There is also a medical closet located near the door to provide the nursing staff a place to store medication for the patient. This medical room is locked and only assessable by the nursing staff. All bedroom doors in this unit are 3'-8" doors.

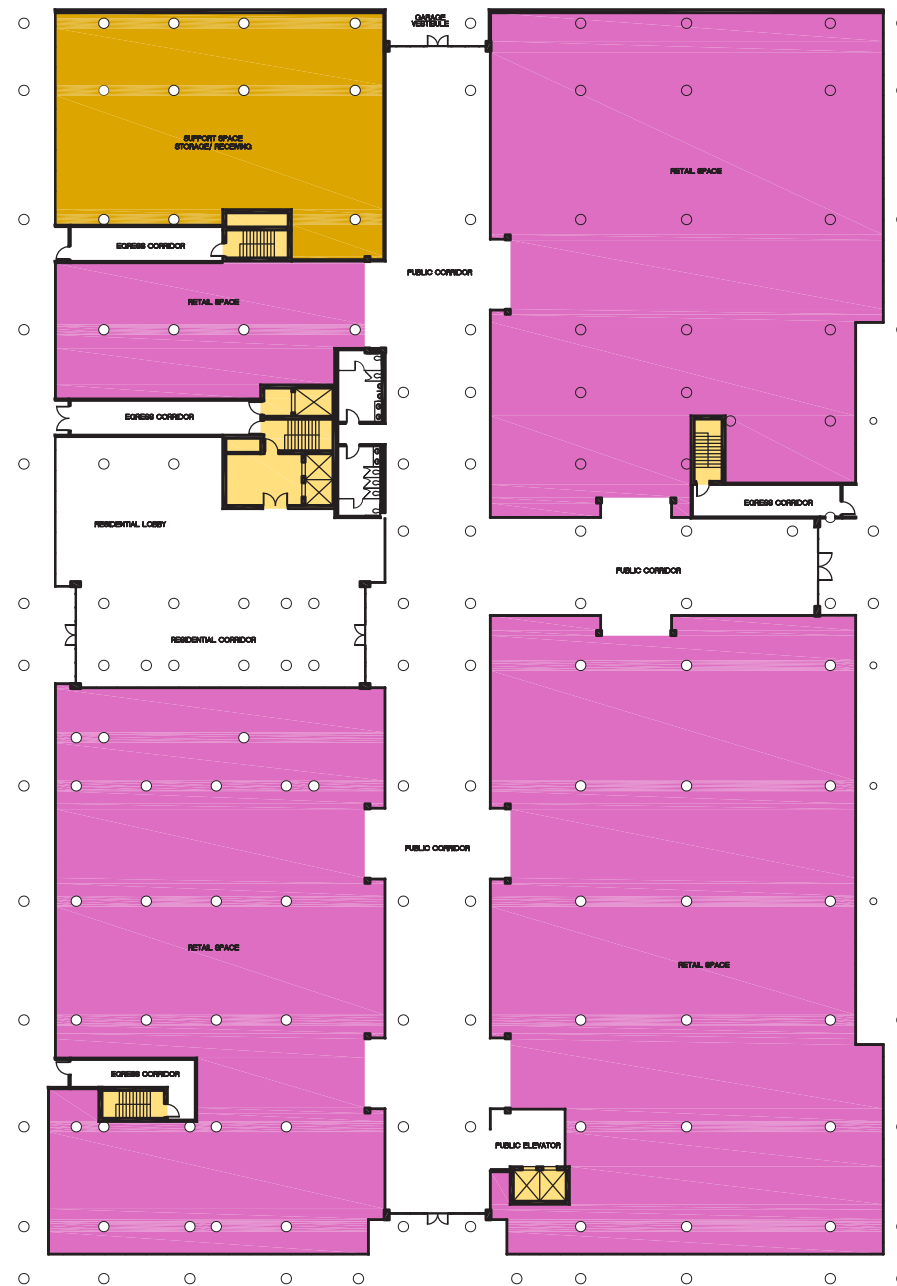


Figure 11.25 - Floor Plan - Level 1



Figure 11.26 - Floor Plan - Level 2

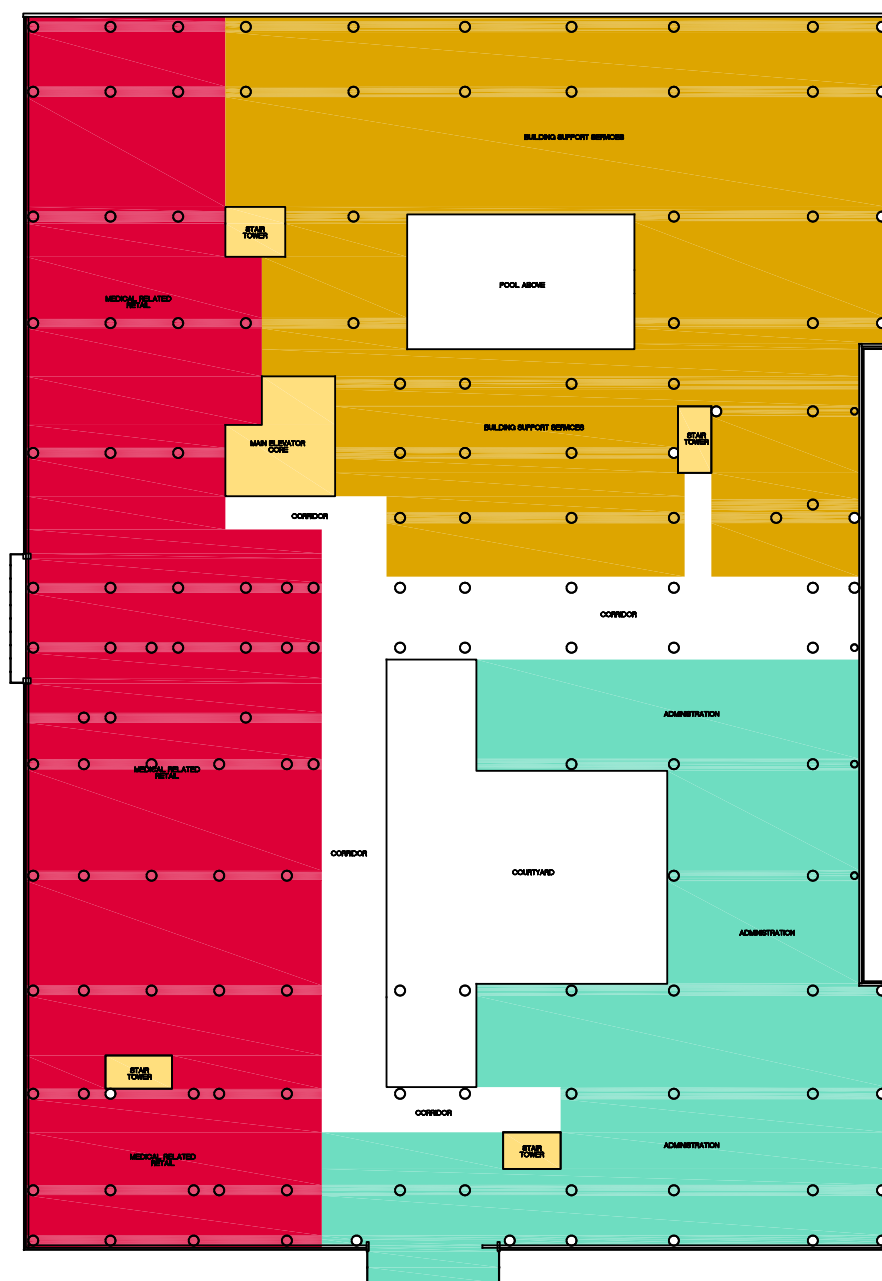


Figure 11.27 - Floor Plan - Level 3

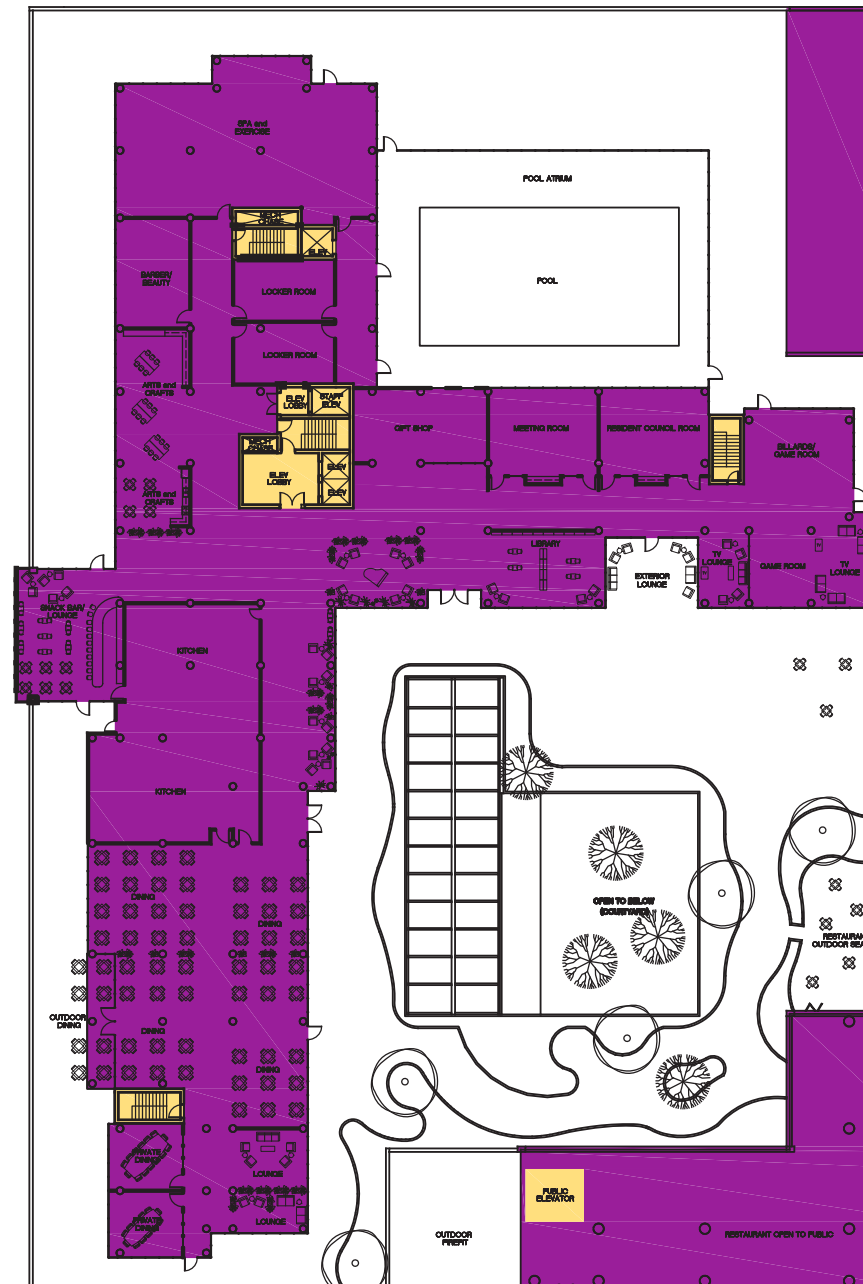


Figure 11.28 - Floor Plan - Level 4

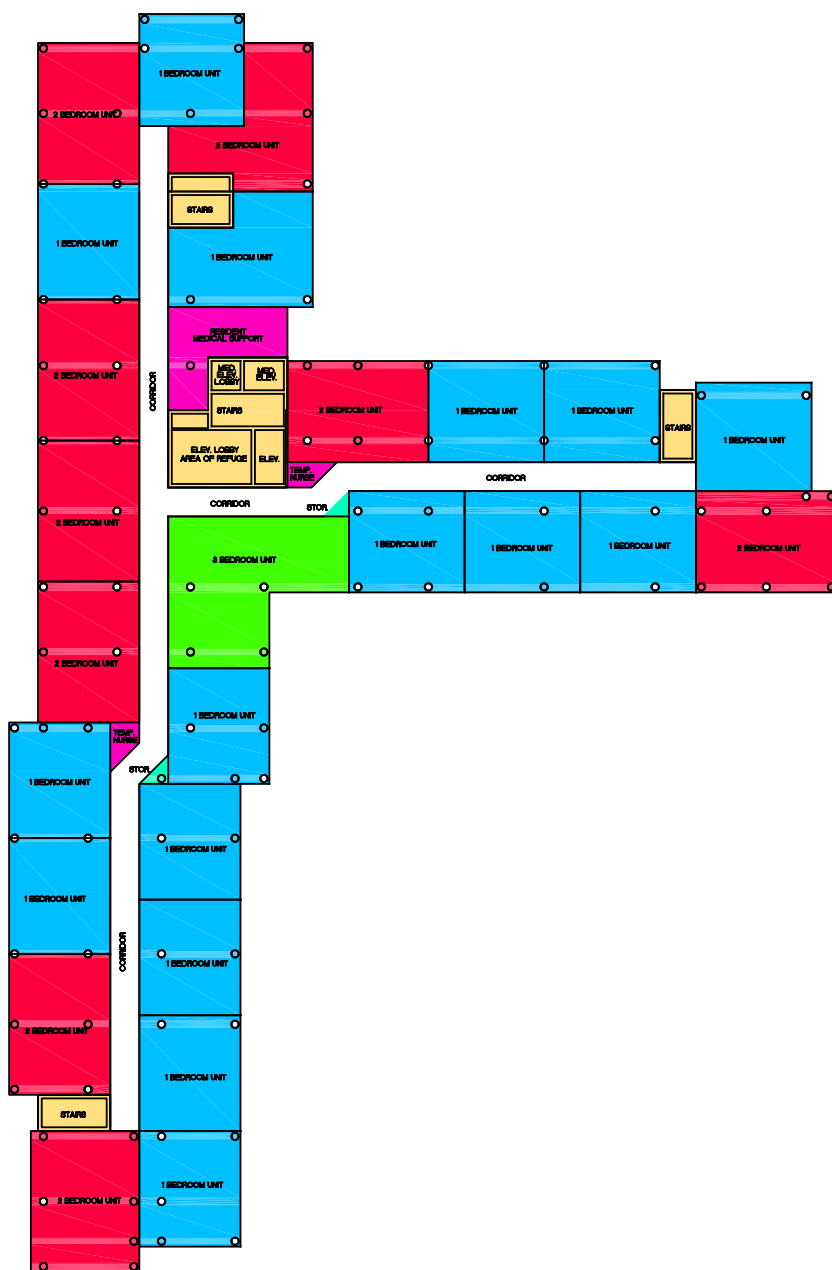


Figure 11.29 - Floor Plan - Levels 5 - 8

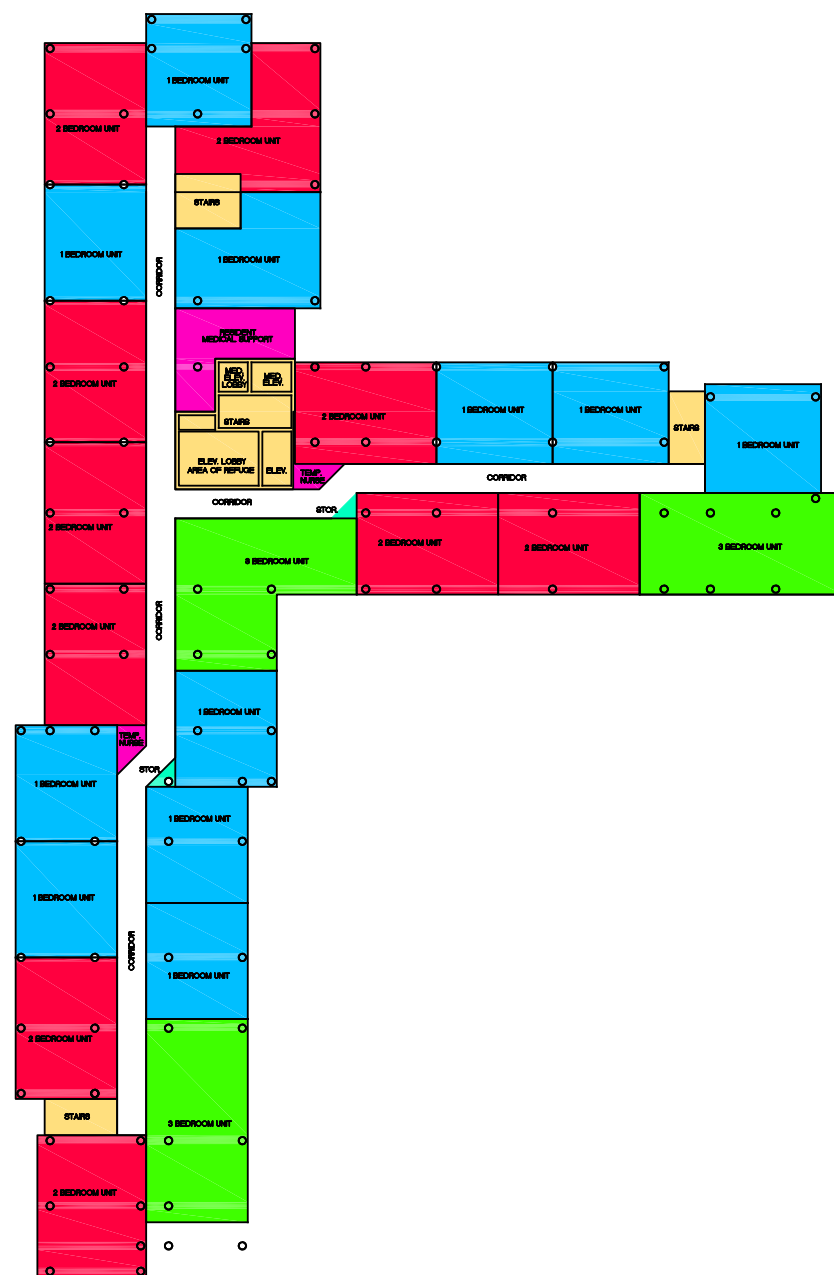


Figure 11.30 - Floor Plan - Levels 9 - 11

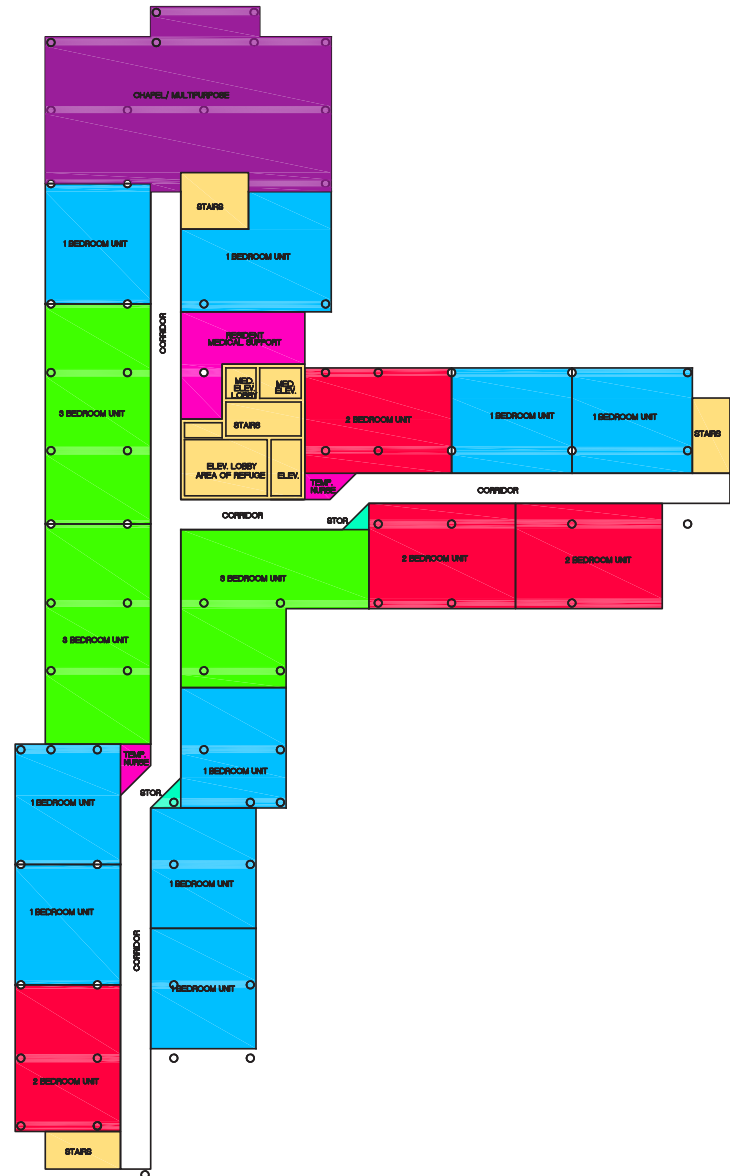


Figure 11.31 - Floor Plan - Level 12

