

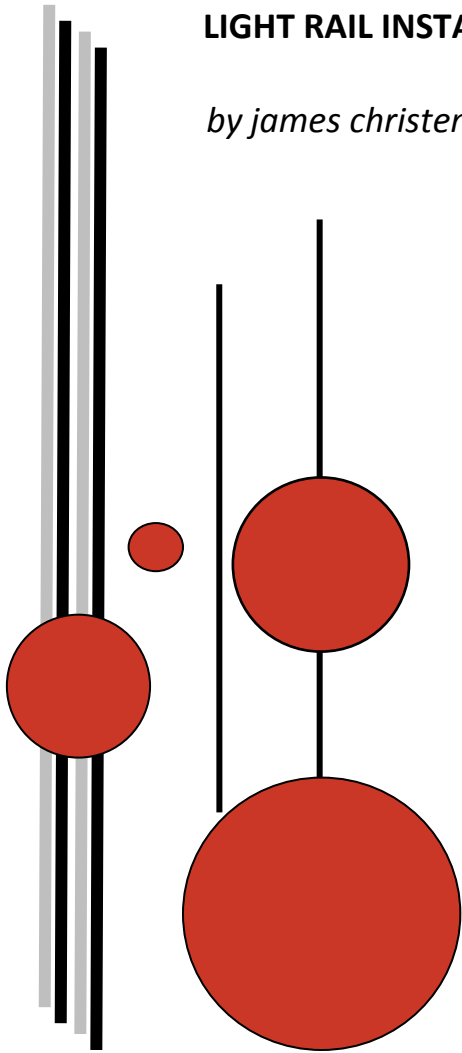
I. THE BUILT ENVIRONMENT



i. INITIATING AN ERA OF DEVELOPMENT ON THE CENTRAL CORRIDOR:

A CROSS-EXAMINATION OF URBAN DESIGN PLANS WITH THE FORM OF UNIVERSITY AVENUE PRIOR TO LIGHT RAIL INSTALLATION

by james christenson & mikey perkins



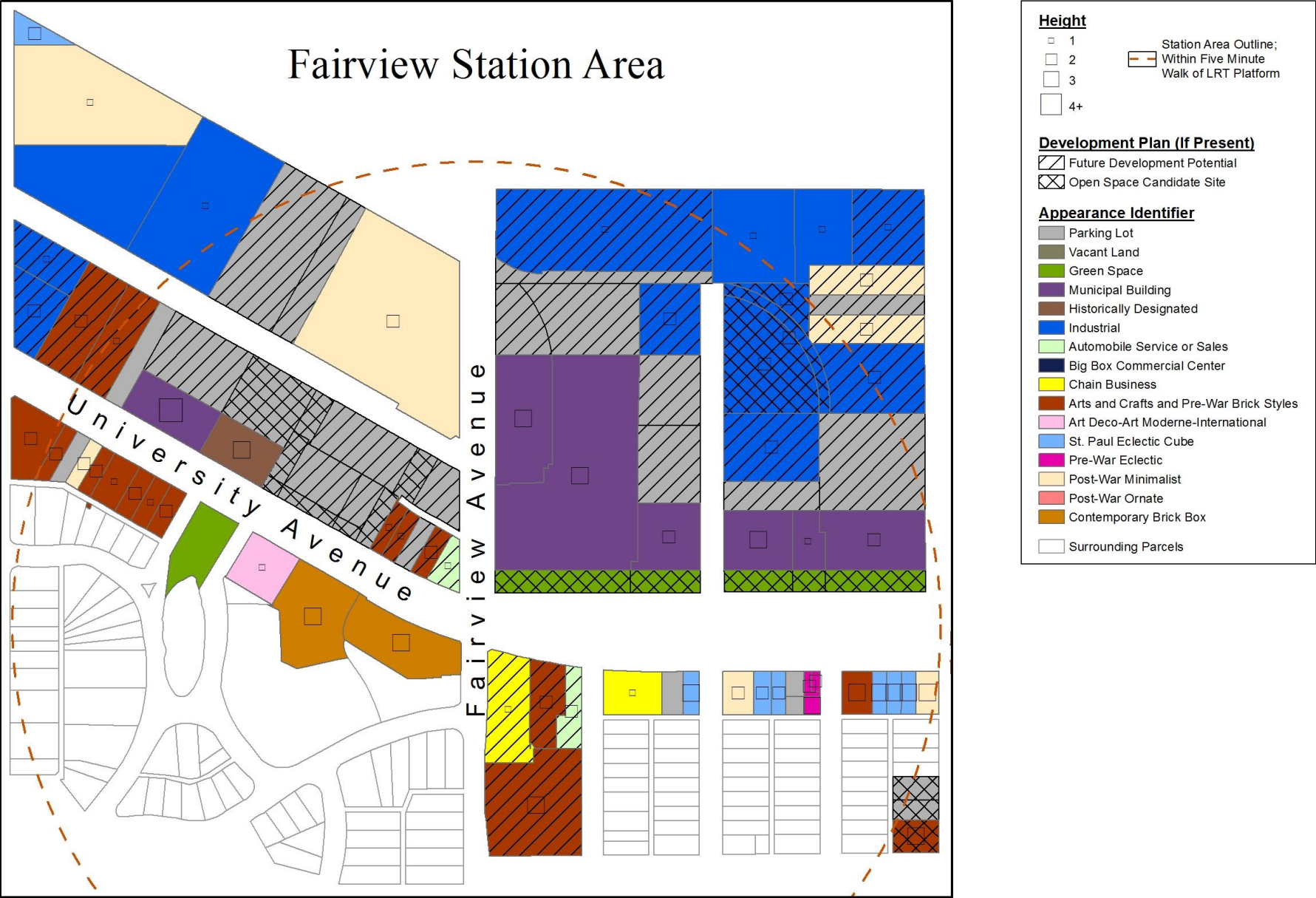
This Chapter's Questions:

1. What is the built environment of University Avenue today?
2. How can city plans for the Central Corridor be codified into a cohesive design scheme that is relevant to the built environment?

Chapter Outline:

- i. Cross-Examination Maps
 - I. Introduction
 - II. University Avenue Today
 - III. The City Plans and Transit-Oriented Development
 - IV. Design Principles and Development Types
 - V. Transit Oriented Development
 - VI. The Pre-Construction Central Corridor and Transit Oriented Development
 - VII. Methods
 - VIII. Our Findings
 - IX. Discussion

