

UIDC

San Jose Downtown Development Team

Southern Illinois University

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<https://vimeo.com/390702516/5d76b23483>

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Table of Contents

Abstract	02
Purpose and Description	03
4D Model Images	06
Built Environment Changes	08
Sustainability	09
Energy Analysis	09
References	10
List of Figures	10

Abstract

The goal of this project was to investigate the potential that the introduction of new methodologies of transportation has on the shaping of society. Transportation greatly affects the shape of society and the shape of the built environment. This is evident by analyzing the prevalence of automobiles in modern society and looking at the scale of infrastructure that has been developed to allow for the easy and effective usage of cars. This design looks at the existing infrastructure and proposes alternative uses and methods of integration for experimental transportation technologies. These technologies propose the idea that cars can become obsolete and thus their infrastructure might lend itself to adaptive reuse. With the re-using of these spaces, there must be a clear set of guidelines established to allow for the creative and innovative use of these spaces while emphasizing the human scale at all times. This aims to put people back at the center of cities and how they are experienced. Instead of designing around vehicle scale, it is instead more effective to layout the cities in a manner that emphasizes how individuals experience and interact with the spaces that they exist within.



Figure 1. Final Presentation Boards and Models

Purpose and Description

This master plan was designed for a section of Downtown San Jose (See Fig 2.) This site was selected because the group was able to send an individual out to San Jose to correspond with our sponsor. During this time, the group was able to collect information about this location by photographing, walking, and observing . This area has a lot of pedestrian and vehicular traffic, and lends itself to very easily integrate proposed solutions. The main site would maintain it's identity as a combination of many resources and uses. There would be a large amount of commercial and public resources allocated on a street level. This is common practice within most cities and allows for the upper stories of buildings to serve as office spaces or residential dwelling spaces. The street-scape will be able to be extended and encroached upon by the commercial spaces, allowing for the blending of spaces and incentivizing of a dynamic atmosphere that people can enjoy interacting and engaging with and within.



Figure 2. Proposed Master Plan and Site (Stremming)

This master plan is centered around a series of tiled hexagons. These hexagons are inscribed within a radius of a quarter mile. These sections are determined to be reasonably traversable within that radius. Meaning that each sector or pod would focused on creating a walkable and healthy environment with key locations for PRT stations for further traversal of the city-scape. The scale-ability of this plan allows it to tie into other proposed systems in the area such as Google's Transit Village.



Figure 3. Hexagonal Walkability Tiles (Murillo)

The adaptation of these streetscapes, is illustrated in the diagram located at the right (see Fig 4.) These streetscapes would serve as an area for expression of identity within the community. This can be realized by creating commercial zones, scenic and fragrant parks, and expressive and unique art from local artists and community members.

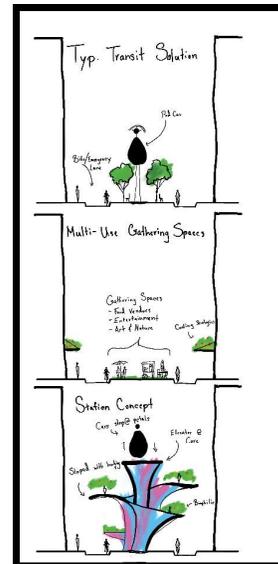


Figure 4. Streetscape Concepts (Stremming)

The master plan emphasizes three main locations. The first location being located to the north of the site. This area would be adapted and developed into a high-end luxury apartments. A green space would be developed and created in the land opposite it, helping to create a social space. This area would use passive water retention strategies and climactically appropriate plant pairings to help create a self-sufficient ecosystem.



Figure 5. Section of Luxury Apartments (Sosa)

The southern area is focused providing transitional housing for people that are struggling with homelessness. This was chosen due to the evident need for housing that the Bay Area faces, and aims to provide a sustainable model for allowing people to easily and effectively re-integrate with society. Pod Car would allow for a individuals to seek job opportunities and live lifestyles that are not inhibited by the lack of funding for amenities that have become commonplace and taken for granted.



Figure 6. Axonometric View of Transitional Housing (Murillo)

Lastly the design includes a plan for a residential building to occupy space currently be used as a parking lot. This building would integrate Pod Car directly into the building design, allowing for a seamless transition from vehicle to one's home. Pod Car would be used as a way to sustainably and effectivley ship goods to and from the building and it's associated commercial spaces. This would also ease in the distribu- tion of goods and deliveries within this area and create a small-scale community located in an area that was previously inhospitable and unsustainable.