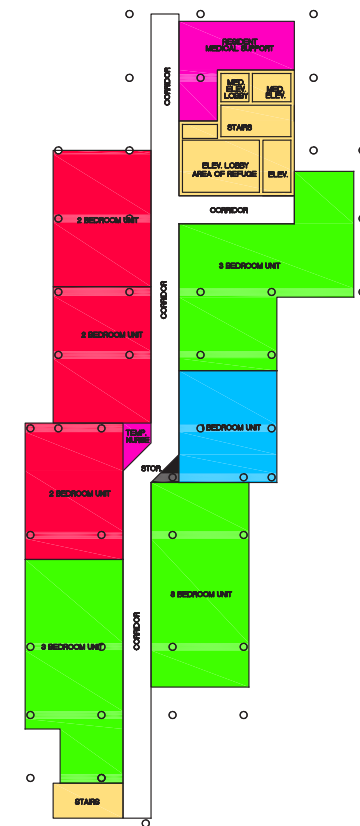


Figure 11.32 - Floor Plan - Level 13

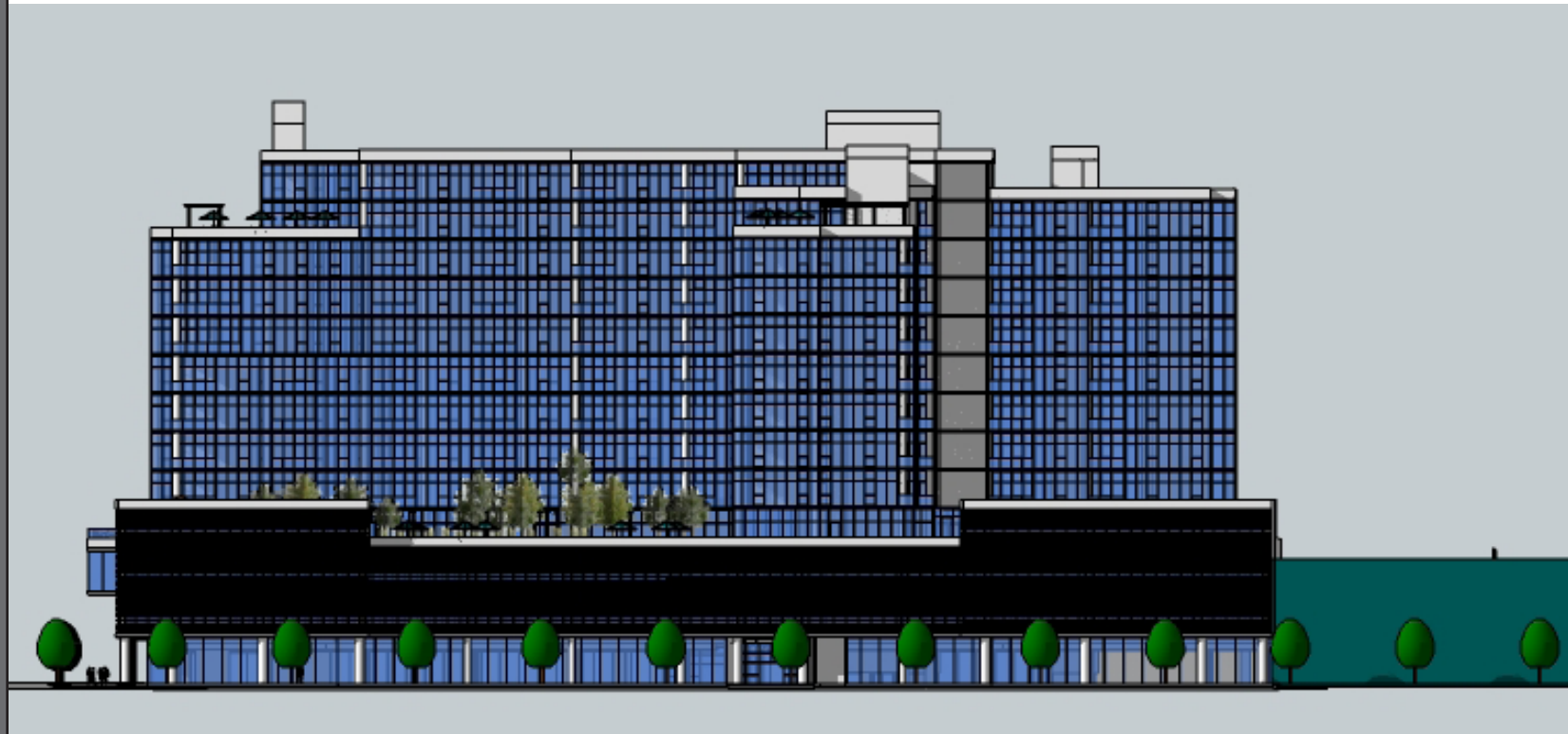


Figure 11.33 - East Elevation

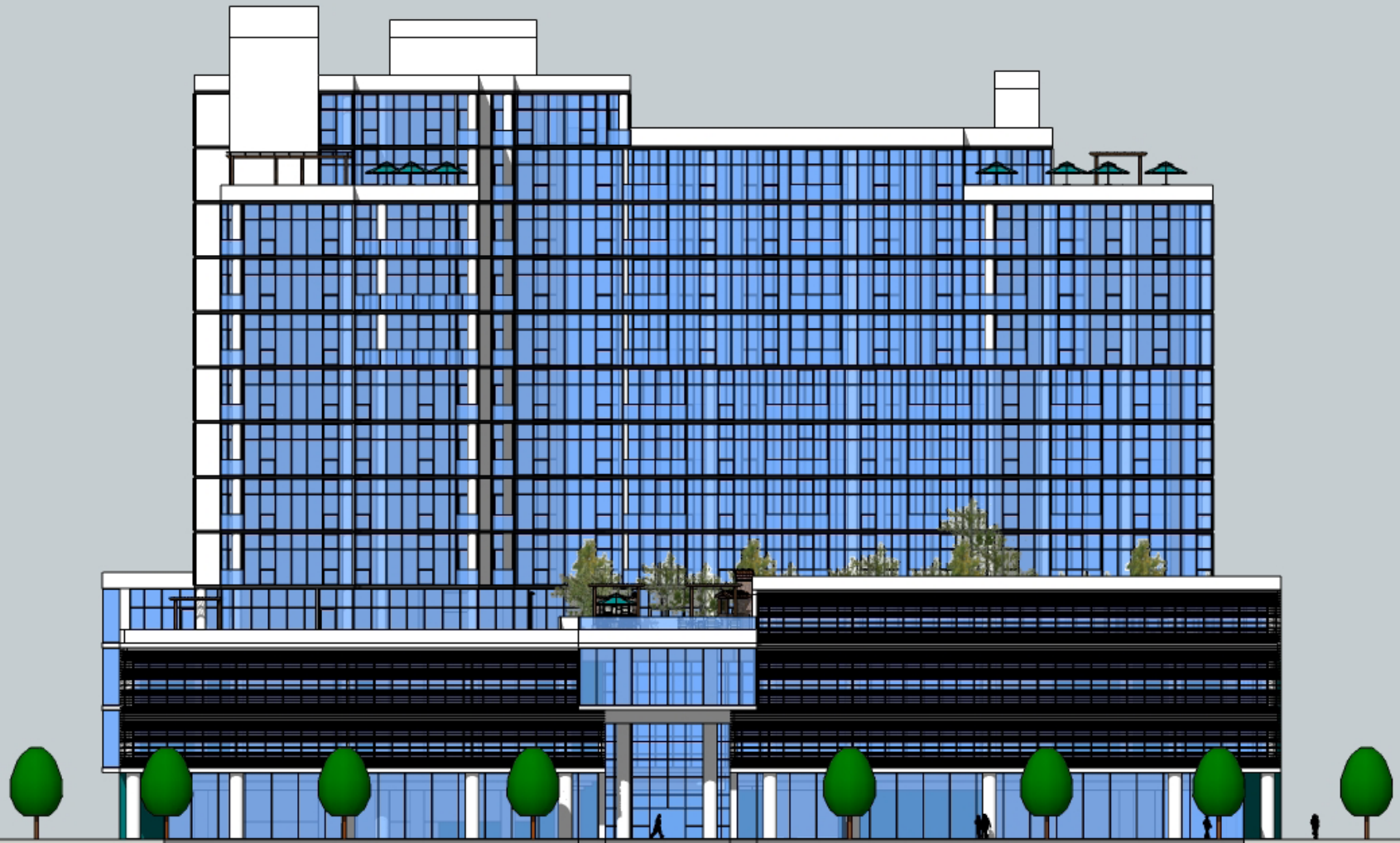


Figure 11.34 - South Elevation

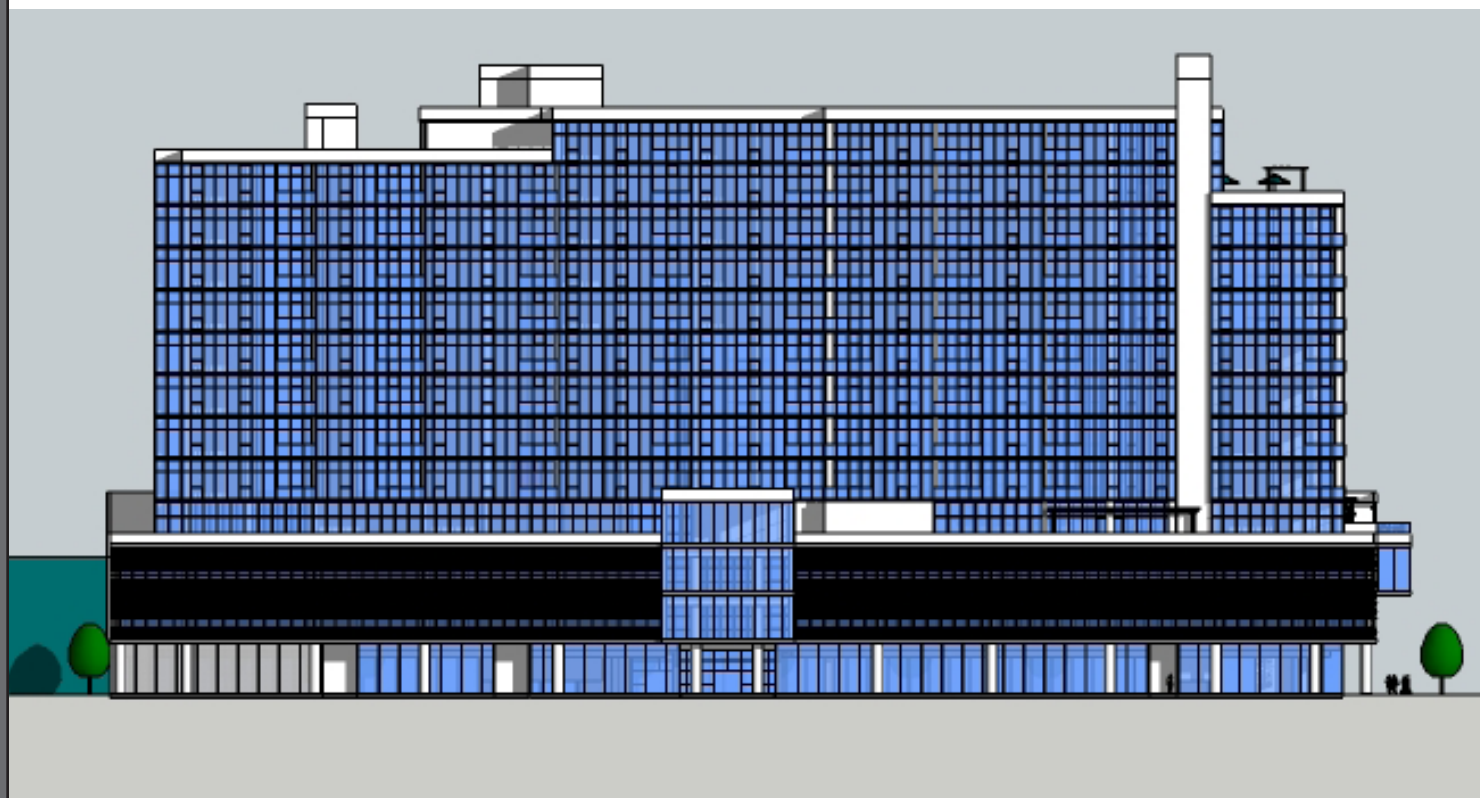


Figure 11.35 - West Elevation

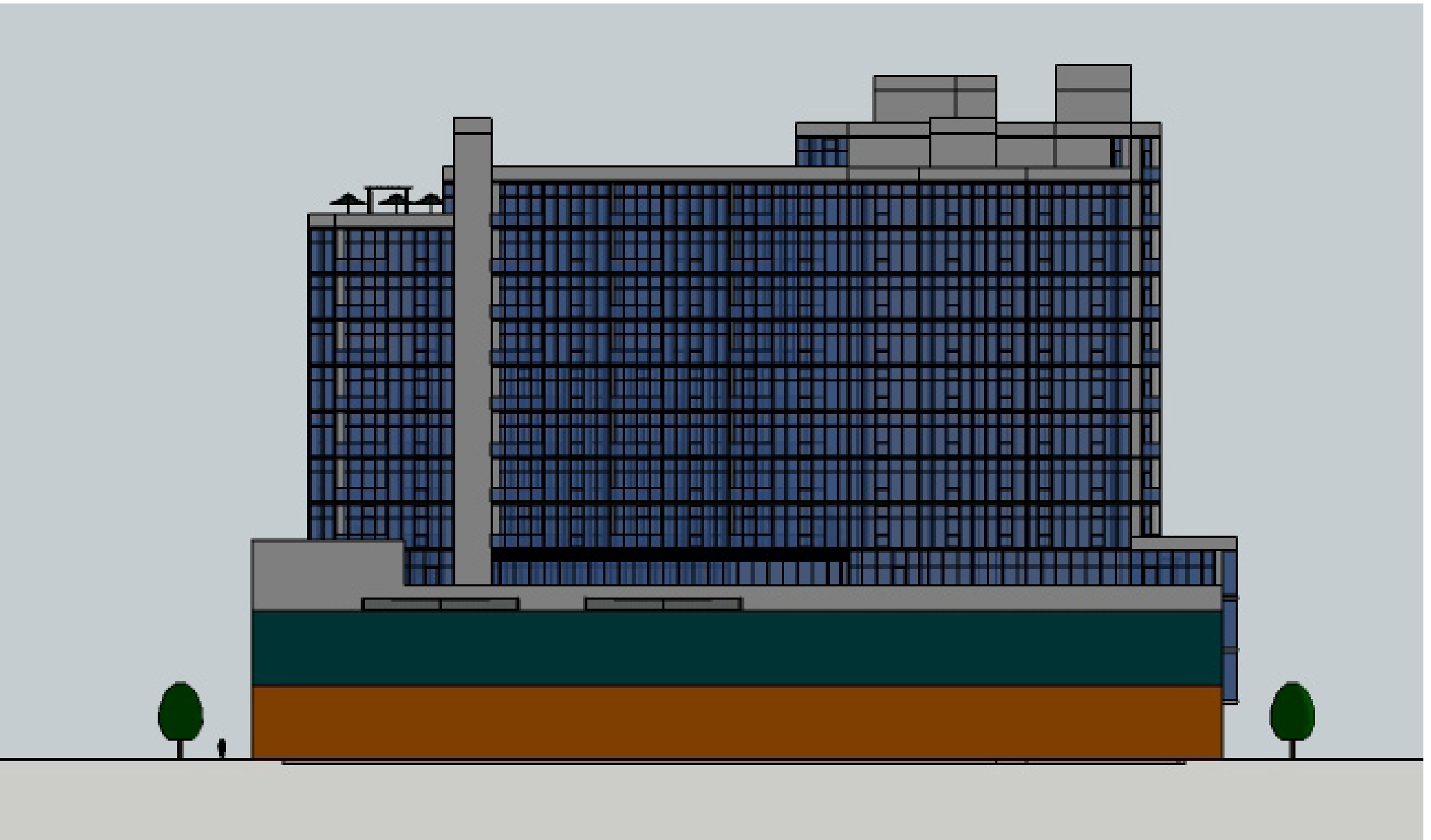


Figure 11.36 - North Elevation

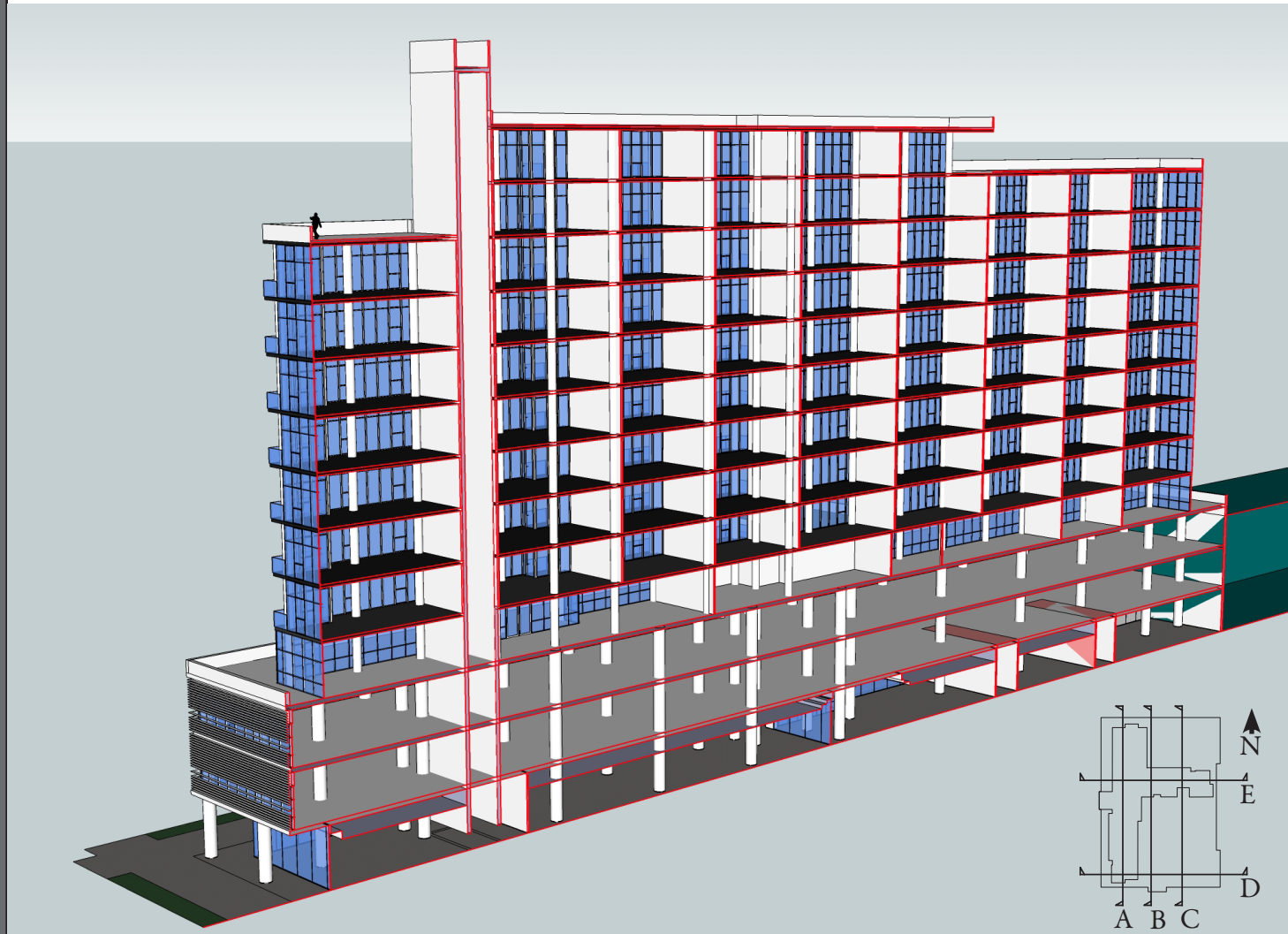


Figure 11.37 - Longitudinal Section A

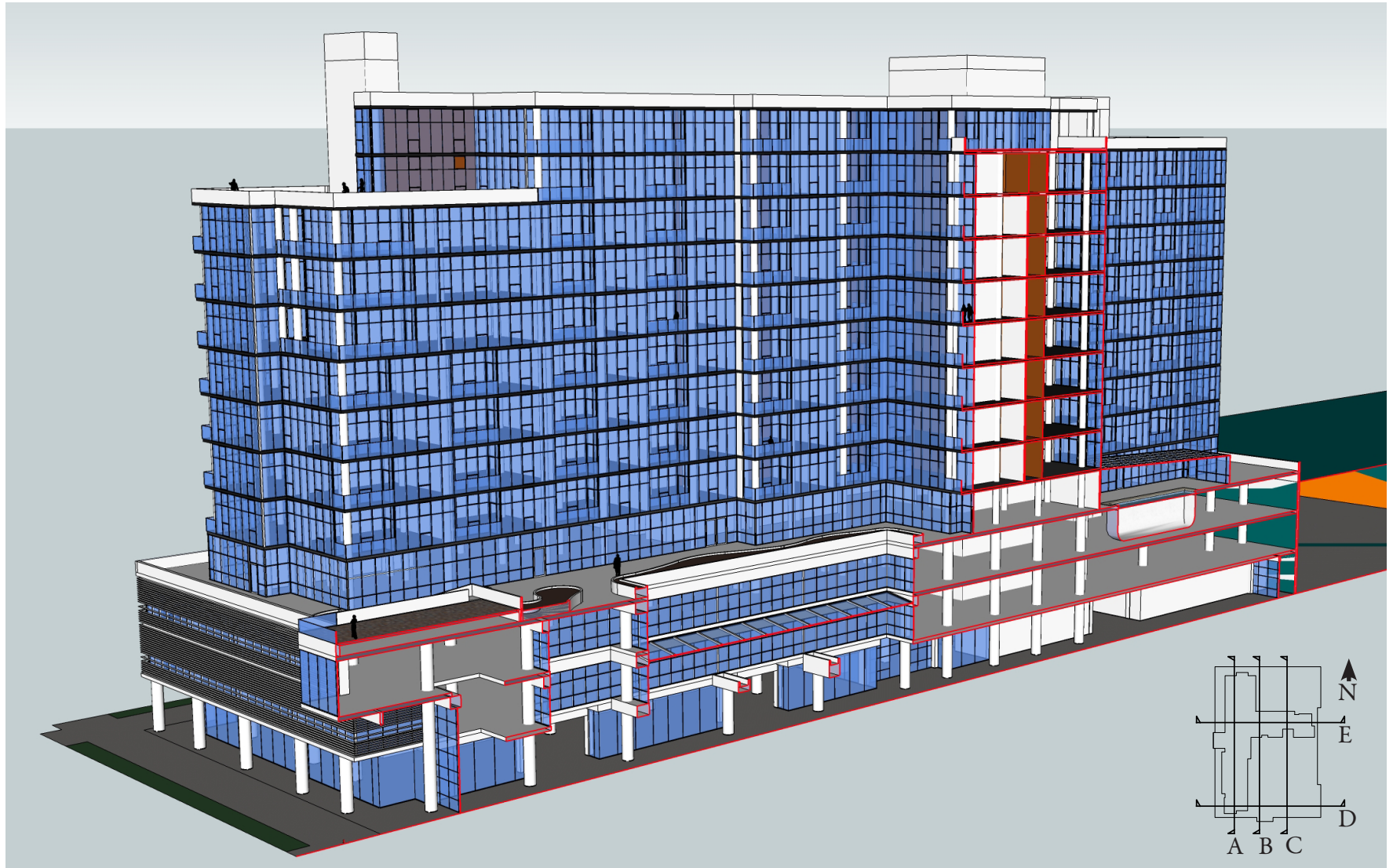


Figure 11.38 - Longitudinal Section B

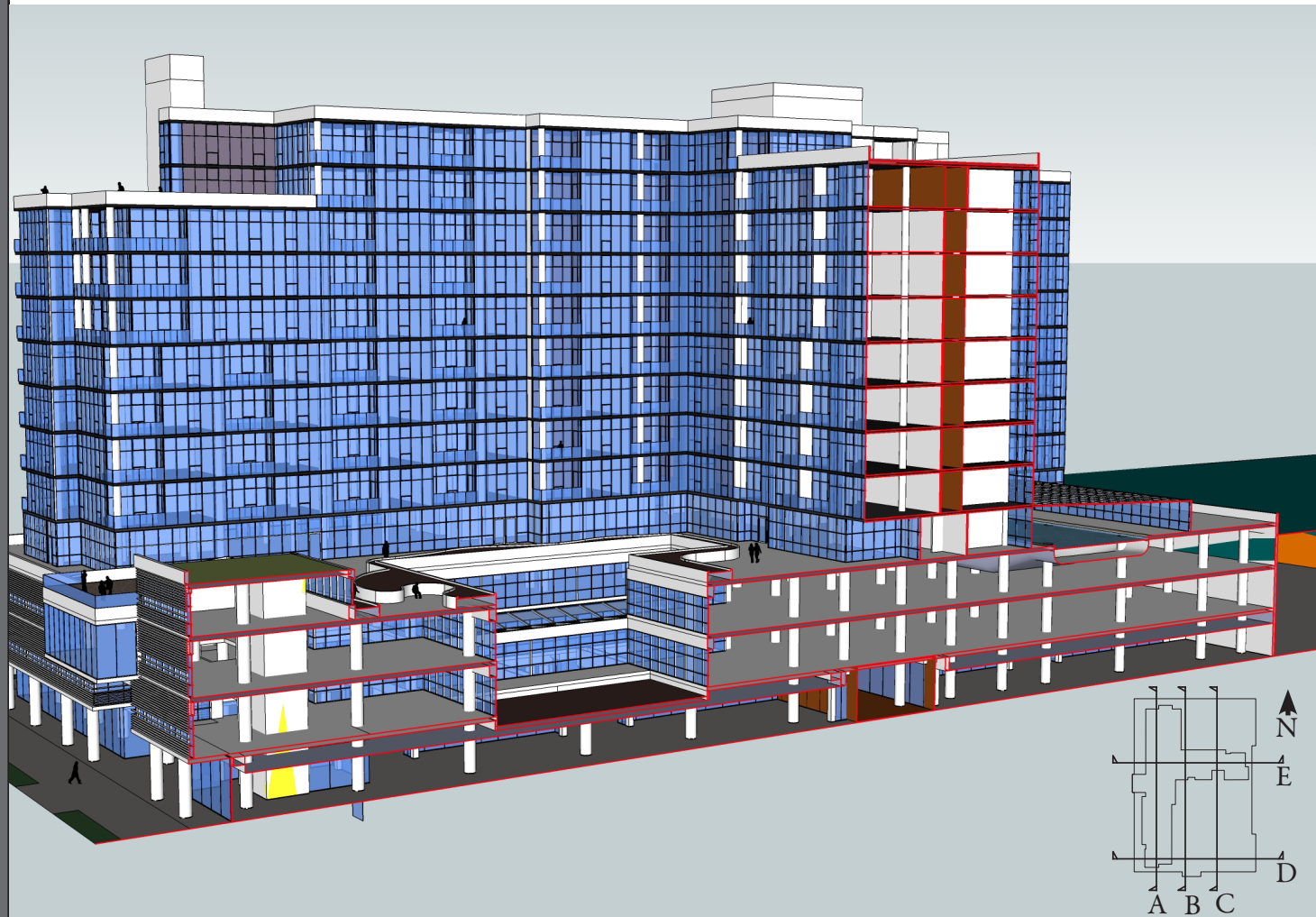


Figure 11.39 - Longitudinal Section C

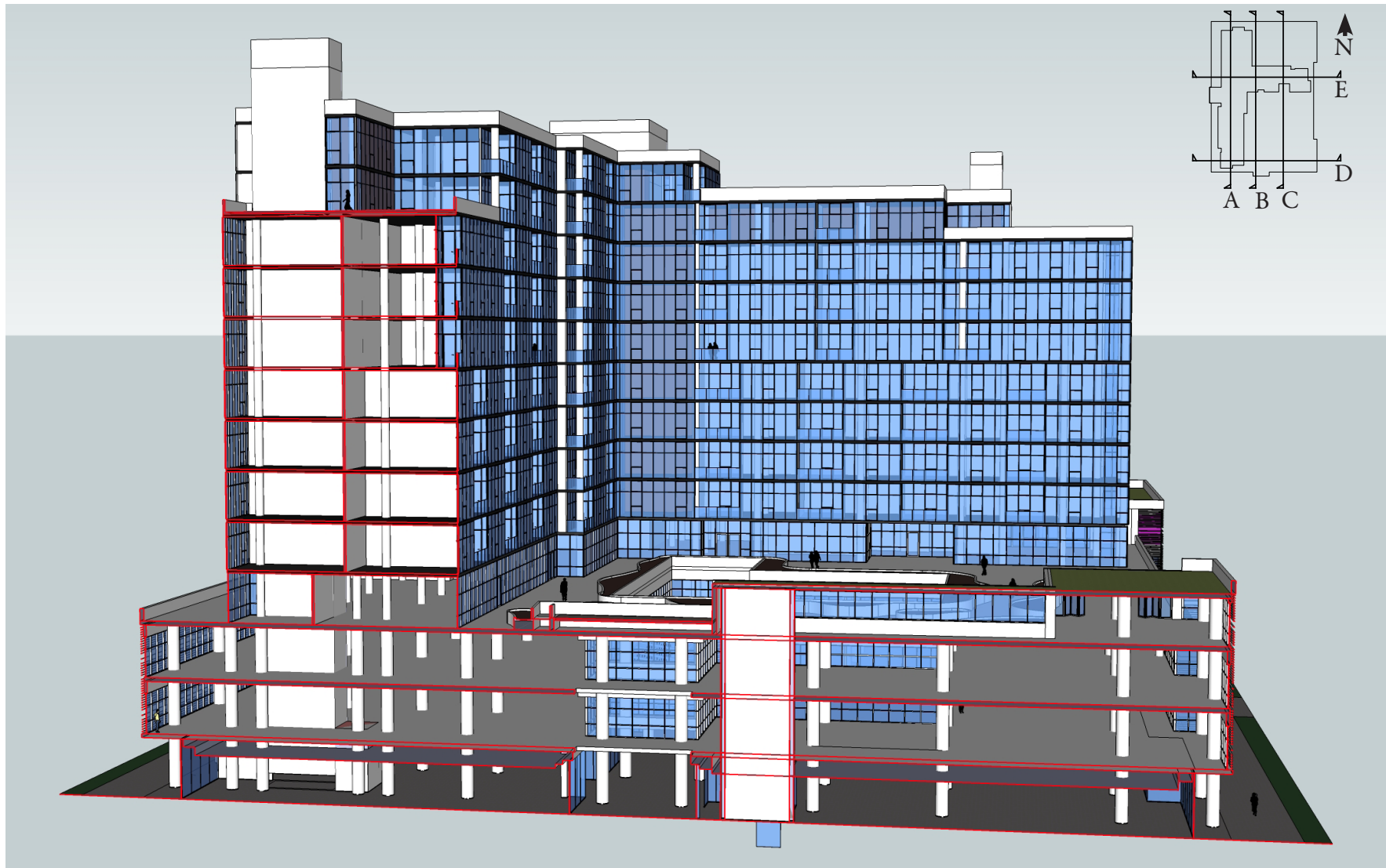


Figure 11.40 - Cross Section D

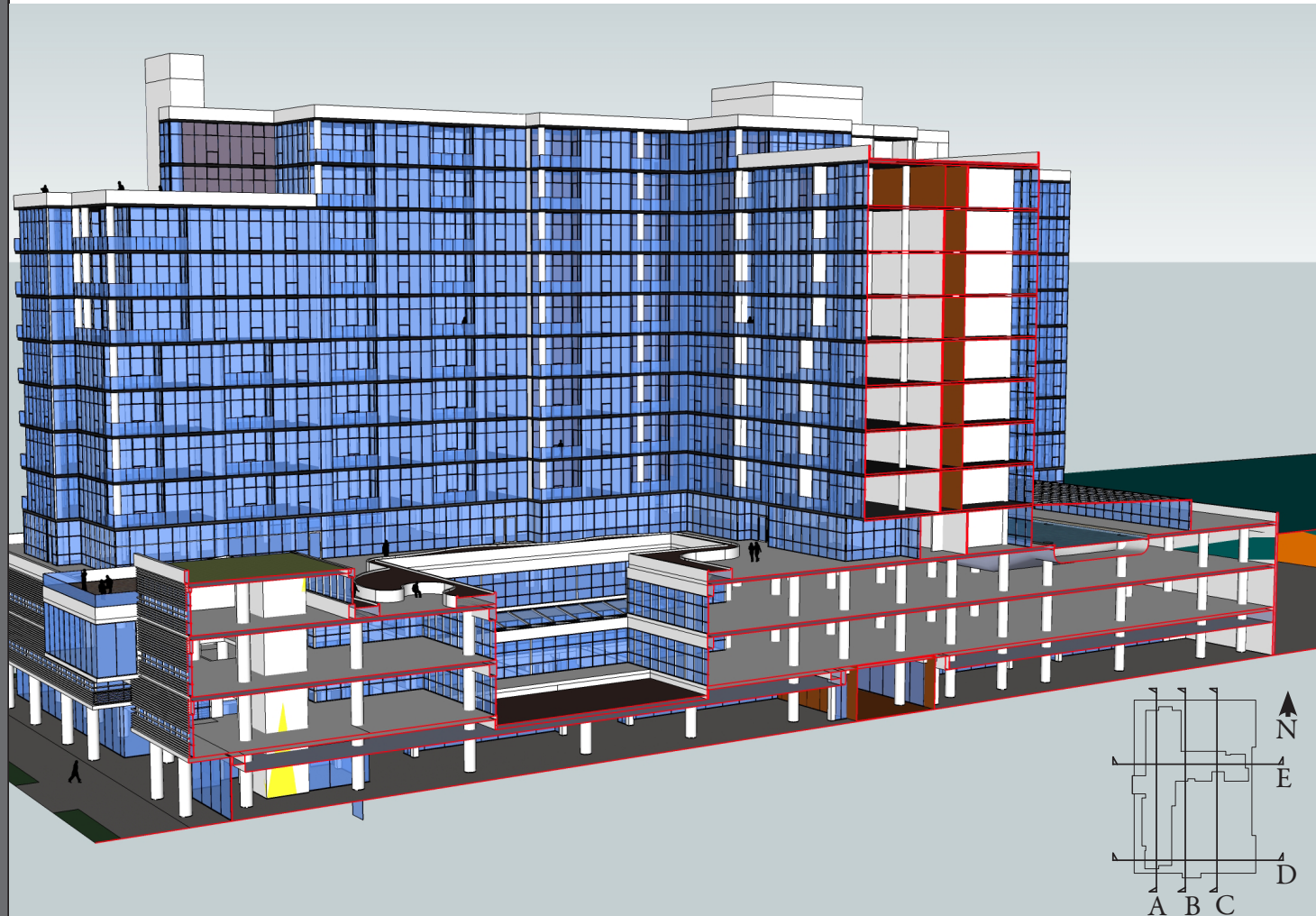


Figure 11.41 - Cross Section E

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Conclusion

Over the next few years North Downtown Omaha will evolve into one of Omaha's most exciting and active neighborhoods. The neighborhood already has started with the Qwest Center opening in 2003 and the new College World Series Ball Park opening in spring of 2011. There are condos, hotels and retail shops springing up all over the area. Young people, empty nesters, and seniors are moving to this area to participate in the active lifestyle, enjoy the walkability of the area, and take part in the vibrant street level activity. As presented throughout this document an introduction of a retirement community could help spur more housing developments in the mixed use area as presented in Figure 9.1 by HDR.