CROSS-EXAMINATION MAPS of university ave today with the city's plans



Height

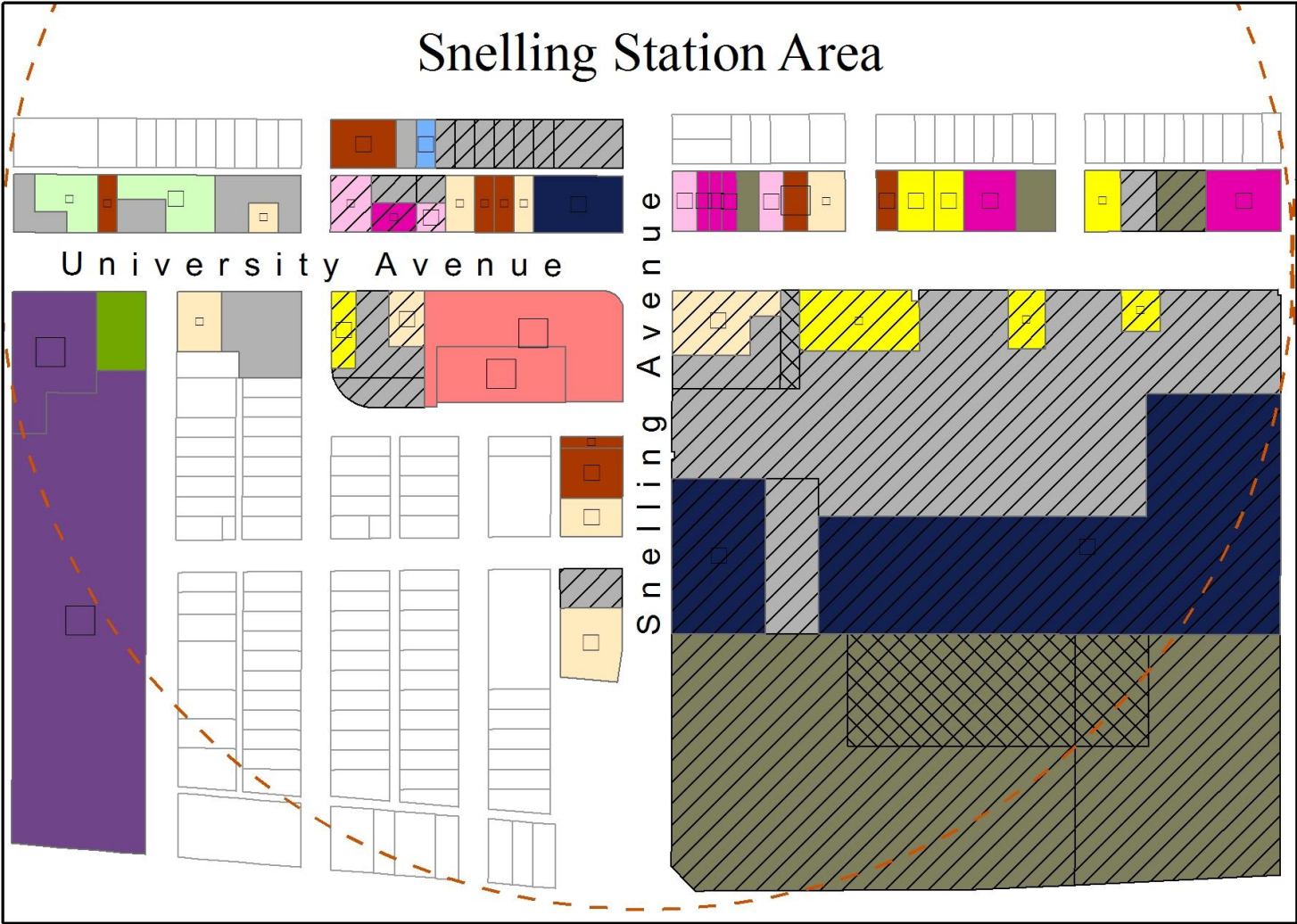
- 1
- 2
- 3
- 4+

Development Plan (If Present)

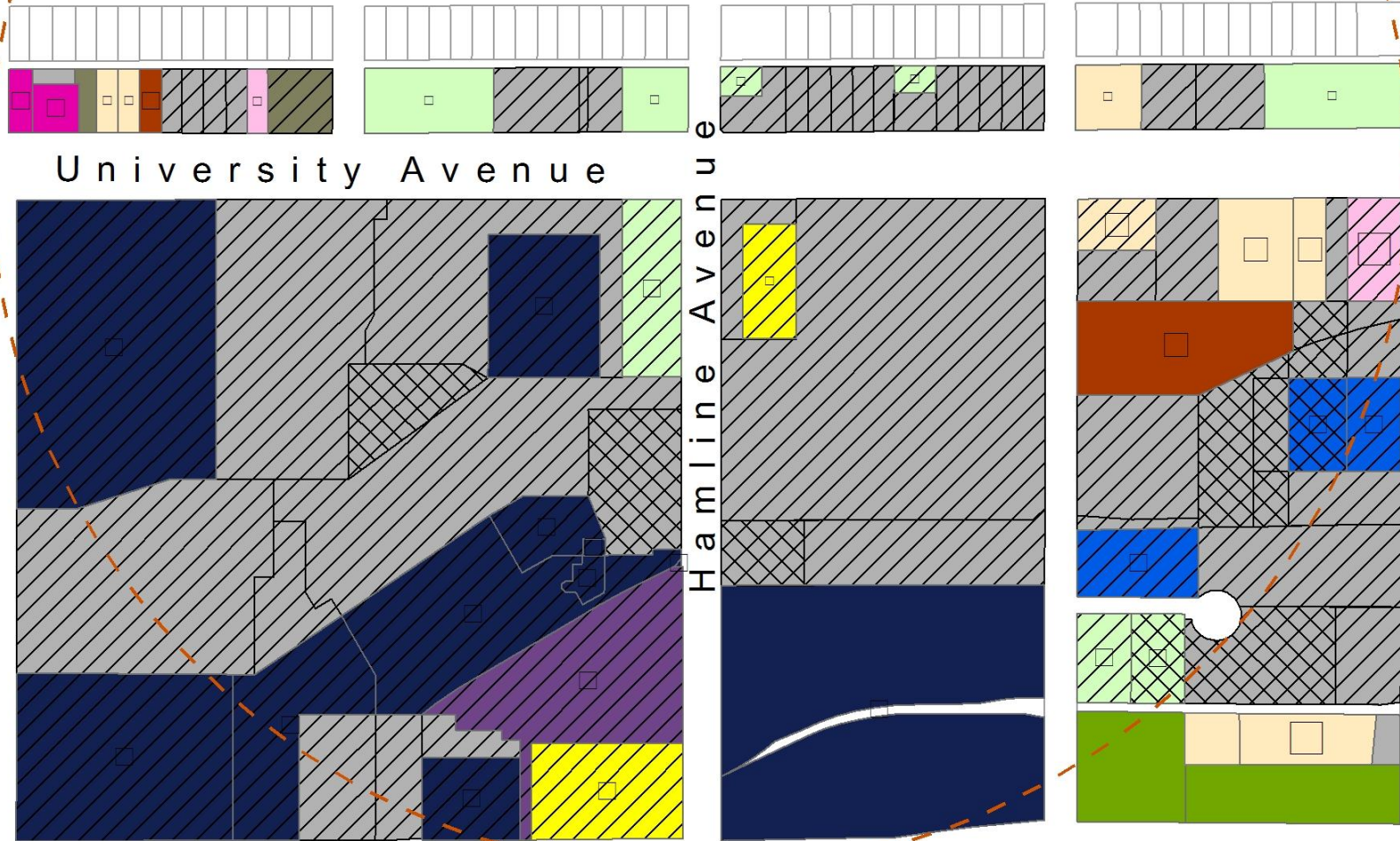
- ▨ Future Development Potential
- ⊠ Open Space Candidate Site

Appearance Identifier

- Parking Lot
- Vacant Land
- Green Space
- Municipal Building
- Historically Designated
- Industrial
- Automobile Service or Sales
- Big Box Commercial Center
- Chain Business
- Arts and Crafts and Pre-War Brick Styles
- Art Deco-Art Moderne-International
- St. Paul Eclectic Cube
- Pre-War Eclectic
- Post-War Minimalist
- Post-War Ornate
- Contemporary Brick Box
- Surrounding Parcels