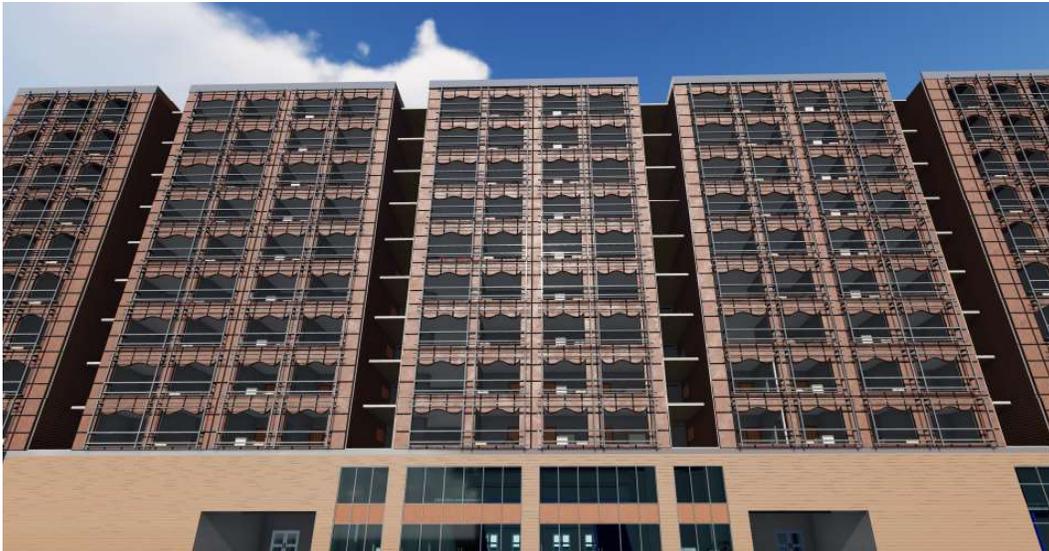


Figure 7. Rendering of Family Housing with Integrated Pod Car Station (Stremming)

4D Model Images

Here are a select group of pictures from the 4D model. This model serves as a rough representation of how the Pod Car system could be integrated into the Downtown urban fabric. The buildings that were designed as a requirement for our studio course sit within the existing conditions that were analyzed and represented within the model.