A new model for a Continuing Care Retirement Community (CCRC) is on the horizon in the United States. This retirement community is designed for active seniors who want to "Age in Place" and not have to relocate to different dwelling units when their healthcare needs change. The seniors that are attracted to this type of community are looking for luxury condos with the added benefit of provided healthcare. There is a lifestyle that this facility caters to; it is not designed for the seniors who want to live out in the country with an abundance of green space, but for a senior that loves the excitement of downtown and all of its benefits of dining, entertainment, and social interaction.

Crieghton University is located within walking distance to the facility and can provide a place for the resident to continue learning; this is very popular with CCRCs. The Clare at Water Tower facility discussed in the precedents section shares their building with Loyola University Chicago allowing the residents to have access to continuing education and lifelong learning. The resident also gains priority access to the University's activities and events, which could include concerts, lectures, performances, and forums with the community. Another University that could have a arrangement with the facility is the University of Nebraska Medical Center.

In order to bring the vision for this CCRC to reality, a Trade Area study was completed to determine if a CCRC would be a viable option in Omaha area. The study also located a suitable site to locate this facility. The next process was to develop and design the CCRC to give the vision a form and a reality. The process included looking at precedents of other CCRCs and evaluating that facility as to what worked for the facility and what things could have been better. A major theme in the design was to incorporate universal design principles throughout the design.

Universal design should be just as important as building codes. There should not be an option to forget a segment of the population that deserves the same dignity as a fully able person. As a person who did a study and put themselves into a wheelchair and lived my daily life for a week, I can understand the frustration of a disabled person when they cannot access something. Throughout the week I had issues at restaurants and

stores where a simple fix could have made a difference. Even in a hospital I had problems with steep ramps and heavy “ADA Compliant” bathroom doors. The physical aspect is just one side; the emotional side is when you have to ask someone to help you do something that is a simple everyday task like at a restaurant getting a refill at the beverage station. This takes the dignity away from a person. This project was designed with Universal design principles and will hopefully pave the way for future projects to understand that there is a minimal cost to create a huge difference in someone’s life.

This project is designed to be a new model of CCRC that does not exist in the United States to date. The first aspect already mentioned earlier and throughout this document is the concept of “Aging in Place” the resident as they age should not be forced to move to a different location in the CCRC regardless of the level of care required. Existing CCRCs typically force a resident to move units when their level of care changes, and is due to the idea of bringing the patient to the care and not the care to the patient. This CCRC is designed to bring the care to the patient in their unit if possible, and if not possible to use a medical circulation system to move the resident to an area for the treatment then return them to their dwelling unit. The medical circulation system is in place to help mitigate the feeling that this facility is a healthcare facility. The residents do not need to see medical staff on a daily basis unless their level of care requires it. The second aspect of the design was to design the project like a high-end luxury condominium tower. This would give the residence resort-like living similar to The Clare at Water Tower facility in Chicago.

The residents in this facility will have access to a wide range of amenities, like fine dining, arts and crafts space, fitness center with an indoor pool, social areas including game room, lounge/bar, piano area, and many more. The outdoor space allows the residents to enjoy the fresh air and excitement of the downtown area. There are multiple outdoor terraces throughout the facility. Also there is a recreational area with tennis courts and lawn bowling above the parking garage. All the roofs visible by residential units are planted green roofs, some are occupiable and some are just for sustainability purposes.

Sustainable design is an important design consideration and should be a must in all building design. Sustainable principles were used when designing the facility. The first floor is shaded by a natural overhang created by the first floor walls being recessed inward. This also allows pedestrians walking along the building to get out of the elements if they choose to do so. The second and third floors have a louver system to shade from summer sunlight but allow the penetration of the winter sunlight. The fourth floor and higher have glass curtain walls made with triple pane glass, also each unit has a patio that is recessed into the facade creating pockets of facade that is naturally shaded. Natural ventilation was considered an important aspect for the project. Each residential dwelling unit is designed to have at least two operable windows per room. The windows are designed to only open slightly to allow residents control of their environment but to keep safety in mind, especially with residents with dementia.

The medical care of the resident is top priority of any CCRC. This facility has a residential medical support room on each floor where a resident will be taken if they cannot be treated within their dwelling unit. All of the dwelling units are design with 3’-8” doors at the entry and bedrooms to allow for easy movement of residents and beds. Each dwelling unit features a large shower with a wet zone; this is to allow the resident to be bathed in their unit with or without assistance. The dwelling unit kitchens are designed to be easily adaptable to the

Conclusion

resident's needs. The appliances in the kitchen are designed to keep the resident safe but still allow them the freedom to cook for themselves. For instance, the stove is magnetic induction cook top. The only thing that is hot will be the pan, the cook top will never reach a burning temperature, you can even place a towel between the burner and the pan and it will not start a fire. A medical closet has been provided in every dwelling unit. This will allow the nursing staff to store medical equipment and medications in the residents dwelling unit and not in the corridors. Each dwelling unit will have a pass card key access to allow for quick access to the unit during emergencies and allow residents with disabilities to unlock their door without having to use a standard key.

The overall facility is designed to allow a resident to enjoy their retirement years without worries of what will happen when their health changes. The facility promotes social interaction with other residents and staff. Residents are encouraged to be independent for as long as possible by employing universal design guidelines and making activities of daily living more accessible.

The process displayed throughout this document was comprehensive; merging the planning process with architectural design in order to create a cohesive project that could be taken to the next step by finding a developer and an architect to construct this new and exciting model for a Continuing Care Retirement Community in the North Downtown Area.

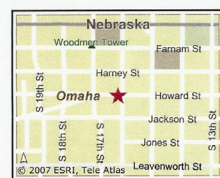
Appendix A.

Market Profile

1615 Howard St
Omaha, NE 68102

October 5, 2008

Latitude: 41.255492
Longitude: -95.9374





Market Profile

Latitude: 41.255492 Longitude: -95.9374		1615 Howard St Omaha, NE 68102 Radius: 1.0 miles	1615 Howard St Omaha, NE 68102 Radius: 3.0 miles	1615 Howard St Omaha, NE 68102 Radius: 10.0 miles
	2000 Total Population	14,473	111,208	527,268
	2000 Group Quarters	3,789	6,326	13,505
	2008 Total Population	14,772	110,237	546,879
	2013 Total Population	15,104	111,562	570,742
	2008 - 2013 Annual Rate	0.45%	0.24%	0.86%
	2000 Households	5,596	44,759	208,736
	2000 Average Household Size	1.91	2.34	2.46
	2008 Households	5,724	44,727	220,795
	2008 Average Household Size	1.9	2.32	2.41
	2013 Households	5,957	45,560	232,121
	2013 Average Household Size	1.88	2.31	2.4
	2008 - 2013 Annual Rate	0.8%	0.37%	1.01%
	2000 Families	1,812	23,410	131,347
	2000 Average Family Size	3.17	3.18	3.09
	2008 Families	1,745	22,562	136,323
	2008 Average Family Size	3.23	3.19	3.05
	2013 Families	1,756	22,507	141,916
	2013 Average Family Size	3.23	3.19	3.04
	2008 - 2013 Annual Rate	0.13%	-0.05%	0.81%
	2000 Housing Units	6,574	48,853	220,365
	Owner Occupied Housing Units	16.4%	42.1%	57.6%
	Renter Occupied Housing Units	68.7%	49.6%	37.2%
	Vacant Housing Units	14.8%	8.3%	5.3%
	2008 Housing Units	6,998	50,035	236,451
	Owner Occupied Housing Units	15.2%	40.5%	56.6%
	Renter Occupied Housing Units	66.6%	48.9%	36.8%
	Vacant Housing Units	18.2%	10.6%	6.6%
	2013 Housing Units	7,361	51,411	249,894
	Owner Occupied Housing Units	14.1%	38.8%	55.5%
	Renter Occupied Housing Units	66.9%	49.8%	37.4%
	Vacant Housing Units	19.1%	11.4%	7.1%
	Median Household Income			
	2000	\$21,384	\$29,056	\$40,437
	2008	\$28,092	\$37,559	\$52,912
	2013	\$34,940	\$45,496	\$64,828
	Median Home Value			
	2000	\$52,969	\$66,708	\$91,619
	2008	\$68,977	\$86,580	\$121,163
	2013	\$76,398	\$95,389	\$134,881
	Per Capita Income			
	2000	\$12,610	\$14,815	\$20,819
	2008	\$17,899	\$19,653	\$26,756
	2013	\$21,314	\$23,208	\$31,655
	Median Age			
	2000	28.9	30.9	33.4
	2008	30.5	32.0	34.7
	2013	31.2	32.7	35.4

Data Note: Household population includes persons not residing in group quarters. Average Household Size is the household population divided by total households. Persons in families include the householder and persons related to the householder by birth, marriage, or adoption. Per Capita Income represents the income received by all persons aged 15 years and over divided by total population. Detail may not sum to totals due to rounding.

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing. ESRI forecasts for 2008 and 2013.



Market Profile

Latitude: 41.255492
Longitude: -95.9374

1615 Howard St
Omaha, NE 68102
Radius: 1.0 miles

1615 Howard St
Omaha, NE 68102
Radius: 3.0 miles

1615 Howard St
Omaha, NE 68102
Radius: 10.0 miles



2000 Households by Income

Household Income Base	5,630	45,025	209,034
< \$15,000	37.0%	23.7%	13.9%
\$15,000 - \$24,999	18.9%	19.3%	14.1%
\$25,000 - \$34,999	15.8%	16.6%	14.9%
\$35,000 - \$49,999	12.3%	17.2%	18.1%
\$50,000 - \$74,999	10.1%	15.1%	20.7%
\$75,000 - \$99,999	3.2%	4.9%	9.5%
\$100,000 - \$149,999	1.9%	2.3%	5.9%
\$150,000 - \$199,999	0.2%	0.4%	1.4%
\$200,000+	0.6%	0.5%	1.6%
Average Household Income	\$28,839	\$35,843	\$51,948

2008 Households by Income

Household Income Base	5,722	44,726	220,796
< \$15,000	28.7%	17.5%	9.6%
\$15,000 - \$24,999	17.4%	15.3%	10.1%
\$25,000 - \$34,999	12.6%	13.6%	10.8%
\$35,000 - \$49,999	15.6%	17.7%	16.5%
\$50,000 - \$74,999	13.4%	18.7%	21.5%
\$75,000 - \$99,999	7.5%	11.2%	17.2%
\$100,000 - \$149,999	3.4%	4.4%	9.6%
\$150,000 - \$199,999	0.7%	1.0%	2.5%
\$200,000+	0.6%	0.7%	2.3%
Average Household Income	\$38,158	\$46,763	\$65,537

2013 Households by Income

Household Income Base	5,960	45,561	232,123
< \$15,000	25.8%	15.5%	8.2%
\$15,000 - \$24,999	13.6%	11.6%	7.2%
\$25,000 - \$34,999	10.6%	10.8%	7.6%
\$35,000 - \$49,999	15.9%	16.7%	14.3%
\$50,000 - \$74,999	16.3%	21.1%	22.5%
\$75,000 - \$99,999	10.3%	13.8%	18.1%
\$100,000 - \$149,999	5.0%	7.8%	14.9%
\$150,000 - \$199,999	1.5%	1.5%	3.6%
\$200,000+	0.9%	1.1%	3.5%
Average Household Income	\$45,292	\$54,967	\$77,050

2000 Owner Occupied HUs by Value

Total	1,117	20,586	126,815
<\$50,000	45.7%	29.2%	14.0%
\$50,000 - 99,999	43.2%	56.3%	45.4%
\$100,000 - 149,999	7.3%	11.1%	25.7%
\$150,000 - 199,999	0.8%	2.1%	8.1%
\$200,000 - \$299,999	1.0%	0.8%	4.3%
\$300,000 - 499,999	0.0%	0.2%	1.8%
\$500,000 - 999,999	0.0%	0.0%	0.5%
\$1,000,000+	1.9%	0.2%	0.2%
Average Home Value	\$82,037	\$72,917	\$107,340

2000 Specified Renter Occupied HUs by Contract Rent

Total	4,460	24,197	81,668
With Cash Rent	98.5%	97.6%	96.0%
No Cash Rent	1.5%	2.4%	4.0%
Median Rent	\$364	\$388	\$474
Average Rent	\$390	\$395	\$489

Data Note: Income represents the preceding year, expressed in current dollars. Household income includes wage and salary earnings, interest, dividends, net rents, pensions, SSI and welfare payments, child support and alimony. Specified Renter Occupied HUs exclude houses on 10+ acres. Average Rent excludes units paying no cash rent.

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing. ESRI forecasts for 2008 and 2013.



Market Profile

Latitude: 41.255492	1615 Howard St Omaha, NE 68102	1615 Howard St Omaha, NE 68102	1615 Howard St Omaha, NE 68102
Longitude: -95.9374	Radius: 1.0 miles	Radius: 3.0 miles	Radius: 10.0 miles
2000 Population by Age			
Total	14,472	111,207	527,266
0 - 4	5.5%	7.7%	7.3%
5 - 9	4.2%	6.9%	7.3%
10 - 14	3.6%	6.3%	7.2%
15 - 19	11.7%	7.7%	7.3%
20 - 24	16.5%	10.4%	7.9%
25 - 34	18.7%	17.5%	15.5%
35 - 44	14.1%	15.2%	15.6%
45 - 54	10.1%	11.1%	12.6%
55 - 64	6.1%	6.4%	7.8%
65 - 74	4.5%	5.5%	6.1%
75 - 84	3.3%	3.8%	4.0%
85+	1.6%	1.4%	1.4%
18+	84.4%	75.3%	73.9%
2008 Population by Age			
Total	14,772	110,235	546,879
0 - 4	5.5%	7.7%	7.3%
5 - 9	4.1%	6.6%	6.7%
10 - 14	3.6%	6.3%	6.7%
15 - 19	11.4%	7.6%	7.1%
20 - 24	14.5%	9.4%	7.7%
25 - 34	18.9%	17.1%	15.1%
35 - 44	13.9%	14.0%	13.8%
45 - 54	11.0%	13.0%	13.9%
55 - 64	7.7%	8.4%	10.0%
65 - 74	4.3%	4.7%	5.8%
75 - 84	3.2%	3.6%	4.2%
85+	1.9%	1.7%	1.9%
18+	84.7%	75.7%	75.3%
2013 Population by Age			
Total	15,104	111,560	570,742
0 - 4	5.4%	7.7%	7.3%
5 - 9	4.1%	6.5%	6.5%
10 - 14	3.4%	6.0%	6.4%
15 - 19	11.1%	7.3%	6.7%
20 - 24	14.6%	10.0%	7.8%
25 - 34	16.9%	15.7%	14.7%
35 - 44	14.0%	13.4%	13.0%
45 - 54	11.2%	12.8%	13.7%
55 - 64	9.0%	10.2%	11.5%
65 - 74	5.1%	5.1%	6.3%
75 - 84	3.1%	3.4%	4.0%
85+	2.1%	1.9%	2.1%
18+	85.0%	76.2%	75.9%
2000 Population by Sex			
Males	55.4%	50.7%	48.8%
Females	44.6%	49.3%	51.2%
2008 Population by Sex			
Males	55.0%	50.8%	48.8%
Females	45.0%	49.2%	51.2%
2013 Population by Sex			
Males	54.9%	50.8%	48.8%
Females	45.1%	49.2%	51.2%

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI forecasts for 2008 and 2013.

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10/05/2008

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Market Profile

Latitude: 41.255492
Longitude: -95.9374

1615 Howard St
Omaha, NE 68102
Radius: 1.0 miles

1615 Howard St
Omaha, NE 68102
Radius: 3.0 miles

1615 Howard St
Omaha, NE 68102
Radius: 10.0 miles



2000 Population by Race/Ethnicity

	1.0 miles	3.0 miles	10.0 miles
Total	14,473	111,208	527,268
White Alone	68.4%	69.5%	81.2%
Black Alone	12.4%	17.4%	11.0%
American Indian Alone	1.8%	1.1%	0.6%
Asian or Pacific Islander Alone	3.2%	1.7%	1.7%
Some Other Race Alone	10.6%	7.8%	3.5%
Two or More Races	3.6%	2.5%	2.0%
Hispanic Origin	18.3%	14.2%	6.9%
Diversity Index	66.0	61.2	41.5

2008 Population by Race/Ethnicity

	1.0 miles	3.0 miles	10.0 miles
Total	14,772	110,237	546,878
White Alone	60.1%	63.8%	77.4%
Black Alone	14.6%	18.6%	12.1%
American Indian Alone	1.9%	1.2%	0.7%
Asian or Pacific Islander Alone	4.3%	2.3%	2.6%
Some Other Race Alone	15.2%	11.4%	5.1%
Two or More Races	3.9%	2.7%	2.2%
Hispanic Origin	25.3%	20.0%	9.9%
Diversity Index	76.1	69.9	49.6

2013 Population by Race/Ethnicity

	1.0 miles	3.0 miles	10.0 miles
Total	15,105	111,562	570,742
White Alone	55.3%	60.5%	75.1%
Black Alone	15.4%	19.0%	12.5%
American Indian Alone	2.0%	1.2%	0.7%
Asian or Pacific Islander Alone	5.0%	2.7%	3.2%
Some Other Race Alone	18.3%	13.8%	6.2%
Two or More Races	4.0%	2.8%	2.3%
Hispanic Origin	29.9%	23.8%	11.9%
Diversity Index	80.7	74.3	54.2



2000 Population 3+ by School Enrollment

	1.0 miles	3.0 miles	10.0 miles
Total	13,900	105,923	504,358
Enrolled in Nursery/Preschool	0.7%	1.4%	1.9%
Enrolled in Kindergarten	1.0%	1.4%	1.5%
Enrolled in Grade 1-8	5.7%	11.2%	12.3%
Enrolled in Grade 9-12	5.2%	5.7%	6.0%
Enrolled in College	17.5%	7.1%	6.1%
Enrolled in Grad/Prof School	3.2%	2.2%	1.5%
Not Enrolled in School	66.8%	70.9%	70.8%

2008 Population 25+ by Educational Attainment

	1.0 miles	3.0 miles	10.0 miles
Total	9,009	68,854	353,609
Less than 9th Grade	11.0%	7.9%	3.7%
9th - 12th Grade, No Diploma	15.9%	13.2%	7.8%
High School Graduate	27.2%	32.5%	29.2%
Some College, No Degree	20.0%	21.7%	24.4%
Associate Degree	4.9%	5.3%	7.4%
Bachelor's Degree	14.9%	13.3%	18.6%
Graduate/Professional Degree	6.0%	6.1%	8.8%

Data Note: Persons of Hispanic Origin may be of any race. The Diversity Index measures the probability that two people from the same area will be from different race/ethnic groups.