Hamline Station Area



Lexington Station Area

- Height**
- 1
 - 2
 - 3
 - 4+

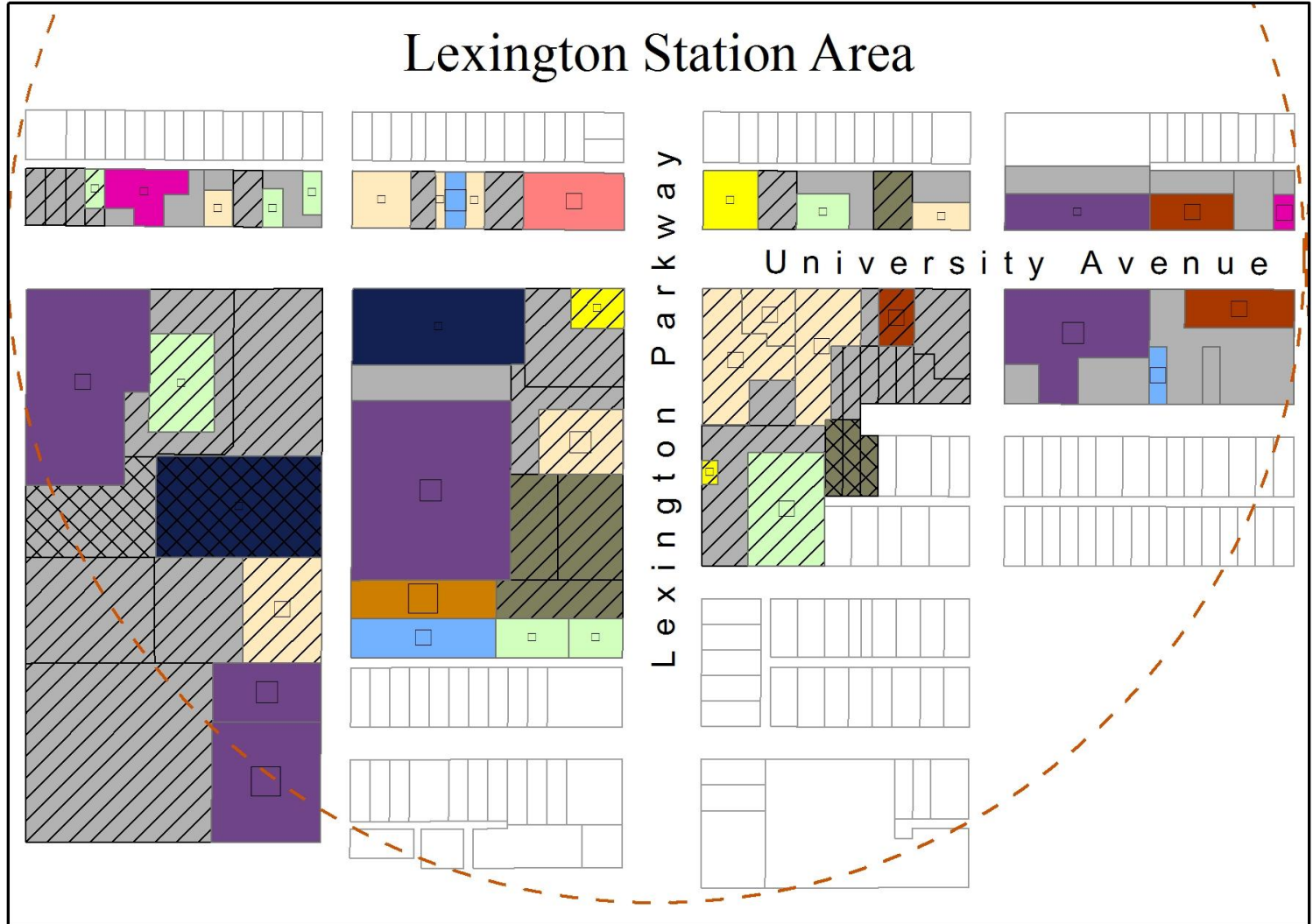
Station Area Outline;
Within Five Minute
Walk of LRT Platform

Development Plan (If Present)

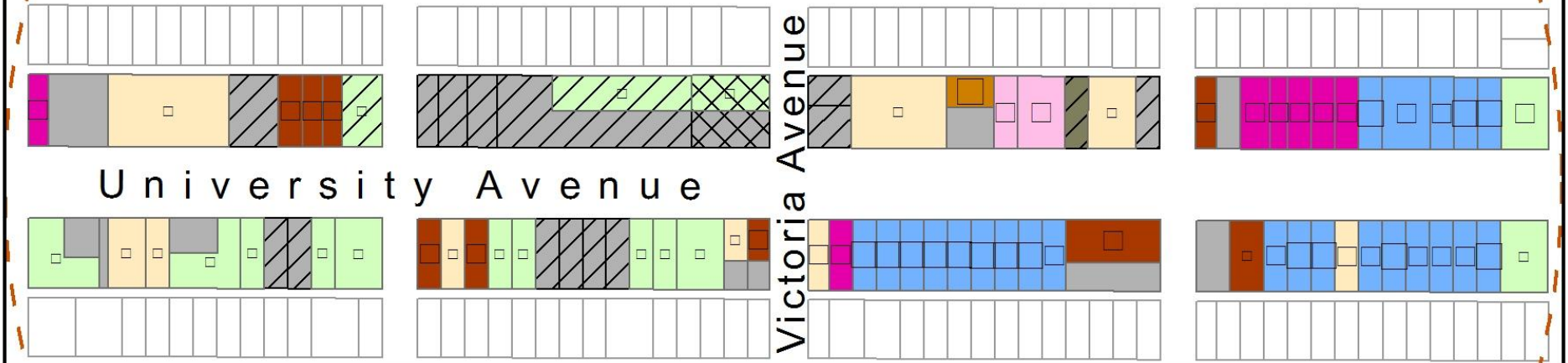
- ▨ Future Development Potential
- ⊠ Open Space Candidate Site