Figure 8. View of Encitra Model



Figure 9. Roadway Reclaimed into Extended Park Space



Figure 10. Luxury Apartment and Sustainable Park

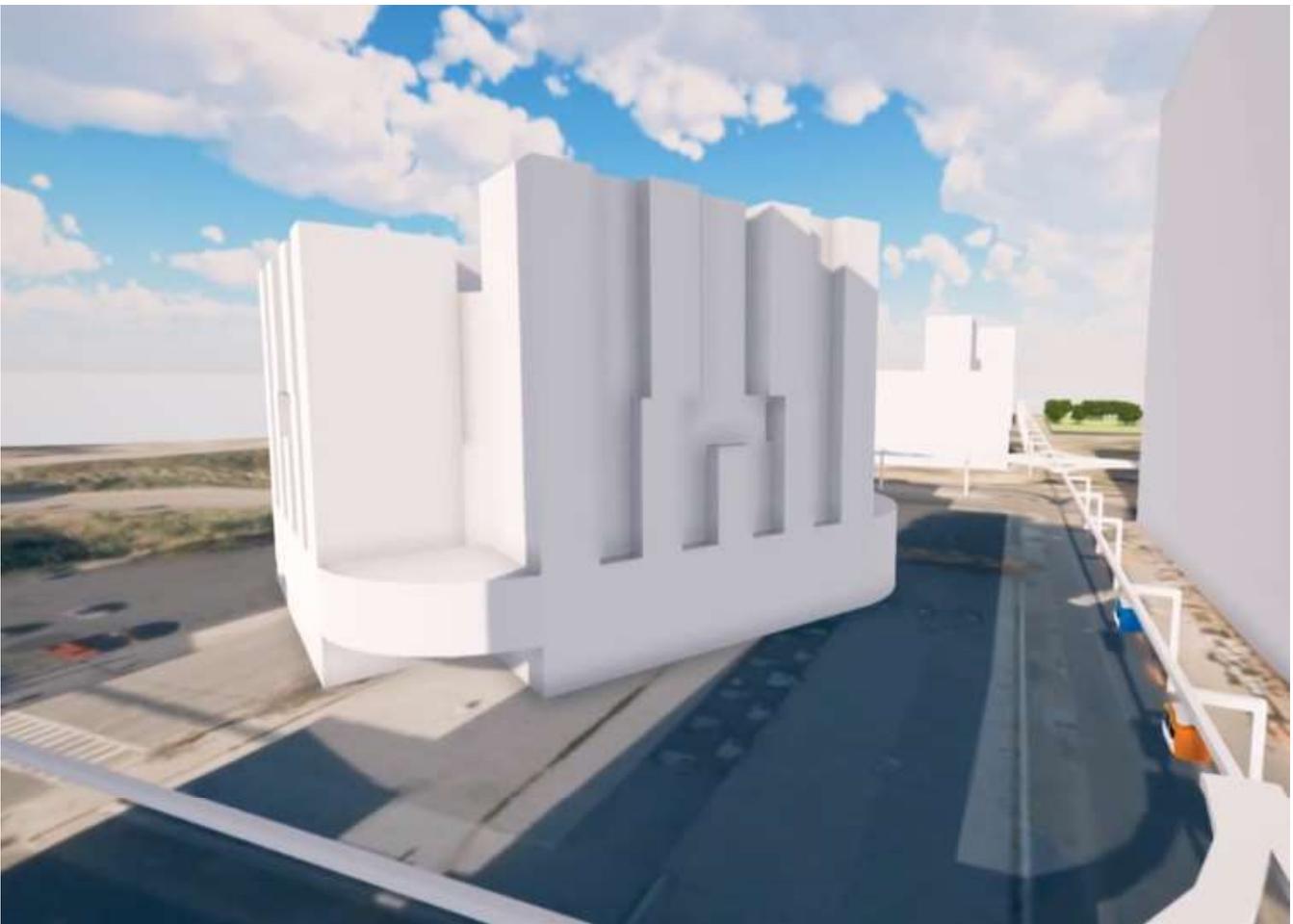


Figure 11. Transitional Housing and Pod Car Track

Built Environment Changes

The design only aims to benefit the built environment by providing additions that incentivize sustainable and inclusive lifestyles. The inclusion of a variety of different types of housing creates a diverse community that has a large pool of perspectives and backgrounds to help this area develop and grow. This would eventually develop into a much larger sense of community and identity within the urban fabric, and adapt and grow as the community grows.



Figure 12. Luxury Apartments from Interstate (Sosa)



Figure 13. Pod Car going into a Building (Stremming)

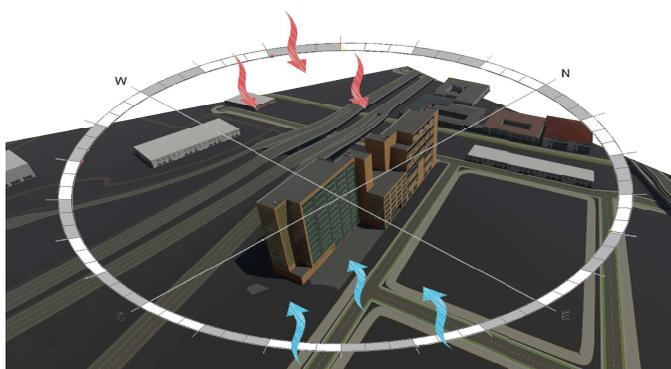
Sustainability

Pod Car being integrated into the Urban Context of Downtown San Jose, will help to create a more sustainable environment. Adapting infrastructure that was previously claimed for roads, will allow for previously eradicated ecosystems to be gradually reintroduced. This will help to create a network or system of parks that would increase the surrounding quality of life by allowing easy and equitable access to nature. This would be achieved by using symbiotic plant pairings that allow for growth cycles that would need little outside help. Another aspect of sustainability to be integrated into this project would be to focus on using these new environmental spaces to help solve large-scale problems like sourcing and using water. Water collection would occur not only on an environmental scale, but would be integrated into the buildings proposed to help maintain and expand upon the water generation sources within the site.



Figure 14. Building Heat Gain and Passive Systems Strategies (Stremming)

Figure 15. Prevailing Wind Analysis (Sosa)



Energy Analysis

Pod Car is a system that relies on solar power to be able to operate. This would help to eliminate the amount of pollution and energy consumption associated with the usage and maintenance of existing infrastructural systems. This system can become tied in with the surrounding buildings to help reduce the power demand that currently exists. If enough buildings and panels were to be included the excess energy produced by the Pod Car system and incorporated buildings could be redistributed into the main power grid and extensively used as a means to achieve Net Zero production in a phased manner.

References

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List of Figures

Figure 1. Final Presentation Boards and Models

Figure 2. Proposed Master Plan and Site (Stremming)

Figure 3. Hexagonal Walkability Tiles (Murillo)

Figure 4. Streetscape Concepts (Stremming)

Figure 5. Section of Luxury Apartments (Sosa)

Figure 6. Axonometric View of Transitional Housing (Murillo)

Figure 7. Rendering of Family Housing with Integrated Pod Car Station (Stremming)

Figure 8. View of Encitra Model

Figure 9. Roadway Reclaimed into Extended Park Space

Figure 10. Luxury Apartment and Sustainable Park

Figure 11. Transitional Housing and Pod Car Track

Figure 12. Luxury Apartments from Interstate (Sosa)

Figure 13. Pod Car going into a Building (Stremming)

Figure 14. Building Heat Gain and Passive Systems Strategies (Stremming)

Figure 15. Prevailing Wind Analysis (Sosa)