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing. ESRI forecasts for 2008 and 2013.



Market Profile

Latitude: 41.255492
Longitude: -95.9374

1615 Howard St
Omaha, NE 68102
Radius: 1.0 miles

1615 Howard St
Omaha, NE 68102
Radius: 3.0 miles

1615 Howard St
Omaha, NE 68102
Radius: 10.0 miles

**2008 Population 15+ by Marital Status**

Total	12,828	87,588	434,199
Never Married	48.0%	39.2%	30.3%
Married	31.9%	38.9%	51.0%
Widowed	4.6%	6.2%	6.0%
Divorced	15.5%	15.6%	12.7%

**2000 Population 16+ by Employment Status**

Total	12,467	86,791	405,221
In Labor Force	58.6%	64.9%	69.9%
Civilian Employed	53.4%	60.2%	65.4%
Civilian Unemployed	4.9%	4.4%	2.9%
In Armed Forces	0.4%	0.2%	1.5%
Not in Labor Force	41.4%	35.1%	30.1%

2008 Civilian Population 16+ in Labor Force

Civilian Employed	92.3%	92.3%	94.9%
Civilian Unemployed	7.7%	7.7%	5.1%

2013 Civilian Population 16+ in Labor Force

Civilian Employed	91.6%	91.7%	94.6%
Civilian Unemployed	8.4%	8.3%	5.4%

2000 Females 16+ by Employment Status and Age of Children

Total	5,463	42,959	210,341
Own Children < 6 Only	5.1%	8.5%	8.2%
Employed/in Armed Forces	3.3%	4.6%	5.6%
Unemployed	0.1%	0.6%	0.3%
Not in Labor Force	1.6%	3.2%	2.3%
Own Children < 6 and 6-17 Only	2.8%	6.0%	6.4%
Employed/in Armed Forces	1.4%	3.6%	4.2%
Unemployed	0.2%	0.3%	0.3%
Not in Labor Force	1.2%	2.1%	2.0%
Own Children 6-17 Only	7.5%	13.2%	16.2%
Employed/in Armed Forces	5.0%	9.6%	12.7%
Unemployed	0.2%	0.6%	0.4%
Not in Labor Force	2.2%	3.1%	3.0%
No Own Children < 18	84.7%	72.3%	69.2%
Employed/in Armed Forces	38.4%	38.2%	39.4%
Unemployed	4.5%	2.5%	1.6%
Not in Labor Force	41.8%	31.6%	28.2%

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing. ESRI forecasts for 2008.



Market Profile

Latitude: 41.255492
Longitude: -95.9374

1615 Howard St
Omaha, NE 68102
Radius: 1.0 miles

1615 Howard St
Omaha, NE 68102
Radius: 3.0 miles

1615 Howard St
Omaha, NE 68102
Radius: 10.0 miles



2008 Employed Population 16+ by Industry

	1.0 miles	3.0 miles	10.0 miles
Total	6,581	49,999	265,543
Agriculture/Mining	0.8%	0.4%	0.3%
Construction	5.8%	6.5%	6.3%
Manufacturing	13.2%	12.6%	9.8%
Wholesale Trade	2.7%	3.0%	3.3%
Retail Trade	10.1%	10.9%	12.2%
Transportation/Utilities	4.9%	5.3%	5.6%
Information	1.9%	2.0%	2.3%
Finance/Insurance/Real Estate	7.6%	9.0%	10.9%
Services	51.2%	47.9%	46.1%
Public Administration	1.9%	2.5%	3.2%

2008 Employed Population 16+ by Occupation

	1.0 miles	3.0 miles	10.0 miles
Total	6,583	50,000	265,543
White Collar	51.4%	52.2%	62.4%
Management/Business/Financial	9.0%	9.5%	12.8%
Professional	16.7%	17.2%	20.9%
Sales	10.5%	10.1%	11.5%
Administrative Support	15.1%	15.4%	17.2%
Services	23.2%	21.0%	16.0%
Blue Collar	25.5%	26.8%	21.6%
Farming/Forestry/Fishing	0.7%	0.4%	0.2%
Construction/Extraction	5.0%	5.8%	4.9%
Installation/Maintenance/Repair	2.1%	2.8%	3.5%
Production	10.3%	9.8%	6.9%
Transportation/Material Moving	7.3%	8.0%	6.1%



2000 Workers 16+ by Means of Transportation to Work

	1.0 miles	3.0 miles	10.0 miles
Total	6,534	51,432	267,180
Drove Alone - Car, Truck, or Van	53.7%	71.7%	81.7%
Carpooled - Car, Truck, or Van	17.7%	15.9%	11.2%
Public Transportation	4.9%	3.7%	1.5%
Walked	19.2%	5.5%	2.2%
Other Means	1.5%	1.2%	0.8%
Worked at Home	3.1%	2.1%	2.6%

2000 Workers 16+ by Travel Time to Work

	1.0 miles	3.0 miles	10.0 miles
Total	6,535	51,433	267,179
Did Not Work at Home	96.9%	97.9%	97.4%
Less than 5 minutes	7.8%	3.4%	2.7%
5 to 9 minutes	17.0%	13.8%	12.2%
10 to 19 minutes	37.9%	44.3%	42.6%
20 to 24 minutes	14.2%	17.6%	20.8%
25 to 34 minutes	13.9%	13.2%	14.1%
35 to 44 minutes	1.7%	1.1%	1.4%
45 to 59 minutes	2.2%	1.5%	1.4%
60 to 89 minutes	1.3%	1.8%	1.3%
90 or more minutes	1.0%	1.2%	1.0%
Worked at Home	3.1%	2.1%	2.6%
Average Travel Time to Work (in min)	17.1	18.1	18.3

2000 Households by Vehicles Available

	1.0 miles	3.0 miles	10.0 miles
Total	5,592	44,831	208,714
None	30.2%	16.3%	8.8%
1	47.3%	44.0%	37.2%
2	16.8%	29.1%	38.8%
3	4.1%	7.6%	11.0%
4	0.7%	1.9%	3.0%
5+	0.9%	1.1%	1.1%
Average Number of Vehicles Available	1.0	1.4	1.7

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing. ESRI forecasts for 2008 and 2013.



Market Profile

Latitude: 41.255492		1615 Howard St Omaha, NE 68102	1615 Howard St Omaha, NE 68102	1615 Howard St Omaha, NE 68102
Longitude: -95.9374		Radius: 1.0 miles	Radius: 3.0 miles	Radius: 10.0 miles
	2000 Households by Type			
	Total	5,596	44,759	208,736
	Family Households	32.4%	52.3%	62.9%
	Married-couple Family	18.7%	31.8%	46.2%
	With Related Children	9.0%	15.7%	22.0%
	Other Family (No Spouse)	13.6%	20.5%	16.8%
	With Related Children	9.1%	14.1%	11.4%
	Nonfamily Households	67.6%	47.7%	37.1%
	Householder Living Alone	57.5%	38.5%	30.0%
	Householder Not Living Alone	10.2%	9.2%	7.1%
	Households with Related Children	18.1%	29.7%	33.4%
	Households with Persons 65+	16.1%	19.8%	20.7%
	2000 Households by Size			
	Total	5,596	44,759	208,736
	1 Person Household	57.5%	38.5%	30.0%
	2 Person Household	21.9%	27.8%	32.1%
	3 Person Household	7.9%	13.6%	15.6%
	4 Person Household	5.5%	10.1%	12.6%
	5 Person Household	3.4%	5.4%	6.1%
	6 Person Household	1.9%	2.5%	2.3%
	7+ Person Household	1.8%	2.2%	1.4%
	2000 Households by Year Householder Moved In			
	Total	5,594	44,831	208,716
	Moved in 1999 to March 2000	38.1%	27.7%	22.4%
	Moved in 1995 to 1998	33.9%	28.5%	28.4%
	Moved in 1990 to 1994	10.0%	13.7%	14.7%
	Moved in 1980 to 1989	8.8%	11.4%	14.1%
	Moved in 1970 to 1979	3.7%	7.2%	10.0%
	Moved in 1969 or Earlier	5.5%	11.5%	10.3%
	Median Year Householder Moved In	1998	1996	1995
	2000 Housing Units by Units in Structure			
	Total	6,578	48,893	220,257
	1, Detached	23.3%	53.3%	64.0%
	1, Attached	1.8%	2.7%	3.8%
	2	5.5%	6.0%	2.6%
	3 or 4	4.8%	6.4%	2.9%
	5 to 9	7.3%	8.7%	6.1%
	10 to 19	8.8%	7.5%	8.1%
	20+	48.6%	14.5%	10.5%
	Mobile Home	0.1%	1.0%	1.9%
	Other	0.0%	0.0%	0.0%
	2000 Housing Units by Year Structure Built			
	Total	6,583	48,927	220,284
	1999 to March 2000	1.0%	0.5%	1.6%
	1995 to 1998	1.0%	1.3%	4.7%
	1990 to 1994	0.4%	1.2%	4.2%
	1980 to 1989	2.9%	4.0%	9.8%
	1970 to 1979	6.0%	6.8%	18.4%
	1969 or Earlier	86.6%	86.2%	61.3%
	Median Year Structure Built	1935	1943	1964

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing.



Latitude: 41.255492
Longitude: -95.9374

1615 Howard St
Omaha, NE 68102
Radius: 1.0 miles

1615 Howard St
Omaha, NE 68102
Radius: 3.0 miles

1615 Howard St
Omaha, NE 68102
Radius: 10.0 miles

Market Profile

Top 3 Tapestry Segments

1.	Social Security Set	Rustbelt Traditions	Rustbelt Traditions
2.	Metro Renters	Great Expectations	Young and Restless
3.	City Dimensions	Inner City Tenants	Cozy and Comfortable

2008 Consumer Spending shows the amount spent on a variety of goods and services by households that reside in the market area. Expenditures are shown by broad budget categories that are not mutually exclusive. Consumer spending does not equal business revenue.

Apparel & Services: Total \$	\$7,260,728	\$67,750,792	\$455,301,929
Average Spent	\$1,268.47	\$1,514.76	\$2,062.10
Spending Potential Index	47	56	77
Computers & Accessories: Total \$	\$755,110	\$7,121,753	\$48,165,495
Average Spent	\$131.92	\$159.23	\$218.15
Spending Potential Index	55	67	91
Education: Total \$	\$4,496,652	\$42,837,225	\$284,038,790
Average Spent	\$785.58	\$957.75	\$1,286.44
Spending Potential Index	57	70	94
Entertainment/Recreation: Total \$	\$10,599,580	\$103,912,571	\$725,990,934
Average Spent	\$1,851.78	\$2,323.26	\$3,288.08
Spending Potential Index	50	63	89
Food at Home: Total \$	\$15,851,860	\$146,282,248	\$972,707,950
Average Spent	\$2,769.37	\$3,270.56	\$4,405.48
Spending Potential Index	57	67	90
Food Away from Home: Total \$	\$10,930,725	\$102,690,641	\$690,283,389
Average Spent	\$1,909.63	\$2,295.94	\$3,126.35
Spending Potential Index	56	67	91
Health Care: Total \$	\$12,098,435	\$116,909,709	\$806,181,224
Average Spent	\$2,113.63	\$2,613.85	\$3,651.27
Spending Potential Index	52	64	89
HH Furnishings & Equipment: Total \$	\$5,982,152	\$59,527,028	\$425,650,238
Average Spent	\$1,045.10	\$1,330.90	\$1,927.81
Spending Potential Index	45	58	84
Investments: Total \$	\$2,373,995	\$25,203,623	\$197,842,793
Average Spent	\$414.74	\$563.50	\$896.05
Spending Potential Index	41	56	88
Retail Goods: Total \$	\$76,934,468	\$746,442,939	\$5,169,376,653
Average Spent	\$13,440.68	\$16,688.87	\$23,412.56
Spending Potential Index	50	61	86
Shelter: Total \$	\$49,209,553	\$445,959,354	\$3,067,369,901
Average Spent	\$8,597.06	\$9,970.70	\$13,892.39
Spending Potential Index	55	64	89
TV/Video/Sound Equipment: Total \$	\$4,633,822	\$43,497,905	\$290,276,936
Average Spent	\$809.54	\$972.52	\$1,314.69
Spending Potential Index	56	68	91
Travel: Total \$	\$5,097,767	\$49,737,280	\$361,583,118
Average Spent	\$890.60	\$1,112.02	\$1,637.64
Spending Potential Index	47	59	87
Vehicle Maintenance & Repairs: Total \$	\$2,953,481	\$28,265,551	\$194,339,041
Average Spent	\$515.98	\$631.96	\$880.18
Spending Potential Index	52	64	89

Data Note: The Spending Potential Index represents the amount spent in the area relative to a national average of 100.

Source: Expenditure data are derived from the 2004 and 2005 Consumer Expenditure Surveys, Bureau of Labor Statistics. ESRI.

Appendix B.

Selected Selections of Omaha Zoning Ordinance

Omaha Zoning Ordinance

Sec. 55-401. GC general commercial district.

Sec. 55-402. Purpose.

The GC general commercial district is intended for a wide variety of commercial uses and limited industrial facilities. Uses allowed in the GC district may generate sufficient traffic or have operating characteristics which make them generally incompatible with residential areas or lower intensity commercial and office districts. GC districts require access from major streets, primarily minor and major arterials. GC districts are most appropriate along arterials, at major intersections, and in areas appropriate for commercial uses which are relatively well insulated from residential districts.
(Code 1980, § 55-402)

Sec. 55-403. Permitted uses.

The following use types are permitted:

(a) Office uses.

Financial services

General offices

Medical offices

(b) Commercial uses.

Agricultural sales and service

Automotive washing

Auto rental

Auto repair services

Bed and breakfast inns

Building maintenance services

Business support services

Business or trade school

Cocktail lounge
Communications services
Construction sales and services
Consumer convenience services
Consumer repair services
Equipment rental and sales
Equipment repair services
Exterminating services
Food sales (limited)
Food sales (general)
Food sales (convenience)
Funeral services
General retail sales
Hotel/motel
Indoor entertainment
Indoor sports and recreation
Laundry services
Liquor sales
Pawnshop services
Personal improvement services
Personal services
Pet services
Research services
Restaurant (drive-in)
Restaurant (limited)
Restaurant (general)
Service station
Veterinary services
(c) Transportation uses.
Transportation terminal
(d) Industrial uses.
Custom manufacturing
(e) Civic uses.
Administrative services

Cultural services
Day care (limited)
Day care (general)
Emergency residential care
Guidance services
Hospital services (limited)
Hospital services (general)
Local utility services
Park and recreation services
Postal facilities
Public assembly
Recreational clubs
Religious assembly
Social clubs

(Code 1980, § 55-403; Ord. No. 33545, § 14, 5-2-95; Ord. No. 36246, § 2, 4-29-03; Ord. No. 37095, § 2, 7-26-05)

Sec. 55-404. Conditional uses.

The following use types are allowed, subject to approval of a conditional use permit, as provided by section 55-883:

(a) Residential uses.
Single-family (detached)
Single-family (attached)
Duplex residential
Two-family residential
Townhouse residential
Multiple-family residential
Large group living
Small group living (disabled)
Small group living (nondisabled)
(b) Civic uses.
College and university facilities
Safety services
Secondary educational facilities

(c) Commercial uses.

Kennels
Outdoor sports and recreation
Surplus sales
(d) Parking uses.
Parking structure
Surface parking

(e) Industrial uses.

Warehousing and distribution (limited)

(Code 1980, § 55-404; Ord. No. 33545, § 15, 5-2-95; Ord. No. 38198, § 21, 7-29-08)

Sec. 55-405. Special permit uses.

The following use types are allowed, subject to approval of a special use permit by the city council, as provided by section 55-884:

(a) Civic uses.
Transitional living
Maintenance and service facilities
(b) Commercial uses.
Auto sales
Body and fender repair services
Convenience storage
Vehicle storage

(c) Miscellaneous uses.

Broadcasting tower
Wind energy conservation system

(Code 1980, § 55-405; Ord. No. 36246, § 2, 4-29-03; Ord. No. 38198, § 21, 7-29-08)

Sec. 55-406. Site development regulations.

Each site in the GC general commercial district shall be subject to the following site development regulations:

TABLE INSET:

Regulator	Requirement
Lot area	5,000 square feet minimum
Lot width	50 feet minimum
Floor area ratio	2.0 maximum
Front yard	The greater of 15 feet or 50 feet from the center line of the fronting street
Street side yard	The greater of 15 feet or 50 feet from the center line of the fronting street
Interior side yard	No requirement
Rear yard	15 feet
Height	75 feet maximum; 45 feet maximum where building is within 100 feet of property classified as R6 or a lower intensity district
Building coverage	70 percent maximum
Impervious coverage	90 percent maximum
(Code 1980, § 55-406)	

Sec. 55-407. Additional regulations.

- (a) Residential uses. Residential uses are allowed as a conditional use in the GC district, subject to the site development regulations for residential uses in the R8 high-density multiple-family residential district. Other conditions may be required as part of approval of a conditional use permit.
- (b) Large projects.
- (1) Projects proposed in the GC district for sites of four acres and over or including a building floor area of 40,000 square feet and over are subject to site plan approval, as set forth in section 55-882. Site plan approval is further required for projects involving phasing or expansion when

the total project meets or exceeds these limits.

(2) Any project encompassing an area of ten acres or over within a GC district shall require a special permit as set forth in section 55-884. A special permit is further required for projects involving phasing or expansion when the total project is equal to or greater than ten acres.

(Code 1980, § 55-407)

Secs. 55-408--55-420. Reserved.

Sec. 55-421. CBD central business district.

Sec. 55-422. Purpose.

The CBD central business district is designed to provide appropriate development regulations for downtown Omaha. Uses are permitted in downtown Omaha which are consistent with the future development and revitalization of the city's core. Mixed uses are allowed and encouraged within the CBD district. Additional provision is made for future combining districts, which provide more specific development controls for parts of downtown with distinctive physical characteristics.

(Code 1980, § 55-422)

Sec. 55-423. Permitted uses.