Appearance Identifier

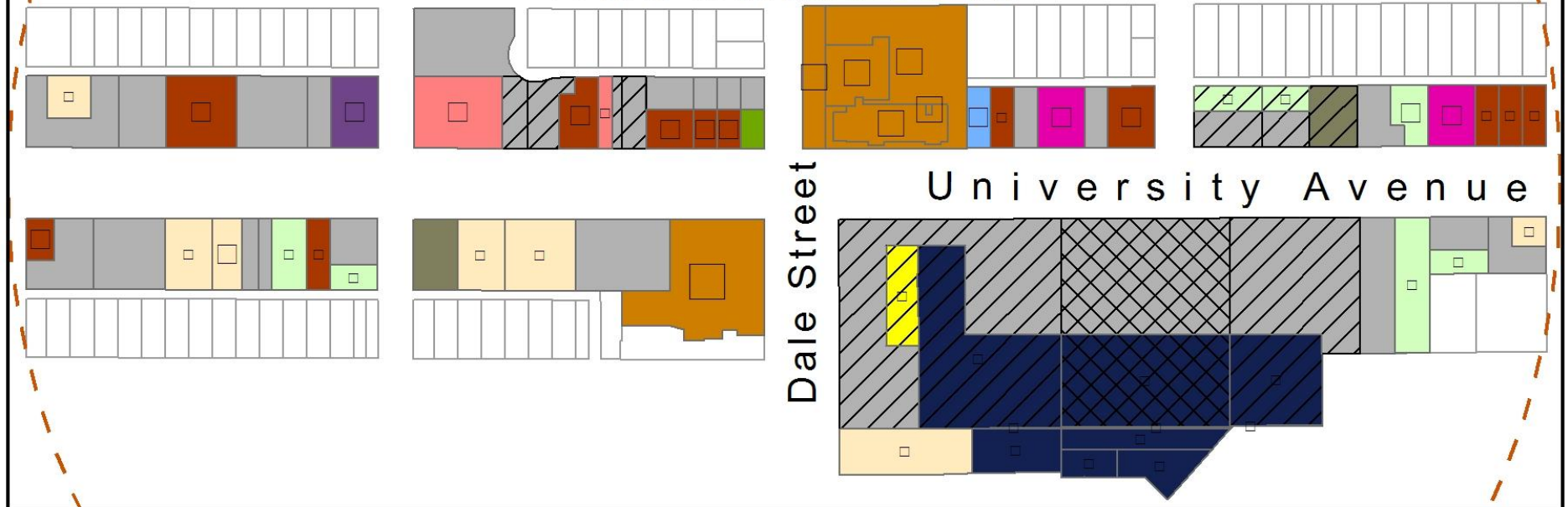
- Parking Lot
- Vacant Land
- Green Space
- Municipal Building
- Historically Designated
- Industrial
- Automobile Service or Sales
- Big Box Commercial Center
- Chain Business
- Arts and Crafts and Pre-War Brick Styles
- Art Deco-Art Moderne-International
- St. Paul Eclectic Cube
- Pre-War Eclectic
- Post-War Minimalist
- Post-War Ornate
- Contemporary Brick Box
- Surrounding Parcels



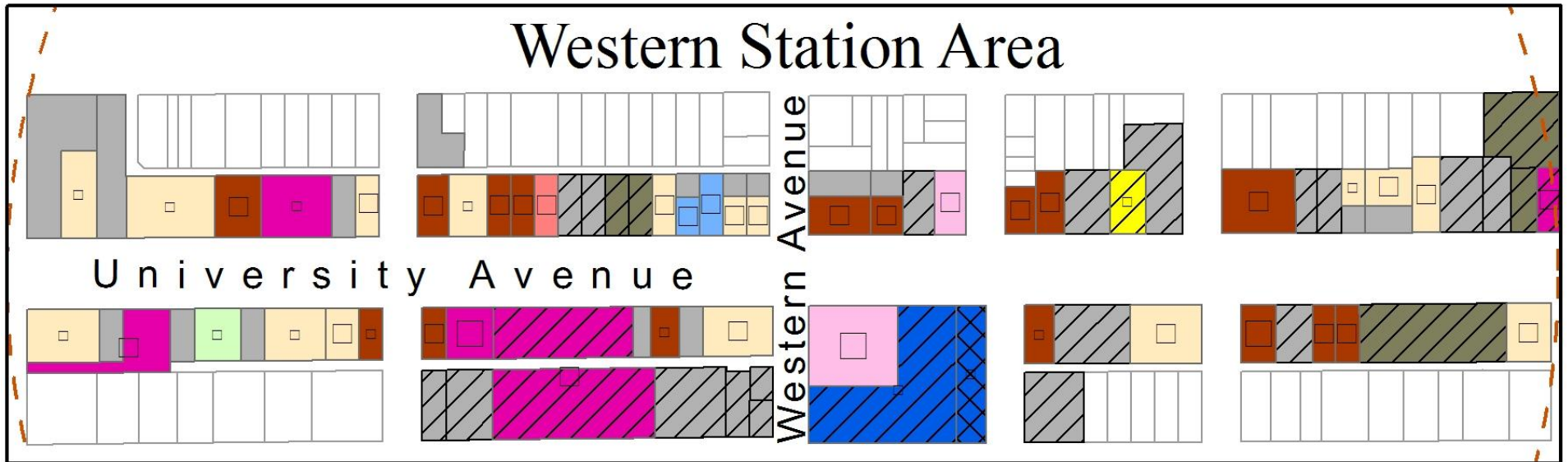
Victoria Station Area



Dale Station Area

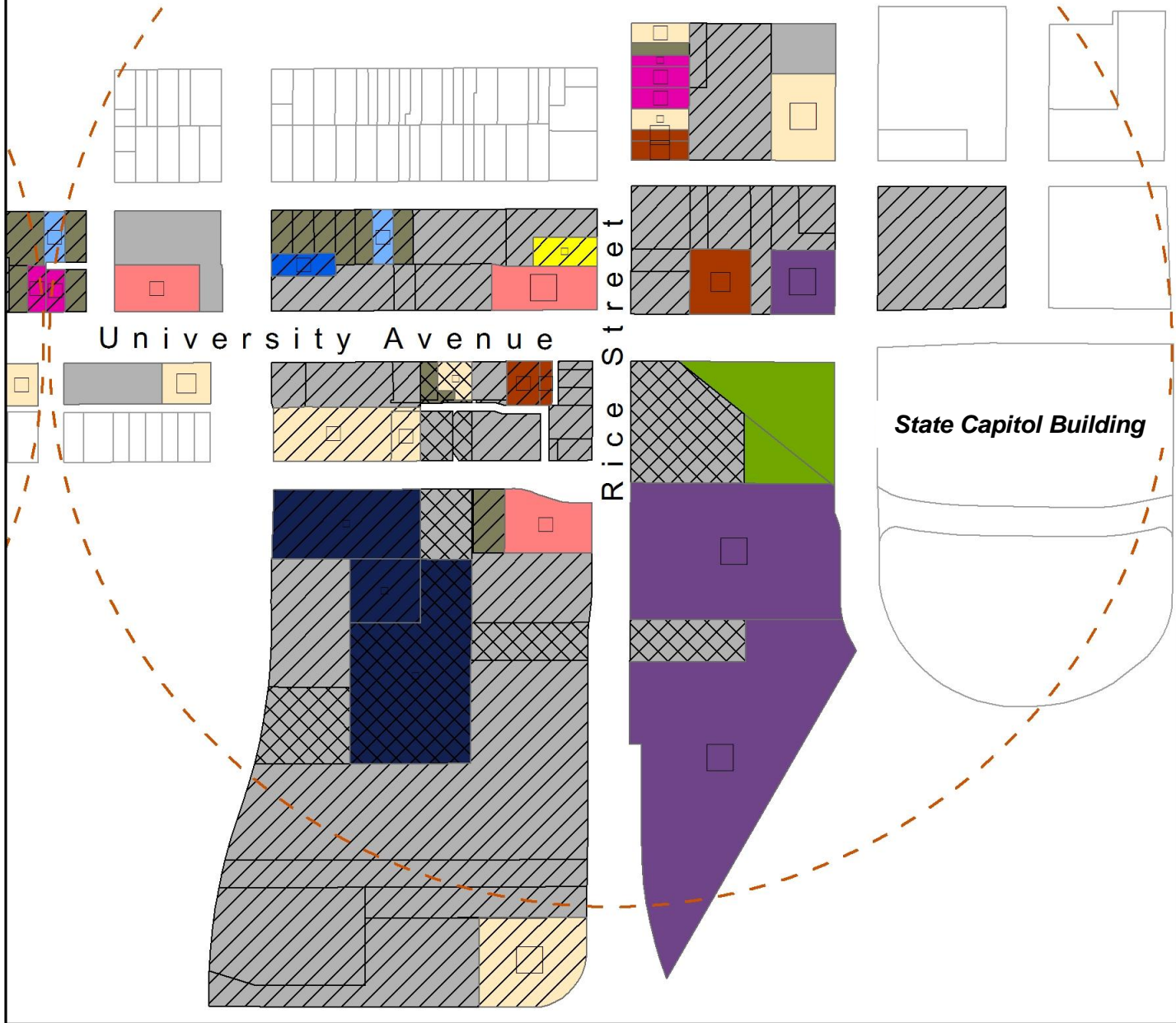


Western Station Area



Height	Development Plan (If Present)	Appearance Identifier	Color/Pattern	Identifier
□ 1	▨ Future Development Potential	□ Parking Lot	■ Industrial	■ St. Paul Eclectic Cube
□ 2	▩ Open Space Candidate Site	□ Vacant Land	■ Automobile Service or Sales	■ Pre-War Eclectic
□ 3	▭ Station Area Outline; Within Five Minute Walk LRT Platform	■ Green Space	■ Big Box Commercial Center	■ Post-War Minimalist
□ 4+		■ Municipal Building	■ Chain Business	■ Post-War Ornate
		■ Historically Designated	■ Arts and Crafts and Pre-War Brick Styles	■ Contemporary Brick Box
			■ Art Deco-Art Moderne-International	□ Surrounding Parcels

Rice Station Area



I. INTRODUCTION

“The Corridor is not living up to its potential. It leaves visitors and residents alike with an impression of neglect, lack of activity and threats to personal safety. New investment needs to create a corridor that is beautiful, green, vibrant and pedestrian-friendly.”

- City of St. Paul, Central Corridor Development Strategy

From a policy perspective, light rail transit (LRT) and other significant transit infrastructure projects are useful as regional planning tools more than simply improvements to existing public transit networks. Politicians and urban designers wield light rail projects as urban-planning silver bullets that can simultaneously foster localized economic investment and improve neighborhoods while enhancing mobility. Transportation geography research, moreover, has empirically substantiated that transit investments can trigger significant redevelopment in urban areas, but only in those cases where active public policy encourages and directs private investment.¹

Acknowledging the pivotal role that policy takes in shaping regional planning, this chapter examines the directives of St. Paul city planners. It codifies their design principles and integrates their vision of a redeveloped Central Corridor with a documentation of the appearance of University Avenue prior to the installation of LRT.

Over the last several years, St. Paul has engaged in a concerted planning effort that has involved the input of city planners, engineers, and private developers, as well as business owners and residents that are local to the Central Corridor. In a master planning document called the Central Corridor Development Strategy published along with supplementary, locally-detailed Station Area Plans, the city has established an urban design thesis that it will pursue along University Avenue. These documents not only express general design principles, but also outline specific spatial areas that will be targeted for future improvement.

In order to effectively evaluate and contextualize the application of these plans to University Avenue, this study offers a catalog of detailed

descriptions of the appearance and nature of the structures and plots along the corridor. This catalog—along with the statistical profiles and maps produced from it—serves as a baseline of comparison from which future research can measure change over time. Moreover, our representation of the Corridor’s appearance is correlated with the city’s development maps, enabling a localized analysis of what and how they intend to change along the Avenue. In cross-examining city plans with what currently exists on the Avenue prior to construction, we hope to offer a translation of planners’ intentions and, perhaps, make it more apparent what developments their vision of the future will prioritize, privilege, and encourage.

In performing this analysis, we ask: how can the Avenue be presently characterized, with reference to the aesthetic qualities of the building stock and lots directly adjacent to the Avenue? And, moreover, how can we expect the physical appearance of the Avenue to change after the activation of the Central Corridor Light Rail Transit line?

This study finds that the city's proposed development scheme:

- 1) Targets buildings or plots immediately proximal to station platforms regardless of their appearance type;
- 2) Targets buildings that are isolated within larger areas of proposed development, also, regardless of their appearance type;
- 3) Targets specifically: big-box commercial retailers, chain businesses, industrial warehouse sites, surface parking lots, and vacant lots;
- 4) Preserves medium- to high-density residential units and buildings with architectural traditions unique to the region;
- 5) Prioritizes the preservation of taller over shorter buildings.

Whereas other chapters in this atlas analyze how market-driven processes are likely to affect University's businesses and residents, our study focuses on how policy-driven processes are likely to affect businesses and residents on a superficial level – the quality, style, and use of the buildings and lots in which they work and live, park and play.

II. UNIVERSITY AVENUE TODAY

"There's already a 'there' there, but the 'there' is a little bit edgy and a bit of a hodgepodge and doesn't have an identity."

- City of St. Paul Councilman Russ Stark²

What many consider the 'heart' of University Avenue—the stretch running from Fairview Avenue to the State Capitol Building—is contested space. In political speeches, statements made by residents and advocates, and city development plans, competing views of the state and value of the Avenue's identity emerge. The above statement by Russ Stark is amongst the pragmatic judgments. He and his colleagues in government and planning regard the arrival of light rail and the anticipated attraction of investment as an opportunity to develop a more coherent Avenue character. With disparate views on the current state of the Avenue, however, it remains unclear what this improvement will look like in the context of its present appearance prior to light rail construction.

The architectural appearance of University Avenue today mirrors its history, suggesting waves of investment, disinvestment, and past development intensities. With a knowledge of only shreds and rumors of local history, a careful observer can interpret how and when development occurred, examining, for example, the striking and frequent juxtaposition of contemporary buildings with a series of worn, more compact remnants of the streetcar era. Buildings along the length of the Avenue are generally low, averaging just below two stories tall. In areas that survived the widening of the Avenue to accommodate the installation of the streetcar in 1890, buildings date back as old as the late 19th century. Between the oldest buildings and the most recent construction is a chronologically representative inventory of buildings that forms a stretch of incongruous design schemes. Despite its incoherence, though, the geographic situation of University Avenue between the Twin Cities' central business districts place portions of it as the third-most valuable land areas in St. Paul, behind downtown and Grand Avenue.

Yet even with the complexity of the Avenue’s historical and geographic dynamics, the value of its land, and the imminent arrival of a transit system that portends new development, little documentation exists to characterize the Avenue’s appearance.

In an attempt to capture the elusive image of University Avenue, a detailed catalog of its built form is integral to our study. Taken in the spring of 2011, this catalog primarily documents building frontages along the Avenue, focusing on the on-street facades to capture the character of University Avenue as a major thoroughfare and future LRT corridor. Documentation extends perpendicular to the Avenue—on thoroughfares and side streets—only in areas that planners have identified as susceptible to change.