The following use types are permitted:

- (a) Residential uses.
- Single-family residential (detached)
 - Single-family residential (attached)
 - Duplex recreational
 - Two-family residential
 - Townhouse residential
 - Multiple-family residential

Small group living (disabled)
Small group living (nondisabled)
(b) Civic uses.
Administrative services
College and university facilities
Community recreation
Cultural services
Day care (limited)
Day care (general)
Emergency residential care
Guidance services
Hospital services (limited)
Hospital services (general)
Local utility services
Park and recreation services
Postal facilities
Public assembly
Recreational clubs
Religious assembly
Secondary educational facilities
Social clubs
(c) Office uses.
Financial services
General offices
Medical offices
(d) Commercial uses.
Building maintenance services
Business support services
Business or trade school
Cocktail lounge
Communications services
Consumer convenience services
Consumer repair services
Exterminating services

Food sales (limited)
Food sales (general)
Food sales (convenience)
Funeral services
General retail sales
Hotel/motel
Indoor entertainment
Indoor sports and recreation
Laundry services
Liquor sales
Pawnshop services
Personal improvement services
Personal services
Pet services
Research services
Restaurant (limited)
Restaurant (general)
Service station
Veterinary services
(e) Transportation uses.
Transportation terminal
(f) Industrial uses.
Custom manufacturing
Warehousing and distribution (limited)
(g) Parking uses.
Parking structure
(Code 1980, § 55-423; Ord. No. 33545, § 16, 5-2-95; Ord. No. 38198, § 22, 7-29-08)

Sec. 55-424. Conditional uses.

The following use types are allowed, subject to approval of a conditional use permit, as provided by section 55-883:

(a) Residential uses.
Large group living

(b) Civic uses.

Convalescent services

Noncommercial day shelters

Primary educational facilities

Safety services

(c) Commercial uses.

Auto rentals

Auto sales

Automotive washing

Construction sales and services

Outdoor entertainment

Outdoor sports and recreation

(d) Parking uses.

Surface parking

(Code 1980, § 55-424; Ord. No. 33545, § 17, 5-2-95;

Ord. No. 38198, § 22, 7-29-08)

Sec. 55-425. Special permit uses.

The following use types are allowed, subject to approval of a special use permit by the city council, as provided by section 55-884:

(a) Civic uses.

Detention facility

Transitional living

(b) Commercial uses.

Restaurant (drive-in)

(c) Industrial uses.

Light industry

Warehousing and distribution (general)

(d) Miscellaneous uses.

Broadcasting tower

(Code 1980, § 55-425; Ord. No. 38198, § 22, 7-29-08)

Sec. 55-426. Site development regulations.

Each site in the CBD central business district shall be subject to the following site development regulations:

TABLE INSET:

Regulator	Requirement
Lot area	No requirement
Lot width	No requirement
Site area/dwelling unit	100 square feet minimum
Floor area ratio	10.0 maximum
Front yard	No requirement
Street side yard	No requirement
Interior side yard	No requirement
Rear yard	No requirement
Height	No requirement
Building coverage	100 percent permitted
Impervious coverage	100 percent permitted
(Code 1980, § 55-426)	

Sec. 55-427. Additional regulations.

(a) Residential uses. Residential uses allowed in the CBD district are subject to the site development regulations of the R8 high-density multiple-family residential uses.

(b) Parking regulations. Uses in the CBD district are exempt from requirements for off-street parking provided by section 55-734.

(c) CBD overlay districts.

(1) Within the CBD district, overlay districts may be established with approval of the city council for areas with special physical or land use characteristics.

(2) Overlay districts within the CBD district may modify, restrict or augment allowed uses and site development regulations of the basic CBD district.

(d) Large projects. Projects proposed in the CBD district for sites over 0.8 acre are subject to site plan review, as set

forth in section 55-882. Site plan approval is further required for projects involving phasing or expansion when the total project meets or exceeds this limit.

(Code 1980, § 55-427)

Sec. 55-428. Floor area bonuses.

Floor area bonuses shall be granted in the CBD district which encourage certain development features that produce public benefits and further planning objectives for the central business district.

(a) Street level commercial uses.

(1) Purpose. This subsection is intended to provide an incentive for the location of commercial uses on the street level of buildings. Such uses encourage pedestrian traffic and contribute to street activity.

(2) Qualifying commercial uses.

a. Location of the following commercial use types on the street level shall qualify for the floor area bonus specified in this subsection:

Food sales

General retail sales

Restaurants

b. All qualifying commercial uses must be visible from and accessible to the sidewalk adjacent to the use.

(3) Calculation of floor area bonus. Calculation of the floor area bonus shall be based upon the percentage of the linear street level frontage of a building that is devoted to qualifying commercial use types, as set forth in table 55-428(1).

TABLE 55-428(1). FLOOR AREA

BONUS FOR STREET LEVEL

COMMERCIAL USE

TABLE INSET:

Percentage of Street
Level Frontage Devoted
to Qualifying

Commercial Use Bonus as Percentage

Increase in
Permitted Floor
Area Ratio

10--29% 10%

30--50% 15%

Over 50% 20%

(b) Skywalks.

(1) Purpose. This subsection is intended to encourage the development of a continuous network of downtown skywalks, in accordance with the downtown development plan approved by the city council.

(2) Eligible improvements. A project must meet the following requirements in order to be eligible for the floor area bonus specified in this subsection:

a. Construction of one or more skywalks connected to the project consistent with skywalk construction and design standards adopted by the city council and in accordance with the downtown development plan.

b. Dedication of easements, acceptable to the city, through the project connecting the skywalk to the street and to other skywalks in the overall network proposed by the downtown development plan.

c. Provision of uniform directional graphics within skywalks and easements, according to skywalk design and construction standards adopted by the city council and acceptable to the city.

(3) Calculation of floor area bonus. Calculation of the floor area bonus shall be as set forth in table 55-428(2).

TABLE 55-428(2). FLOOR AREA

BONUS FOR SKYWALK

DEVELOPMENT

TABLE INSET:

Improvement Bonus as Percentage
Increase in
Permitted Floor

Area Ratio

Dedication of easements without construction of skywalks
10%

Construction of skywalk or skywalks along with
dedication of easements 30%

(c) Residential development.

(1) Purpose. The purpose of this subsection is to encourage the inclusion of housing within projects in downtown Omaha. The subsection further encourages the development of mixed use projects which incorporate housing into principally commercial or office projects.

(2) Qualifying residential uses. The provision of any residential use permitted in the CBD district shall qualify for the floor area bonus specified in this subsection.

(3) Calculation of floor area bonus. Calculation of the floor area bonus shall be as set forth in table 55-428(3).

TABLE 55-428(3). FLOOR AREA

BONUS FOR RESIDENTIAL

DEVELOPMENT

TABLE INSET:

Percentage of Gross
Floor Area of Project

Devoted to

Residential Use

Bonus as Percentage

Increase in

Permitted Floor

Area Ratio

10--29% 10%

30--50% 20%

Over 50% 30%

(d) Incorporation of off-street parking.

(1) Purpose. This subsection is intended to encourage projects to incorporate off-street parking within the

exterior walls of the project or in parking structures adjacent to and connected with the project.

(2) Required off-street parking for bonus eligibility. At least one parking space for each two housing units, or one parking space for each 1,000 square feet of gross floor area for any nonresidential use, must be provided for a project to be eligible for the floor area bonus.

(3) Eligible methods for providing off-street parking.

Off-street parking may be incorporated into a project as follows to qualify for the floor area bonus:

a. Inclusion of one or more off-street parking levels within the exterior walls of the project.

b. Construction of a parking structure adjacent to the project or, if not adjacent, connected to the project by an enclosed pedestrian path.

c. Provision of surface parking shall not qualify a project for the floor area bonus.

(4) Any project meeting items (2) and (3) of this subsection shall receive a 30 percent increase in the permitted floor area ratio within the CBD district.

(e) Street landscaping.

(1) Purpose. This subsection is intended to encourage installation of street landscaping on public sidewalks adjacent to downtown development projects, in accordance with the downtown development plan and design and construction standards adopted by the city council.

(2) Qualifying improvements. A project must meet the following requirements in order to qualify for the floor area bonus set forth in this subsection:

a. Installation of street trees along all sidewalks adjacent to the project of an approved size and species, as set forth in design and construction standards adopted by the city council. Street trees shall be spaced at no greater than 25

feet on center, unless specifically permitted by the planning director.

b. Installation of new sidewalks adjacent to the project, incorporating a paving pattern approved by the planning director and consistent with adopted design and construction standards.

c. Installation of granite curbs on all adjacent street frontages, consistent with design and construction standards.

(3) Calculation of the floor area bonus. Calculation of the floor area bonus shall be as set forth in table 55-428(4).

TABLE 55-428(4). FLOOR AREA

BONUS FOR STREET

LANDSCAPING

TABLE INSET:

Improvement	Bonus as Percentage
Increase in Permitted Floor Area Ratio	
Installation of street trees only	10%
Installation of street trees with sidewalks and granite curb construction	20%

(f) Administration of floor area bonus provisions.

(1) The floor area bonus provisions shall be administered by the planning director. The planning director shall act on all applications for floor area bonuses within ten days of submittal of an application.

(2) An applicant may appeal a denial of a floor area bonus application to the city council.

(Code 1980, § 55-428)

Secs. 55-429--55-440. Reserved.

Sec. 55-441. DS downtown service district.

Sec. 55-442. Purpose.

The DS downtown service district applies to area on the periphery of the central business district. These areas characteristically display

a mixture of residential, commercial, office and light industrial uses. These uses require close proximity to downtown Omaha and occasionally have operating characteristics that are not appropriate in other commercial zoning districts. The DS district also is intended to respond to the continued growth of downtown Omaha and accommodate development which supports this growth.

(Code 1980, § 55-442)

Sec. 55-443. Qualifications for designation.

(a) Minimum area. Each DS district must include a contiguous area of at least ten acres, including intervening streets, alleys and private ways.

(b) Location. Each DS district must be adjacent to the CBD district or within 1,000 feet of the CBD district.

(c) Land use. A DS district must have a minimum of 20 percent of its land area in industrial or transportation uses, and a minimum of 20 percent of its land area in commercial, office, civic or residential uses at the time of application of the district.

(Code 1980, § 55-443)

Sec. 55-444. Permitted uses.

The following use types are permitted:

(a) Residential uses.

Single-family residential (detached)

Single-family residential (attached)

Duplex residential

Two-family residential

Townhouse residential

Multiple-family residential

Small group living (disabled)

Small group living (nondisabled)

(b) Civic uses.

Administrative services

College and university facilities

Community recreation
Cultural services
Day care (limited)
Day care (general)
Emergency residential care
Guidance services
Hospital services (limited)
Hospital services (general)
Local utility services
Park and recreation services
Postal facilities
Public assembly
Recreational clubs
Religious assembly
Secondary educational facilities
Social clubs
(c) Office uses.
Financial services
General office
Medical offices
(d) Commercial uses.
Agricultural sales and service
Auto rentals
Auto repair services
Auto sales
Automotive washing
Building maintenance services
Business support services
Business or trade school
Cocktail lounge
Communications services
Consumer convenience services
Consumer repair services
Equipment rental and sales

Exterminating services
Food sales (limited)
Food sales (general)
Food sales (convenience)
Funeral services
General retail sales
Hotel/motel
Indoor entertainment
Indoor sports and recreation
Laundry services
Liquor sales
Pawnshop services
Personal improvement services
Personal services
Pet services
Research services
Restaurant (drive-in)
Restaurant (limited)
Restaurant (general)
Service station
Veterinary services
(e) Industrial uses.
Custom manufacturing
Light industry
Warehousing and distribution (limited)
(f) Transportation uses.
Railroad facilities
Dock facilities
Transportation terminal
(g) Parking uses.
Parking structure
Surface parking
(Code 1980, § 55-444; Ord. No. 33545, § 18, 5-2-95;
Ord. No. 38198, § 23, 7-29-08)

Sec. 55-445. Conditional uses.

The following uses are permitted, subject to approval of a conditional use permit, as set forth in section 55-883:

(a) Residential uses.

Large group living

(b) Civic uses.

Convalescent services

Maintenance and service facilities

Noncommercial day shelters

Primary educational facilities

Safety services

(c) Commercial uses.

Body and fender repair services

Construction sales and services

Outdoor entertainment

Outdoor sports and recreation

Surplus sales

Vehicle storage

(d) Industrial uses.

Warehousing and distribution (general)

(e) Transportation uses.

Truck terminal

(Code 1980, § 55-445; Ord. No. 33545, § 19, 5-2-95; Ord. No. 38198, § 23, 7-29-08)

Sec. 55-446. Special permit uses.

The following uses are permitted subject to approval of a special use permit by the city council, as set forth in section 55-884:

(a) Civic uses.

Detention facility

Transitional living

(b) Commercial uses.

Convenience storage

(c) Industrial uses.

Construction yards

General industry

Scrap and salvage services

(d) Miscellaneous uses.

Broadcasting tower

(Code 1980, § 55-446; Ord. No. 38198, § 23, 7-29-08)

Sec. 55-447. Site development regulations.

Each site in the DS downtown service district shall be subject to the following site development regulations:

TABLE INSET:

Regulator	Requirement
Lot area	No requirement
Lot width	No requirement
Site area/dwelling unit	200 square feet minimum
Floor area ratio	5.0 maximum
Front yard	No requirement
Street side yard	No requirement
Interior side yard	No requirement
Height	No requirement
Building coverage	100 percent permitted
Impervious coverage	100 percent permitted
(Code 1980, § 55-447)	
Secs. 55-448--55-460. Reserved.	

Sec. 55-501. GI general industrial district.

Sec. 55-502. Purpose.

The GI General Industrial District is intended to accommodate a variety of commercial and industrial uses with moderate external effects. The GI district provides for conditional approval of uses with more significant effects that can be controlled through

specific requirements. The GI district, combined with performance standards, is appropriately located in both suburban and central city industrial areas. GI districts should be insulated from residential and lower intensity use districts.

(Code 1980, § 55-502; Ord. No. 36175, § 2, 2-25-03; Ord. No. 36559, § 1, 3-16-04)

Sec. 55-503. Permitted uses.

The following use types are permitted.

(a) Commercial uses.

Agricultural sales and services

Auto rentals

Auto sales

Automotive repair services

Automotive washing

Body and fender repair services

Building maintenance services

Business support services

Business or trade school

Communications services

Construction sales and services

Consumer repair services

Convenience storage

Equipment rental and sales

Equipment repair services

Exterminating service

Food sales (convenience)

Laundry services

Research services

Service station

Surplus sales

Vehicle storage

(b) Civic uses.

Administrative services

Detention facilities

Local utility services

Maintenance and service facilities

Park and recreation services

Postal facilities

(c) Parking uses.

Parking structure

Surface parking

(d) Transportation uses.

Railroad facilities

Transportation terminal

Truck terminal

(e) Industrial uses.

Construction yards

Custom manufacturing

General industry

Light industry

Warehousing and distribution (limited)

Warehousing and distribution (general)

(Code 1980, § 55-503; Ord. No. 33545, § 24, 5-2-95;

Ord. No. 36175, § 2, 2-25-03; Ord. No. 36559, § 1, 3-16-

04; Ord. No. 36631, § 2, 5-25-04; Ord. No. 37125, § 2,

8-30-05)

Sec. 55-504. Conditional uses.

The following use types are allowed, subject to approval of a Conditional Use Permit, as provided by Section 55-883.

(a) Civic uses.

Cultural services

Day care (general)

Day care (limited)

Guidance services

Noncommercial day shelters

Safety services
 (b) Commercial uses.
 Hotel/motel
 Pet services
 Veterinary services
 (c) Transportation uses.
 Dock facilities
 (d) Miscellaneous uses.
 Broadcasting tower
 Wind energy conservation system
 (Code 1980, § 55-504; Ord. No. 33110, § 3, 11-23-93; Ord. No. 33545, § 25, 5-2-95; Ord. No. 36175, § 2, 2-25-03; Ord. No. 36559, § 1, 3-16-04; Ord. No. 36631, § 3, 5-25-04)

Sec. 55-505. Special permit uses.

The following use types are allowed, subject to approval of a special use permit by the city council, as provided by section 55-884.

(a) Residential uses.
 Large group living
 (b) Office uses.
 Financial services
 General offices
 Medical offices
 (c) Commercial uses.
 Campground
 Cocktail lounge
 Consumer convenience services
 Food sales (limited)
 Food sales (general)
 Funeral service
 General retail sales
 Indoor entertainment
 Indoor sports and recreation
 Liquor sales

Outdoor entertainment
 Outdoor sports and recreation
 Pawnshop services
 Personal improvement services
 Personal services
 Restaurant (drive-in)
 Restaurant (limited)
 Restaurant (general)
 (d) Civic uses.
 Transitional living
 Recreational clubs
 Major utility services
 Social clubs
 Military installations
 Emergency residential care
 (e) Industrial uses.
 Resource extraction
 Scrap and salvage services
 (f) Miscellaneous uses.
 Nonputrescible landfill
 (Code 1980, § 55-505; Ord. No. 36175, § 2, 2-25-03; Ord. No. 36559, § 1, 3-16-04; Ord. No. 37125, § 2, 8-30-05; Ord. No. 38198, § 26, 7-29-08)

Sec. 55-506. Site development regulations.

Each site in the GI-general industrial district shall be subject to the following site development regulations.

TABLE INSET:

Regulator	Requirement
Lot Area	10,000 sq. ft. minimum
Lot Width	100 ft. minimum
Floor Area Ratio	2.0 maximum
Front Yard (Minimum)	50 ft. from the center line of the fronting

Street Side Yard	street Lesser of 10 ft. or 50 ft. from the center line
Interior Side Yard	of the fronting street No Requirement
Rear Yard	10 ft. minimum on lots without alley frontage; no requirement along alley
Height	120 ft. maximum; 45 ft. maximum where building is within 100 ft. of an R6 or lower intensity district
Building Coverage	90 percent maximum
Impervious Coverage	90 percent maximum (Code 1980, § 55-506; Ord. No. 36175, § 2, 2-25-03; Ord. No. 36559, § 1, 3-16-04)

Sec. 55-507. Additional regulations.

- (a) Large projects in the GI district.
- (1) Any civic or commercial use types proposed in the GI district for sites of up to ten acres, or with a building floor area of up to 40,000 square feet, are subject to site plan approval as provided by section 55-882. Site plan approval is further required for projects involving phasing or expansion when the total project meets or exceeds these limits.
- (2) Any civic or commercial use types proposed in the GI district on sites with an area over ten acres, or with a building floor area of over 40,000 square feet shall require a special permit as set forth in section 55-884. A special permit is further required for any civic or commercial use types involving phasing or expansion when the total project area is equal to or greater than these amounts.
(Ord. No. 36175, § 2, 2-25-03; Ord. No. 36559, § 1, 3-16-04)

Secs. 55-508--55-520. Reserved.

Sec. 55-521. HI heavy industrial district.

Sec. 55-522. Purpose.

The HI heavy industrial district is intended to accommodate industrial uses with major external effects. These uses characteristically have operating characteristics and environmental effects that make them incompatible with surrounding uses. The HI district is most appropriately located in areas that are separated from residential and consumer-oriented commercial districts. When this is not possible in previously developed areas, the HI district is combined with performance standards and buffering requirements to minimize the effects of permitted uses. In addition, the uses that create the greatest conflicts with existing residential areas are controlled through special permit procedures.
(Code 1980, § 55-522; Ord. No. 36176, § 2, 2-25-03)

Sec. 55-523. Permitted uses.