The catalog, then, is a compilation of appearance identifiers—categories constructed to meaningfully reflect the nature and appearance of individual buildings and plots of land along the Avenue (see *Methods* for a discussion of how each appearance type is defined and refer to the subsequent maps to examine how they

are spatially distributed). Table 1 is a statistical profile of this compilation of categorical data, which enables a meaningful discussion of how the built form of University Avenue can be characterized prior construction. It presents the percentages of the total acreage of the study area that are occupied by each respective type of cataloged feature, reflecting some of the proportional diversity of architectural and built schema along the Avenue. Additionally, the third column shows the proportions of the different building types alone, excluding landscape features such as parking lots and green spaces.

Beginning with the non-structural form of University Avenue, the first column of the table is useful for demonstrating the dramatic proportions of the spaces along the Avenue that are dedicated to marginal land-uses. A total of 44.9% of the study area’s acreage is composed of vacant land and parking lots. Along University Avenue, at-grade parking lots and undeveloped gaps between buildings interrupt the active frontage of businesses and residences,

Table 1		
Percent of Total Study Area Acreage Occupied by Respective Built Forms (Cataloged Appearance Types)		
Appearance Type	% of Studied Surface Area, by Acreage	% of Studied Surface Area, by Acreage (Excluding Parking Lots, Green Spaces, Vacant Lots)
Parking Lot	38.6%	n/a
Vacant Lot	6.3%	n/a
Green Space	1.9%	n/a
Municipal Building	10.7%	20.2%
Historically Designated	0.2%	0.3%
Industrial	6.0%	11.3%
Automobile Service or Sales	3.1%	5.9%
Big-box Commercial Center	11.8%	22.1%
Chain Business	1.9%	3.5%
Arts and Crafts and Pre-War Brick Styles	4.7%	8.8%
Art Deco – Art Moderne – International	0.8%	1.5%
St. Paul Eclectic Cube	1.5%	2.8%
Pre-War Eclectic	1.7%	3.1%
Post-War Minimalist	7.9%	14.9%
Post-War Ornate	1.5%	2.8%
Contemporary Brick Box Residential	1.5%	2.9%

detracting from the coherence of the built environment.

The disproportionately large land-mass that this aggregate of empty land composes is more, however, than the sum of small, inter-building parking lots serving individual businesses. Fields of parking lots serving so-called ‘big-box’ retailers and strip commercial centers (together constituting 11.8% of the study area) consume land at a dramatic rate. This occurs most notably at two of the Avenue’s, and the state’s, busiest intersections—those that University Avenue makes with Snelling Avenue and Lexington Parkway—where large supermarkets, department stores, and big-boxes form a strip set back by thousands of square feet of parking. These indicate a trend of inefficient investment as well as a set of zoning policies that contain parking requirements unsuitable for a central urban location. For a major urban thoroughfare, the scale of underutilized, prominent real estate would seem a gross mismatch of design priorities. Additionally, open, green spaces, such as pedestrian parks, compose 1.9% of the total study area. This number is especially low when considering that

many of these spaces are only pseudo-public or minimally catered to pedestrian use, existing as the frontages of residential or municipal buildings.

The remaining structures that were built prior to the Second World War contrast the low densities and substantial building set-backs that high parking volumes and associated commercial developments feature. Reminiscent of the pedestrian-oriented design schemes associated with the streetcar era, these buildings have minimal setbacks, meeting their customers at street level with frontage windows displaying merchandise. Some of these buildings support mixed land-uses, with apartments and lofts in the upper floors. They display architectural iterations of primarily Arts and Crafts, Moderne, Art Deco, International, and St. Paul Eclectic Cube styles with brick, wood-paneled, and limestone exteriors. In sum, these older structures comprise 13.1% of the built surface area of the study area. Where these older buildings fall on neighboring plots, they rarely have significant gaps between them, or else are constructed with seamless transitions. Despite the presence of

these older structures, only 0.2% of the total study area acreage (one building, to be precise) qualified for historical designation.

An additional category of Pre-War structure is also worth noting, that being what this study terms Pre-War eclectic. These buildings have no coherent architectural character, or are else a motley compilation of too many design schemes to warrant an architectural designation. Comprising 3.1% of the surface area of documented buildings, these structures tend to be poorly retrofitted or re-façaded older styles. Many reflect poorly realized attempts to redevelop older properties, while others include architectural oddities whose unique facades offer a sense of place.

Old and new municipal buildings constitute 20.2% of the buildings in the study area. These consist primarily of fire and police services, though a series of public medical complexes line University Avenue as well. Lastly, there are several large public schools situated prominently along the Avenue.

This study recognizes three prominent Post-War commercial and

residential building types whose building styles are not specific to the automotive industry or chain establishments. These three, termed Post-War minimalist, Post-War ornate, and contemporary brick box, constitute 20.6% of the building surface area. Three-quarters of these Post-War buildings have been classified as stylistically nondescript (minimalist), indicating the lack of an emphasis on unique aesthetic value in the Avenue's modern buildings.

The aforementioned omnipresence of parking is emblematic of a greater atmosphere and legacy of automobile accommodation among some of University Avenue's Post-War buildings. Around the time that the Avenue's streetcar system was being dismantled in the 1950s and in the decades following, an agglomeration phenomenon resulted in a high concentration of car dealerships and service stations along its length. Despite closures of many of these businesses in recent decades, the area is still locally known for its service stations and as a source of new and, especially, used cars. Both active and inactive frontages of automotive

retailers constitute a distinct architectural presence, with drab, corporate exteriors and large windows onto stocked or dormant sales floors. While automotive businesses account for only 5.9% of the study area's acreage, their large, contiguous parking lots enhance their presence.

Of the Post-War structures, chain stores are also relatively common, comprising 3.5% of building surface area. Note, however, that they too are often associated with contiguous parking developments that make them spatially significant. These include a full gamut of the usual corporate fast-food structures as well as other retail outlets and services. These reflect an additional auto-oriented commercial style, as it often requires navigating a parking lot to access many of these businesses on foot.

An overt travel mode orientation is created, however, by more than just retail, service, and surface parking lots on the Avenue. The visual and spatial layout of the street subordinates non-automotive transit. Along University, blocks tend to be large with few cross streets. Abundant large parking lots spanning

the space between disaggregated businesses add to the physical and perceived distance between walkways and businesses. This layout scheme simultaneously accommodates the ease of use and storage of automobiles while deterring pedestrian accessibility to commercial centers, forcing long, indirect walking routes on narrow sidewalks.

A superficial catalog of University Avenue's appearance cannot convey a resident or visitor's experience of the place. Still, a documentation of its built form offers a proxy by which future research can measure change. A cursory understanding of the area that regional light rail developers propose to change offers a context in which to examine their development plans.

III. THE CITY PLANS AND TRANSIT-ORIENTED DEVELOPMENT

“If we don’t have this conversation about who and what [the Central Corridor] will impact, then we will find our future by default... I like to find our future by design.”

- Melvin Carter III, St. Paul City Councilmember³

City planners have followed three basic goals in their approach to redeveloping the built form of University Avenue. The first is to foster economic activity, the second is to promote transit use, and the third is to improve the image of the Avenue. Integrating these premises, planners envision green spaces, mixed commercial and residential space, and vibrant street-level activity in the place of the vast asphalt plains of the Avenue’s parking lots and other underutilized spaces. By nurturing the development of medium- to high-density residential, commercial, and institutional uses along University, planners not only hope the city will benefit economically and fiscally from private investment in such buildings,

but that a greater density of people living and working along the transit-corridor will allow more people to give up their car for a transit pass.

The purpose of this section then, is to analyze the development goals and schema that the city intends for the Avenue so that readers can understand the urban design rationale for why they have identified certain tracts of land for change. While there are other goals the planners intend to achieve with the construction of the Central Corridor, such as amplifying the Twin Cities’ status as a major regional center, those goals will not affect the built form of University as explicitly as the above three precepts and so are not considered in our chapter.

Two documents guide our understanding of the city’s plans – the Central Corridor Development Strategy and the University Avenue Station Area Plans – both published by the Planning Commission of the City of St. Paul. The former represents an abstract vision and set of strategies articulated by community task forces for the Central Corridor as a whole. The latter are a series of documents that outline

potential development schemes for each area within a quarter-mile from individual train stops on University. The Station Area Plans grew out of roundtables, workshops, and open houses that planners intended to be inclusive of the voices of residents and business owners that were local to each station area.⁴ Put together, the Development Strategy and Station Area Plans convey two main facets of our study: one, they establish guidelines for development types and styles; and two, they cite locations of potential future development, preferred green/open space candidate sites, and areas to be preserved. The plans were not intended to be prescriptive and the authors judiciously note that they are to be adaptive and flexible. Despite this disclaimer, they do represent a sample of the kinds of public and private development that the city is likely to privilege.

IV. DESIGN PRINCIPLES AND DEVELOPMENT TYPES

This section partially recapitulates the publicly accessible city plans for future design and development along University Avenue. The subsequent discussion focuses on codifying the general design principles and development types that the city has identified as being necessary to foster economic activity, promote transit use, and improve the appearance of the Central Corridor. However, as this and more detailed information is readily accessible to the public via the published Central Corridor Development Strategy and the Station Area Plans, this section is not intended to be exhaustive and readers are encouraged to consult the available city documents for elaboration.

1) Congruity of Design and Selective Preservation

According to the plans, new development should “fit” in both size and style among the existing buildings on the Avenue. The plans call for smooth transitions of scale and design

amongst buildings so that high-rise condos do not incongruously overwhelm the two-story, single family homes and small businesses common of the Avenue. By encouraging a high degree of uniformity in future development, the planners’ intentions seem to be to overcome the miscellany of built forms on University Avenue as it is today for a more consistent, organized appearance. New buildings, like great skylines, will play off the architectural design of their nearby predecessors to achieve this goal.

If new development is to “fit” with what already exists along University, then it is necessary for large tracts of the Avenue and its immediate surroundings to remain unchanged and thus for planners to identify areas of preservation. Areas to be preserved generally fall under three categories: one, buildings that already align with the design principles planners consider favorable to transit-oriented development; two, large stretches of low-rise, residential areas surrounding the Avenue whose diverse and historic character planners intend to maintain and for whom local neighborhood groups have been politically vocal; and

three, specific building structures that planners consider part of the distinct urban fabric on University Avenue. Together, the areas that have been designated for preservation contain built forms that planners believe give the Avenue a unique and meaningful sense of place.

2) Transit-Supportive Land Uses

The success of the Central Corridor as a modifier of transit behavior and economic development tool ultimately derives from how many people consistently ride the line. The greater the mass of people that step onto or off of the train at nodes along University, the more confident developers will be in investing significant capital along the Central Corridor. To maximize ridership and thereby facilitate greater development, planners intend to take advantage of LRT’s capacity as a local server that can provide riders with direct, street-side access within short walking distance of their destination. Thus, in the areas closest to stations, planners promote “a mix of transit-supportive uses, such as medium-to-high density residential, small format retail,

restaurants, and institutions.”⁵ Dense, mixed land usage at-grade with the Avenue are likely to foster greater activity along the transit corridor, incentivizing residents, consumers, and locally employed populations to use transit service over automobiles. In this way, a mix of residential and commercial developments on the Avenue have been anticipated to create both transit destinations and transit origins.

This transit-supportive design principle prompts several visions for large-scale development types, notably those termed “Market Intensification Sites.” These sites are envisioned as agglomerated commercial areas with a mix of large-scale retail, entertainment venues, and both chain and “ma and pa” specialty stores. The concentrated market districts are to be located near stations and densely gridded with both pedestrian-oriented and pedestrian-exclusive walkways. As a space of both employment and consumption, these highly developed areas intend to attract people for diverse reasons, promoting a consistently active pedestrian atmosphere.

While not only intending to divert city-wide vehicle miles travelled to transit ridership, the planners also intend to diminish the presence of spaces that cater to cars. This goal manifests in several forms. Primarily, planners intend to substantially develop surface parking lots into open green spaces and medium- to high-density buildings. They believe surface parking lots are underutilized properties that, if developed, would generate more economic activity, raise tax revenue for the city, improve the aesthetic appearance of University, and generate a more pedestrian-friendly atmosphere. Planners do not intend to completely undermine automobile access – encouraging consolidated and below-grade parking structures – yet they do intend to substantially overhaul the present scale of automobile accommodation. Additionally, development of commercial spaces that maintain or promote automobile use, such as drive-in restaurants and car service stations will also be prioritized under the city plans.

3) Fill-in the Avenue

Sections of University Avenue appear as a series of void spaces with prominent gaps between buildings. Vacant and empty land, along with parking lots, constitutes large proportions of the surface area of the Avenue’s frontage. Some of these locations are small parcels, such as alleyways and sites of recently demolished buildings, whereas others are larger land tracts that extend from University Avenue through to the parallel side-streets.⁶ As such, planners have identified the infill of these sites as a major source of future development in an effort to “create a continuous [and] animated street face along University”⁷ and increase the opportunity for people to live or work on the Avenue. In so doing, they believe University will emerge as a more thoroughly urban place that is both visually captivating and physically active.

4) Green Environments

The last of the critical planning principles is to prioritize new development of open and green public spaces to compliment other new

construction. In order to attract more residents, businesses, and visitors to University, planners want to change the appearance of University from “one of gray empty spaces to a green boulevard with attractive landscaping and numerous neighborhood parks.”⁸ They believe this strategy will not only enhance the image of the Avenue, but expand and enhance the community realm, define a sense of place, offer spaces of representation, and anchor new developments along the Avenue. Lastly, the emergence of significant open environments, primarily but not limited to parks, will signify that University is to be a walkable, pedestrian-friendly place. To that end, the city will offer LRT users the opportunity to make an extended, varied day trip that takes them up and down the Avenue.

V. TRANSIT ORIENTED DEVELOPMENT

The city’s ambitious plans for re-ordering the built form of University Avenue were not built from the foundation of arbitrarily chosen urban design principles. Rather, they are an

interpretive iteration of the tenets of Transit Oriented Development (TOD), a regional transit planning and design scheme that has experienced increasing popularity among urban planners in recent decades. While its name emphasizes the use of transit, the underlying premise of TOD is that every trip starts and ends with a walking trip. As such, it assesses the quality of transit sites and their surrounding built environment by how well transit users can readily access their destination once stepping off of the train, achieve the goals of their trip, and conveniently re-board public transit once they finish. Furthermore, TOD emphasizes the benefits of specific development types such as market squares, public parks, and urban residential “villages” in the style of the New Urbanist movement.