The following use types are permitted.

- (a) Commercial uses.
- Agricultural sales and services
 - Auto rentals
 - Auto sales
 - Automotive repair services
 - Automotive washing
 - Body and fender repair services
 - Building maintenance services
 - Business support services
 - Business or trade school

Communications services
Construction sales and services
Consumer repair services
Convenience storage
Equipment rental and sales
Equipment repair services
Exterminating service
Food sales (convenience)
Laundry services
Research services
Service station
Surplus sales
Vehicle storage
(b) Parking uses.
Parking structure
Surface parking
(c) Transportation uses.
Dock facilities
Railroad facilities
Transportation terminal
Truck terminal
(d) Industrial uses.
Construction yards
Custom manufacturing
General industry
Heavy industry
Light industry
Warehousing and distribution (limited)
Warehousing and distribution (general)
(e) Civic uses.
Detention facilities
Local utility services
Maintenance and service facilities
Major utility services

Military installations
Park and recreation services
Postal facilities
(f) Miscellaneous uses.
Construction batch plant
(Code 1980, § 55-523; Ord. No. 33545, § 26, 5-2-95; Ord. No. 36176, § 2, 2-25-03; Ord. No. 36632, § 2, 5-25-04; Ord. No. 37125, § 2, 8-30-05; Ord. No. 38023, § 1, 3-4-08)

Sec. 55-524. Conditional uses.

The following use types are allowed, subject to approval of a conditional use permit, as provided by section 55-883.

(a) Civic uses.
Administrative services
Cultural services
Guidance services
Noncommercial day shelters
Recreational clubs
Social clubs
Safety services
(b) Commercial uses.
Hotel/motel
(c) Miscellaneous uses.
Broadcasting tower
Wind energy conservation system
(Code 1980, § 55-524; Ord. No. 33545, § 27, 5-2-95; Ord. No. 36176, § 2, 2-25-03; Ord. No. 36632, § 2, 5-25-04)

Sec. 55-525. Special permit uses.

The following use types are allowed, subject to issuance of a special permit by the city council, as required by section 55-884.

(a) Office uses.
Financial services
General offices

Medical offices
 (b) Commercial uses.
 Cocktail lounge
 Consumer convenience services
 Food sales (limited)
 Food sales (general)
 Funeral services
 General retail sales
 Indoor entertainment
 Indoor sports and recreation
 Liquor sales
 Outdoor entertainment
 Outdoor sports and recreation
 Pawnshop services
 Personal improvement services
 Personal services
 Restaurant (drive-in)
 Restaurant (limited)
 Restaurant (general)
 (c) Civic uses.
 Day care (general)
 Day care (limited)
 Transitional living
 (d) Industrial uses.
 Meatpacking and related industries
 Resource extraction
 Scrap and salvage services
 Stockyards
 (e) Miscellaneous uses.
 Non-putrescible landfill
 Putrescible and non-putrescible landfill
 (Code 1980, § 55-525; Ord. No. 33110, § 4, 11-23-93;
 Ord. No. 36176, § 2, 2-25-03; Ord. No. 37125, § 2, 8-30-05; Ord. No. 38023, § 2, 3-4-08; Ord. No. 38198, § 27,

7-29-08)

Sec. 55-526. Site development regulations.

Each site in the HI heavy industrial district shall be subject to the following site development regulations.

TABLE INSET:

Regulator	Requirement
Lot Area	10,000 square feet minimum
Lot Width	100 feet minimum
Floor Area Ratio	2.0 maximum
Height	120 feet
Front Yard	50 feet from the center line of the fronting street
Street Side Yard	Lesser of 10 feet or 50 feet from the center line of the fronting street
Interior Side Yard	No requirement
Rear Yard	10 feet on lots without alley frontage; no requirement along alleys
Building Coverage	90 percent maximum
Impervious Coverage	100 percent permitted

(Code 1980, § 55-526; Ord. No. 36176, § 2, 2-25-03)

Sec. 55-527. Additional regulations.

(a) Large projects in the HI district.
 (1) Any civic or commercial use types proposed in the HI district for sites of up to ten acres, or with a building floor area up to 40,000 square feet, are subject to site plan approval as provided by section 55-882. Site plan approval is further required for projects involving phasing or expansion when the total project meets or exceeds these limits.

(2) Any civic or commercial use types proposed in the HI district on sites with an area over ten acres or a total floor area over 40,000 square feet shall require a special permit as set forth in section 55-884. A special permit is further required for any civic or commercial use types involving phasing or expansion when the total project area is equal to or greater than these areas.

(Ord. No. 36176, § 2, 2-25-03)

Secs. 55-528--55-540. Reserved.

Sec. 55-583. PUD planned unit development district.

Sec. 55-584. Purpose.

The PUD planned unit development overlay district is intended to provide flexibility in the design of planned urban projects, to encourage comprehensive planning of major developments, to permit innovation in project design that includes incorporation of open space and other amenities, and to insure compatibility of developments with the surrounding urban environment. The PUD district may be used in combination with any base district specified in this chapter. The PUD district, which is adopted by the city council, assures specific development standards for each designated project.

(Code 1980, § 55-584)

Sec. 55-585. Permitted uses.

(a) Uses permitted in a PUD overlay district are those permitted in the underlying base district.

(b) Townhouse structures containing no more than four single-family dwelling units each are permitted in PUD districts combined with the R4 base district, provided that the maximum permitted density for the base district is not exceeded.

(Code 1980, § 55-585)

Sec. 55-586. Site development regulations.

Site development regulations are developed individually for each PUD district, but must comply with minimum or maximum standards established for the base district, with the following exceptions:

(a) Lot area and lot width are not restricted, provided that the maximum density allowed for each base district is not exceeded.

(b) Maximum building coverage shall be the smaller of the allowed building coverage in the base district, or 60 percent.

(Code 1980, § 55-586)

Sec. 55-587. Minimum site area.

The minimum area of any PUD district is one acre. This minimum may be waived by the planning board or city council if it determines that development of a site is impossible without PUD designation and that such designation is consistent with the comprehensive plan of the city.

(Code 1980, § 55-587)

Sec. 55-588. Access to public streets.

Each PUD district must abut a public street for at least 50 feet and derive its access from that street. Exceptions to the requirement that individual lots abut a street may be allowed if adequate and permanent access by easement or internal street system from a public street is provided to each lot.

(Code 1980, § 55-588)

Sec. 55-589. Application for creation of district.

(a) Concept review.

(1) Prior to application for a PUD district, the prospective applicant shall submit a concept plan to the planning department and consult with the planning director regarding the proposed development. The concept plan shall include:

- a. A general land use plan showing site design, proposed uses, and related planning and development data.
- b. A general plan for public facilities, showing approximate location of public and private streets, pedestrian ways, other circulation features, utilities, and community facilities.
- (2) The planning director shall advise the applicant of the project's conformance with the master plan and shall provide other comments on land use, transportation, environmental and other issues within ten days of the concept discussion.
- (b) Development plan. The application for a PUD district shall include a development plan containing the following information:
 - (1) A tract map, showing site boundaries, street lines, lot lines, easements and proposed dedications or vacations.
 - (2) A land use plan designating specific uses for the site and establishing site development regulations, including setback height, building coverage, impervious coverage, density and floor area ratio requirements.
 - (3) A site development and landscaping plan, showing building locations or building envelopes, site improvements, public or common open spaces, community facilities, signs and other significant visual features, and typical landscape plans.
 - a. The landscape plan shall specify landscaping in buffer areas, and public or community open spaces.
 - b. The plan shall identify plants by their common and scientific names and shall include quantities, size and spacing.
 - (4) A circulation plan, including location of existing and proposed vehicular, pedestrian, bicycle and other circulation facilities, and location and general design of parking and loading facilities.

- (5) A public services and utilities plan providing requirements for and provision of all utilities, sewers, and other facilities needed to serve the site.
 - (6) A topographic map and site grading plan, showing existing and proposed contours in no greater than five-foot intervals.
 - (7) Schematic architectural plans and elevations sufficient to indicate building height, bulk, materials and general architectural design.
 - (8) A proposed development schedule.
 - (9) Limits of flexibility or variance of the development plan, specifying changes which may be made without being considered a substantial amendment.
 - (10) A traffic impact analysis, if required by the public works director, completed according to standards and requirements on file with the city clerk.
- (Code 1980, § 55-589)

Sec. 55-590. Adoption of district.

- (a) The planning director, planning board and city council shall review and evaluate each PUD application using the criteria established in section 55-885 and other applicable sections of this Code. The city may impose reasonable conditions as deemed necessary to ensure that a PUD shall be compatible with adjacent land uses, will not overburden public services and facilities and will not be detrimental to public health, safety and welfare.
- (b) The planning director and public works director shall review each application and shall transmit their recommendations to the planning board and the applicant before the date of the public hearing.
- (c) The planning board, after proper notice, shall hold a public hearing and act upon each application.
- (d) The planning board may recommend amendments to

PUD district applications.

(e) The recommendation of the planning board, together with that of the planning director and public works director, shall be transmitted to the city council for final action.

(f) The city council, after proper notice, shall hold a public hearing and act upon any ordinance establishing a PUD planned unit development overlay district.

(g) An ordinance adopting a PUD planned unit development overlay zoning district shall require a favorable vote of five members of the city council for approval if the planning board recommends denial of the ordinance. The city council may amend such ordinances, provided at least five councilmembers vote to do so.

(h) Upon approval by the city council, the development plan shall become a part of the ordinance creating or amending the PUD district. All approved plans shall be filed with the city clerk.

(i) Any protest against a PUD planned unit development overlay district shall be made and filed as provided by R.R.S. 1943, § 14-405, and amendments thereto.

(j) No application for approval of the same or substantially the same application for a PUD may be filed within one year of a denial of that application by the city council.

(Code 1980, § 55-590)

Sec. 55-591. Amendments to development plan.

(a) Major amendments to the development plan must be submitted to the planning board for a recommendation and approved by the city council. Major amendments include:

- (1) An increase in the density of the development;
- (2) Substantial changes in circulation or access;
- (3) Substantial changes in the mix of dwelling unit types included in the project;
- (4) Substantial changes in grading or utility provision;
- (5) Substantial changes in the mixture of land uses, or an increase in the amount of land used for nonresidential purposes;

(6) Reduction in approved open space, landscaping or buffering;

(7) Substantial changes in architectural or site design features of the development;

(8) Any other change that the planning director finds is a major divergence from the development plan.

(b) All other changes in the development plan shall be considered minor amendments. The planning director, upon receipt of an application, may approve minor amendments in the development plan.

(1) If the director does not act on an application for a minor amendment of a development plan within 15 days, it shall be considered approved.

(2) An application that is disapproved by the planning director shall be considered a major amendment and shall be subject to the approval process for such amendments.

(Code 1980, § 55-591)

Sec. 55-592. Building permits, certificates of occupancy and other permits.

The permits and inspections division shall not issue a building permit, certificate of occupancy, or other permit for a building, structure or use within a PUD district unless it is in compliance with the approved development plan or any approved amendments.

(Code 1980, § 55-592)

Sec. 55-593. Existing planned unit developments.

Any PUDs approved under procedures in force before the effective date of this chapter [March 4, 1987] shall be designated as PUD districts and shall be governed by requirements or restrictions applicable at time of their approval.

(Code 1980, § 55-593)

Sec. 55-594. Termination of district.

If no substantial development has taken place in a PUD district for

three years following approval of the district, the planning board shall reconsider the zoning of the property and may, on its own motion, initiate an application for rezoning the property.

(Code 1980, § 55-594)

Secs. 55-595--55-600. Reserved.

Sec. 55-601. NCE neighborhood conservation/enhancement district.

Sec. 55-602. Purpose.

The NCE neighborhood conservation/enhancement overlay district is intended to help preserve unique pedestrian-oriented land use, urban design, and other distinctive characteristics of older established neighborhoods and commercial areas as well as to enhance more recently developed neighborhoods and commercial areas in order to implement the urban design element of the city's comprehensive plan. The NCE district, used in combination with a base district, allows changes in permitted uses and adjustments to site development standards in order to respond to the needs of a specific residential neighborhood or neighborhood commercial area. In addition, the NCE district may include supplementary site development standards and guidelines, based upon a neighborhood conservation/enhancement plan adopted by the city council as part of the city's comprehensive plan.

(Code 1980, § 55-602; Ord. No. 37810, § 5, 8-14-07)

Sec. 55-603. Qualifications for designation; manner of designation; applicability; conflict of provisions; permitted uses.

(a) Qualifications for designation. To qualify for

adoption, a proposed NCE district shall satisfy the following requirements:

(1) Minimum area. Each NCE district shall include a contiguous area of at least five acres, including intervening streets, alleys and private ways.

(2) Status of area at time of adoption. The area included in each NCE district shall be allocated into one of the following two categories:

a. Conservation. Areas intended to be conserved must have been recorded as a subdivision with the county register of deeds no later than 1960.

b. Enhancement. Areas intended to be enhanced must have been recorded as a subdivision with the county register of deeds no earlier than 1961.

(b) Manner of designation. NCE districts shall be designated as follows:

(1) NCE-C. An NCE district adopted for the primary purpose of conserving areas in a neighborhood whose subdivision(s) were recorded no later than 1960 shall be designated as "NCE-C."

(2) NCE-E. An NCE district adopted for the primary purpose of enhancing areas in a neighborhood whose subdivision(s) were recorded no earlier than 1961 shall be designated as "NCE-E."

(c) Applicability. The general provisions of these sections 55-601 through 55-608 and the specific provisions adopted as part of an NCI district shall apply to any project in the NCE district.

(d) Conflict of provisions. Where the provisions of these sections 55-601 through 55-608 and the specific provisions adopted as part of an NCE district conflict with other sections of this chapter, the provisions of these sections 55-601 through 55-608 and the specific provisions adopted as part of the NCE district shall

control.

(e) Permitted uses. Except as may be limited by the NCE district provisions based upon the adopted neighborhood conservation/enhancement plan, use types permitted in any NCE district are the same as those permitted in the base zoning district(s) underlying the NCE district.

(Code 1980, § 55-603; Ord. No. 37810, § 5, 8-14-07)

Sec. 55-604. Application for creation of district.

(a) Initiation. An application for an NCE overlay district may be initiated by:

- (1) A majority of property owners within the proposed district;
- (2) The planning board; or
- (3) The city council.

(b) Contents. An application for creation of an NCE district shall include the following components:

- (1) A statement of purpose, describing the reasons that the existing base zoning district or districts are not fully adaptable to the specific neighborhood.
- (2) A map indicating the boundaries of the proposed NCE district, specifying the base district(s) included within these boundaries.
- (3) A neighborhood conservation/enhancement plan prepared by or under the direction of the city planning department, identifying those areas that are to be conserved and those that are to be enhanced, consisting of maps and other graphic and written material necessary to describe land uses, distinctive neighborhood characteristics, building siting and design, pedestrian facilities, site development requirements, signage, circulation, and other existing or proposed features of the proposed NCE district. A neighborhood conservation/enhancement plan which encompasses areas zoned for non-residential use types shall include zoning policies for the urban design elements addressed in article XXII (urban design).
- (4) A specific set of modifications to be made in existing base district regulations, including use, site development, off-street

parking, and other regulations included in this chapter.
(Code 1980, § 55-604; Ord. No. 37810, § 5, 8-14-07)

Sec. 55-605. Adoption of district.

The following substantive requirements, procedural steps and protest provisions shall apply to the adoption of any new NCE district:

- (a) A neighborhood conservation/improvement plan, as prepared by the city planning department, and the NCE district application shall be transmitted to the planning board.
- (b) The planning board, after proper notice pursuant to section 55-891, shall hold a public hearing and act upon the plan and district application.
- (c) The planning board may recommend amendments to the plan and district application.
- (d) The recommendation of the planning board, together with that of the planning director, shall be transmitted to the city council for final action.
- (e) The city council, after proper notice pursuant to section 55-891, shall hold a public hearing and act upon the NCE district ordinance. The neighborhood conservation/enhancement plan shall be adopted as a portion of the city's comprehensive plan.
- (f) The ordinance adopting the NCE district shall include a statement of purpose, a reference to the approved neighborhood conservation/enhancement plan, and a list of modifications to the base district(s) regulations.
- (g) An ordinance adopting an NCE district shall require a favorable vote of five members of the city council for approval if the planning board recommends denial of the ordinance. The city council may amend such ordinances, provided at least five councilmembers vote to do so.
- (h) Each NCE district shall be shown on the zoning map, identified sequentially by order of enactment and referenced to the enacting ordinance.

- (i) Any protest against an NCE district shall be made and filed as provided by R.R.S. 1943, § 14-405, and amendments thereto.
(Code 1980, § 55-605; Ord. No. 37810, § 5, 8-14-07)

Sec. 55-606. Criteria for approval.

The city council may adopt an NCE district if the area meets one or more of the following criteria:

- (a) The area has distinctive building features, such as scale, size, type of construction, or distinctive building materials, that should be preserved.
- (b) The area has distinctive site planning features, such as lot platting, setbacks, street layout, alleys or sidewalks, that the base district regulations cannot accommodate.
- (c) The area has distinctive land use patterns, including mixed land uses or unique uses or activities, that the base district cannot accommodate.
- (d) The area would benefit from the adoption of new urban design criteria that would significantly enhance the character of existing and new commercial development or redevelopment in the area.
- (e) The area has special natural or streetscape characteristics, such as creek beds, parks, gardens or street landscaping, that should be preserved or respected.
(Code 1980, § 55-606; Ord. No. 37810, § 5, 8-14-07)

Sec. 55-607. Urban design standards and guidelines for areas zoned for non-residential use types; urban design site plan review.

- (a) Urban design standards and guidelines. An NCE district which includes areas zoned for non-residential use types shall contain standards and guidelines for the elements described in article XXII, modified as appropriate to address the characteristics of the area to be

conserved or to be enhanced, as the case may be.

- (b) Minimum building design guidelines. An NCE district proposed for an area which includes areas zoned for non-residential use types shall include building design guidelines consistent with the following:

- (1) Large retail building design guidelines as set forth in article XXII (urban design), section 55-935.
- (2) General building design guidelines as set forth in article XXII (urban design), section 55-936.
- (c) Urban design site plan review. Urban design site plan approval pursuant to article XXII (urban design), section 55-937 shall be required for all projects which include non-residential use types in the NCE district.
(Code 1980, § 55-607; Ord. No. 37810, § 5, 8-14-07)

Sec. 55-608. Building permits and other permits.

Building or other permits issued by the permits and inspections division in an NCE district shall be consistent with the adopted NCE district ordinance and the approved neighborhood conservation/enhancement plan.
(Ord. No. 37810, § 5, 8-14-07)

Sec. 55-608.1. Applicability of site development standards and guidelines to changes to existing development.
Proposed changes to existing structures located on sites in the NCE district shall be subject to the standards and guidelines contained in, or adopted pursuant to, sections 55-604 through 55-608, in the following manner:

- (a) Total reconstruction. Any project which involves the total reconstruction of any existing structure on a site, as a result of a decision to redevelop the site, shall be subject to the standards and guidelines contained in, or adopted pursuant to, sections 55-604 through 55-608. Any project which involves the total reconstruction of any existing

structure on a site as a result of a casualty loss shall be subject only to the said standards and guidelines which govern building design.

(b) Other change involving issuance of a building permit. Any change to a project that does not constitute a total reconstruction as provided in section 55-609(a) shall be subject to each standard and guideline contained in, or adopted pursuant to, sections 55-604 through 55-608, to the extent that such change to the project concerns each such standard or guideline.

(c) Exception. Notwithstanding the provisions of section 55-609(b), above, ordinary maintenance and repairs of an existing structure or site shall not be subject to the standards and guidelines contained in, or adopted pursuant to, sections 55-604 through 55-608.

(d) Ordinary maintenance and repairs. For the purposes of this section 55-609, the term “ordinary maintenance and repairs” means improvements necessary to replace deteriorated elements of existing structures or of a site when made without substantially changing the size, shape, configuration or style of the structure or site.

(e) Changes involving development agreements. Any existing or proposed structure or site covered by an existing development agreement shall be covered by site development or building design guidelines established by that agreement. If the development agreement covering the structure does not include building design guidelines, then the standards and guidelines contained in, or adopted pursuant to, sections 55-604 through 55-608 and which govern building design shall apply. Any modifications to any such structures or sites that require a major amendment shall be subject to the standards and guidelines contained in, or adopted pursuant to, sections 55-604 through 55-608, to the extent that the sections are applicable to the amendment.

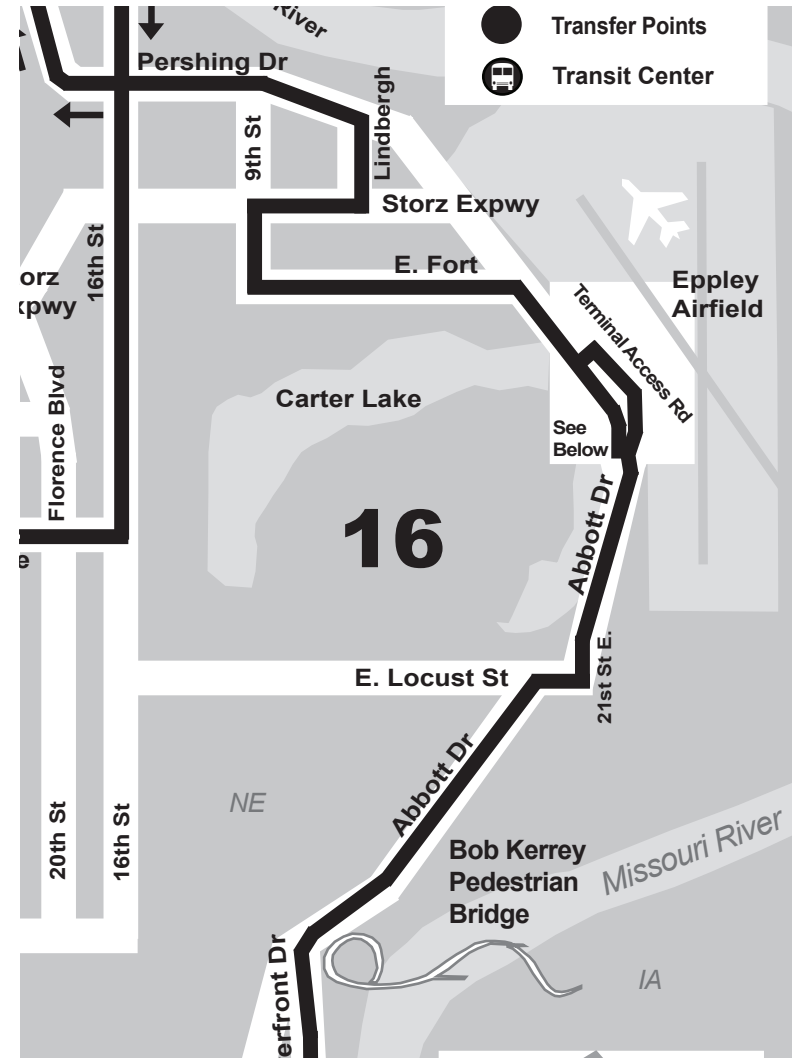
(Ord. No. 37810, § 5, 8-14-07)

Appendix C.

Full MAT Bus Routes

Appendix C.

Full MAT Bus Routes from
www.metroareatransit.com



Appendix D.

Utility Maps

Map Created by HDR - North Downtown Omaha's New Urban Neighborhood

Site location add by Jesse McConnell



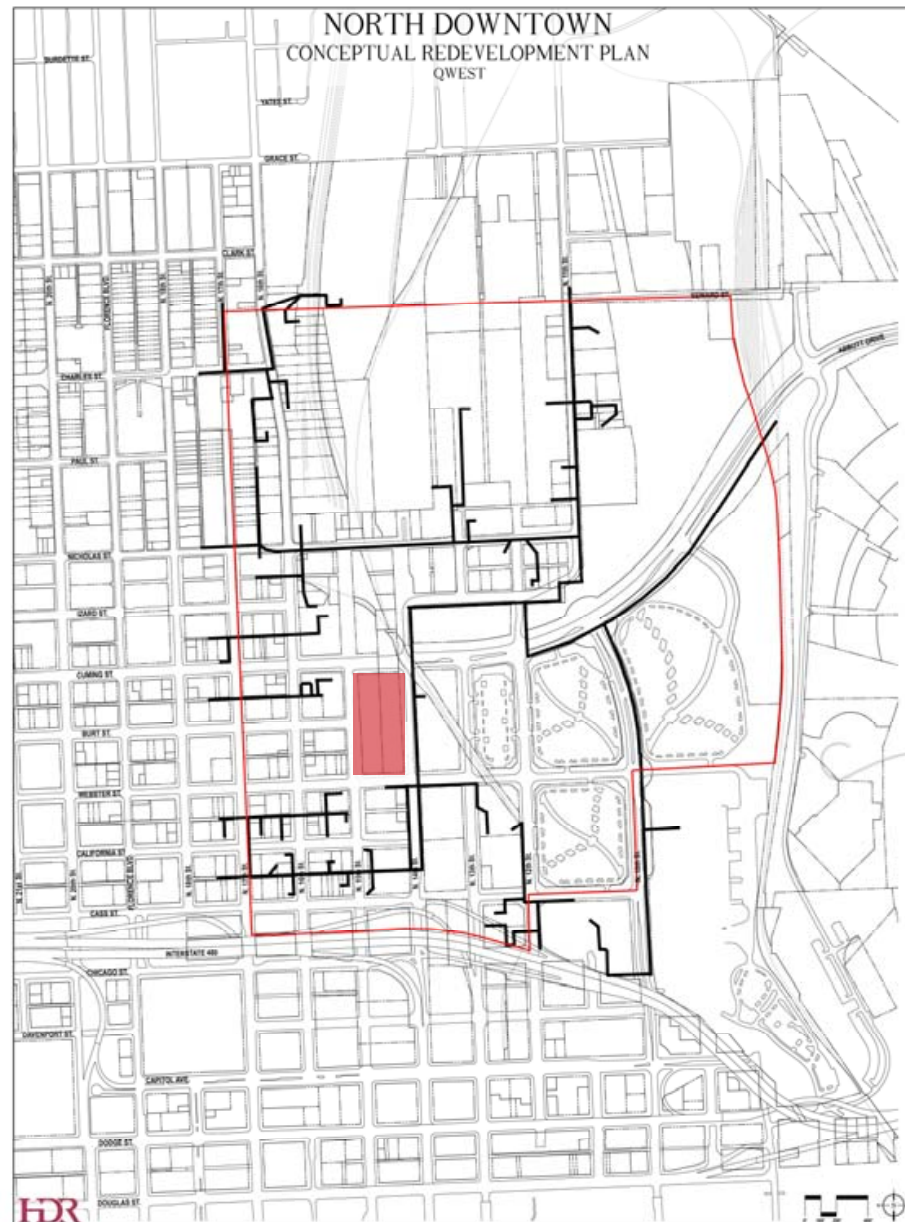


















Appendix E.

Code Review

Omaha Codes

Omaha Building Codes

- International Building Code (IBC) 2006
- International Energy Code 2006
- International Fire Code 2006

Code Review

Construction Type is I-2 - For all Residential Floor

Egress Requirements

- 1007.2.1 Elevators Required - 4 or more stories above or below level of discharge at least on required accessible means of egress shall be an elevator. See section 1007.4 exception if there is a horizontal exit.
- 1007.3 Exit Stairs - Clear 48" between handrails since the building is sprinkled handrail distance can be smaller.
As per Table 1005.1 there needs to be .3 inch/ occupant for I-2.
- 1020.1.7 Smoke Protection enclosure - 2 Hour Wall
- 1021.1 Exit Passageway - Shall not be used other than a means of egress. No less than 44" wide. 2 hour construction if connected to 2 hour stairs.
- 1017.3 Dead Ends - No more than 20'-0"
- 1022.4 Capacity of Refuge Area
 - I-2 = 15 Sq. Ft. / Occupant for Ambulatory
 - I-2 = 30 Sq. Ft. / Occupant for Non-ambulatory

Table 1016.1 Exit Access Travel Distance

I-2 = 200ft

Table 1017.1 - Corridor doesn't have to be rated

Sprinklers

Sprinklers are required

903.3.2 - Quick response in residential rooms.

Appendix F.

Meeting Notes

Notes from major Reviews

Meeting Notes

December 15, 2008, 3-5pm

Participates: Brito, Gordon Schultz, Keith Sawyers, Jim Potter, Scott Pfeiffer, and Jesse McConnell

- Summary of where the project is going to be located.
 - Showed map (produced by HDR) of main attractions around site. For example, Pedestrian Bridge, Old Market, Qwest Center, Creighton University, etc.
 - Then showed map of Common Elements, Entertainment District, Artist Live/Work District, Mixed Use District, Corporate and Urban Office Park, Riverfront District.
 - Showed aerial photos of the area
- Covered the Site Analysis portion of the Kiosk Graphics.
 - Mentioned Cumming and 10th Streets are busy streets (two way), 13th and 14th streets are one-way streets bring traffic to and from the NoDo Area to Downtown.
 - Streetcar, Showed route and mentioned that the city still is in a development phase with the project and they just approved another study to be done.
 - But due to time constraints I will keep with the streetcar path i have developed from previous documentation and forums that the city published earlier about where the routes will be located.
 - The route will travel down Webster St to 10th Street then loop through downtown, and then will continue to the Zoo down 10th street.
- Is Creighton doing any elderly program? (Potter) - No one knew for sure if they had a program.
- Old vintage bus line/ route? (Scott)- Jesse will look up that information to see if I can incorporate that in my transportation plan.
- Need to show pedestrian traffic for the site in the Traffic analysis graphics. (Brito)
- Talked about where the Wall Street Tower is going to be located. 263 units, price range of units, etc.
- Map of Proximity to services, Showed zoom levels and the layers I currently have. Also I need to add some graphics to the maps... labeling key buildings to give people a frame of reference.
 - Committee suggest that I look at more services
 - ambulances, fire stations, Emergency services
 - Schools
 - Childcare facilities
 - Snow Routes
 - Show an emergency route when there are large events and Baseball stadium and Qwest Center.

- Beauty Shops - they are located nearby, but I am proposing to have one in the facility that has limited hours of operation.
 - Fitness centers are not located on PTS map, because I have a fitness center in my facility. Scott also mentioned that most of the residents would not feel comfortable working out in a facility with people half their age.
- Topo graphics on kiosk - Graphics are in the beginning stages. I need to add text and a legend letting people know what the slope of the terrain is.
 - The site is very flat about a 1/8" slope.
 - Was going to do a site section but there isn't too much to show since the site is flat. I will be showing some site sections to show the surrounding buildings, but those will show up in the conceptual design section.
 - Show Floodplain information for the area.
- Visibility Graphics -
 - I need to add a few extra pictures around Cumming Street.
- Zoning Graphics - Showed map. Need to do some touchups to call out site better.
 - Will be adding more information about the zones.
 - Write up a petition to change the zone of the site.
 - Will be talking with Omaha planning department to have them give me the steps I would need to go through to get a site rezoned.
 - (Scott) In a typ. CCRC since you have so many different types of uses, like assembly, Residential, 2 types of institutional, and sometimes single family residential, they usually do a PUD (Planned Unit Development).
 - Make sure I have to site rezoned to a classification that will allow a PUD overlay.
 - (Brito) Is there any lien on the site?
 - (Brito) Any overlay zoning - in the area. I haven't seen any overlays in that area.
- EPA Superfund Site - Lead contamination.
 - (Scott) Worked on the Riverfront Condo Project- What type of things did they have to do to satisfy the EPA?
 - Can't have any livable space at a certain elevation
 - No trees since it could penetrate the cap they put in.
 - I will be putting documentation into my report just to let people know that I did look at the problem and have a list of things I need to do to solve them.
- Show design Scheme 5
 - Showed stop motion video of building foam blocks. Then showed SketchUp model.
 - Walked through parts of the model and how it related to programming spread sheet.
 - Referring to my precedent project. Clara at Water Tower in Chicago. Showed committee spreadsheet of unit types, square footage, and number of units in the facility. And showed how I used those ratios to develop my program.
 - I selected 200 units as a goal because the initial demographic study showed that I could support that many, plus I want to make sure I have enough units to support the activities and service that I want to offer in my building.
- (Scott) by code 4 of the Independent units would be ADA accessible by day one, Half of the skilled nursing will be required to be ADA accessible by day one.
- I would like to Make all the units ADA accessible. They may not be 100% accessible from day one but they are adaptable when needed to be accessible.
- (Scott) Likes that courtyard/roof garden idea for security reasons... protects the residents and also gives the residents a peace of mind that it's safe to go out at night.
- (Potter) I need to keep in mind when designing the elevator stack I need to keep in mind that some of these people will be in wheelchairs with assistants and i will need to allow for that extra traffic.
- (Scott) Try to get natural light into hallway.
- (Brito) Typ. the upper floors are more expensive.. Why don't i have more Penthouses on those upper floors?
 - (Brito) Or is this ok having a diverse size of rooms on the upper floors?
 - (Potter) more than likely the project will be driven by cost.
 - (Scott) Thinks the mix is really good, because alot of bigger condos in Omaha are not going very fast. But he thinks that some of the 3-bedroom should be moved closer to the top.
- (Gordon) Are these going to be condos?
 - (Jesse) I believe these are going to be more of a condo you buy the right for that airspace.
 - (Scott) A typ. CCRC will have you buy the right to live there but they have the option to move you around to different units.
- (Gordon) There may be a challenge for trying to do an Ageing in place concept with this type of building. Getting appropriate care to certain location could be a problem.
 - Look at a management point of view, how will I address this issue?
 - (Potter) Scandinavian Countries they do home health.
 - Saint Francis Square. - San Francisco
- Victoria Plaza - San Antonio - Evaluation of residents then did a study with the same residents 9 years later and had a control group that didn't move into the facility.
- The goal of a CCRC is to nurture what remains.
- This project will more likely have new younger seniors first then start to have diversity in ages as the facility ages.
- There could be a possibility of having Smart Cars rental and/ or storage for residents to use.. Similar to Golf cart use at Retirement communities.
- Management based model.
 - What are the probabilities of something happening
 - What is the average lifespan of a person and their need changes?
 - What is the likely that they will move to a small unit after for example 8 years?
 - Walkability for the Nurses and staff.
 - Have nursing station around the building.
- (Potter) He doesn't think that the efficiency isn't really a problem

- Layout in a way that is convincing that you can manage this facility. And is designed in a way that it will work.
- (Scott) I need to decide how i want to design the facility, Use it as a learning exercise and keep on the same track I'm on now or Make this building buildable and add a skilled nursing wing to the building.
 - Ageing in with Independent and Assisted Living is very doable, but he thinks that Nursing is virtually impossible.
- (Keith) Page or two to summarize the aspects form the other studies that have major impact on the design of my building. This could be used to help people understand why I designed the building the way I did. And it would help the committee to stay on topic about what I want to see in my final design.
 - Show why the units are that size.. Why are they located in certain spots? Diagram everything so when I'm not around people can understand what I did.
 - The committee doesn't have to agree with my choices but they

Meeting Notes

February 5th, 11:30am - 12:30pm

Participates: Brito, Keith Sawyers, Wayne Drummond, and Jesse McConnell

- Discussion on what Jesse's Final schedule will be for the remainder of the project.
- The following dates are meetings and due dates for the Jesse and his committee.
 - They are color coded as the following:
 - Meeting with Jesse and Main Mentors (Brito and Wayne) (Keith your invited too)
 - Meeting with Jesse and Whole Committee
 - Due Dates for Jesse
 - Thursday, February 19th, 10:30am - 12:00pm
 - Hard Copy of work-in-progress of book
 - Design Review
 - Tuesday, March 10th, 10:30am - 12:00pm
 - Hard Copy of work-in-progress of book
 - Design Review
 - Monday, March 23rd
 - Jesse Turns in Rough draft of Book to Wayne and Brito (Hard Copy)
 - Brito and Wayne Reviews Rough draft (May have a meeting between them only to discuss Rough Draft)
 - Monday, March 30th, 10:30am - 11:30am
 - Wayne and Brito meet with Jesse about Changes to Rough Draft of book.
 - Jesse Makes Corrections for next due date
 - Friday, April 3rd, 5pm
 - Jesse Delivers Draft copy of Book to ALL Committee Members for their review for the Final Oral Exam. (Hard Copy)
 - Thursday, April 16 - 9:00am - 11:30am
 - Final Oral Exam with Committee ONLY. Not open to Public.
 - Monday, April 20th, 10:30am - 11:30am
 - Wayne and Brito meet with Jesse about final changes to draft of Book.
 - Jesse Makes Corrections for Final Due Date.
 - Wednesday, April 22nd, by 5pm

- Jesse Has both Brito and Wayne sign off on Book
- Turn books and CDs into proper places.
- Date and Time to be Announced
 - Jesse and Stacey will be working together to have a "Show and Tell" session open to the public about our projects. We are looking at doing this during Finals week but still are working on the details of when and where.
 - I will be inviting the whole committee and the general public.
 - NOTE: This review is a completely voluntary and has no bearing on my Terminal Project Results. It is just an Exhibition.

Appendix F.

Interactive Kiosk Display

This Kiosk was used to present the total project and to allow reviewers to navigate through the project as they wished. The full Kiosk display is hosted on the following website:

www.jesseserver.com/kiosk/main.htm