With these premises in mind, we can define TOD as a walkable, location-efficient, mixed-use scheme of development that “balances the need for sufficient density to support convenient transit service with the scale of the adjacent community.”⁹ TOD-style development models are typically applied within a quarter-mile radius of

a transit stop, an area that has a five minute walk time between the center and the periphery. Despite the TOD-specific scale and style of planned development on University Avenue, however, readers should maintain the perspective that the city plans primarily reflect an economic revitalization scheme and a design scheme second. That said, the use of TOD is more than an incidental means to an end; it reflects the design values of its planners. The application of TOD on University Avenue should be regarded as a new evaluation of the movement’s design principles and textbook phraseology, which the planners have tailored to the reality of the Avenue and their own imagination.

One of the fundamental precepts of TOD that the city’s plans adopted is the goal of “place-making.”ⁱ A subjective and somewhat intangible concept, place-making contends that not all built environments are memorable, immersive, or adequately representative. Under TOD and the

ⁱ See Chapters 8 and 9 for further discussion of place-making and its relation to the Central Corridor planning process

city's statements, new plans for construction should be evaluated based on their ability to create a sense of place. Successful place-making entails enriching the existing urban landscape and creating unique neighborhoods.¹⁰ Pursuing this premise on University Avenue, city planners intend for regional and historical architectural traditions to persist and new development to weave together different building forms, uses, and densities. A crucial element of this case study's analysis, then, is to distinguish what kinds of buildings have been respectively selected for preservation and redevelopment to analyze how planners have conceived of what existing built forms constitute the Avenue's "sense of place."

Other elements of TOD that planners have incorporated into their design and development principles for post-light rail University are less abstract and can be summarized more succinctly. The second Central Corridor planning principle, creating Transit-Supportive Land Uses, aligns with the more basic concepts of TOD and is reflected in the scale of the planning, which calls for development

within a quarter-mile of each station area. This measure supports pedestrian design, in which for much of the Avenue, transit users are consistently within at least a five minute walking distance of a light rail station.

Filling-in the Avenue is a near verbatim transcription of Peter Calthorpe's classic text on Transit Oriented Development, *The Next Great Metropolis*.¹¹ Throughout the book, Calthorpe discusses the merits of developing underutilized or vacant parcels with construction that is composed of mixed-use, walkable, and unobtrusive properties. The last stated principle, which promotes Green Environments, is similarly aligned with TOD's emphasis on making human-friendly places. TOD writers emphasize the importance of safe, comfortable, varied, and attractive public and semi-public open spaces.¹² This goal comes at the intersection of what St. Paul planners have called "improving the image" of University and crafting pedestrian-friendly streets.

VI. THE PRE-CONSTRUCTION CENTRAL CORRIDOR AND TRANSIT ORIENTED DEVELOPMENT

TOD theorists offer critical frameworks for assessing the performance and "transit-orientedness" of urban environments. Robert Cervero, an expert in the field, offers a cynical statistic that, of the nation's 3,300 fixed rail stations, only 100 qualify as legitimate sites of TOD.¹³ Most new developments, Cervero contends, qualify only as transit-adjacent development (TAD). TAD sites are those "physically near transit [that fail] to capitalize upon this proximity...[They] lack any functional connectivity to transit – whether in terms of land-use composition, means of station access, or site design."¹⁴ The distinctions between TAD and TOD are most apparent if seen as a continuous spectrum, which offers a useful means of evaluating urban form. Figure 1 offers some useful indicators for the two poles of the spectrum.¹⁵

As it presently exists, University Avenue falls on the left of the spectrum, near the end of TAD. It

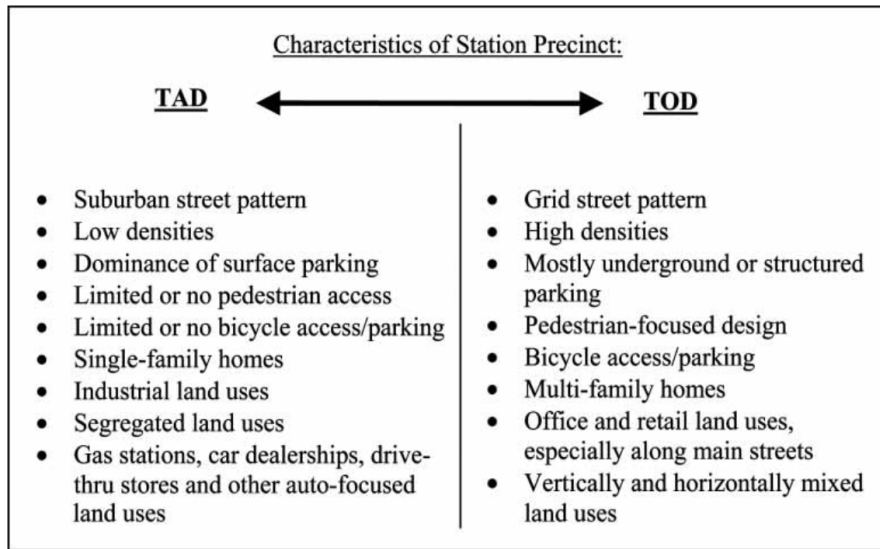


Figure 1. Reproduced from Renne (2009).

may have a grid street pattern and horizontally-mixed land uses, but it is dominated by surface parking, auto-focused land uses, minimal pedestrian orientation, relatively low densities for a major urban thoroughfare, and is speckled with industrial land uses. Placing the Avenue on this spectrum offers a useful baseline from which to understand the magnitude of post-light rail development. It also reveals the formidable challenge the Central Corridor's planners and developers face in realizing legitimate transit-oriented urban design.

This challenge is exacerbated by the documented history of light-rail-based development. Unlike streetcar and subway line development in past centuries, contemporary light-rail investment has not substantially shaped the spatial morphology of our cities without significant pressure from public policy.¹⁶ Central Corridor planners have acknowledged this trend and made serious efforts to control future changes in the land-use and built form of University Avenue. One area of policy that reflects the city's concerted effort to facilitate a particular

development scheme is in recent zoning revisions. During the drafting of the Central Corridor Development Strategy, the city realized that the requirements of existing zoning schemes would not accommodate the types of development that the city envisioned for the Avenue.¹⁷ To compensate for the current zoning code's auto-oriented structure, the city moved in early 2011 to craft new zoning codes tailored to the urban design schemes laid out in the Central Corridor Development Strategy and the Station Area Plans.

The implication for the future of University Avenue is that despite the city's statements that their development plans are not intended to be prescriptive, officials are actively employing available public policy tools to pursue their urban design priorities. New zoning requirements will permit, if not enable and privilege, new construction of taller, denser buildings, with mixed land-uses.¹⁸ They will also limit the permissible types of future construction, impeding potential developments of new, big-box-style commercial centers and auto-oriented facilities, among others. While as of

April 2011 these new zoning requirements have not yet been adopted, this policy directive implicates the city in an overt attempt to orchestrate a new wave of development whose ramifications for University Avenue are worth examining.

VII. METHODS

The greatest challenge to creating a catalog of the built form on University Avenue is in establishing a robust and defensible categorization scheme and methodology. It must be simultaneously descriptive and meaningful to the reader and useful and reliable to future researchers. The existence of contested perceptions of the Avenue's character steered this study away from making judgments about the appearance and nature of individual plots and buildings beyond what is most readily apparent and defensible. This section seeks to substantiate the choice of the study area, identify the sources of data and collection methods, and codify the descriptive variables used in the classification scheme.

To begin, this study examines the area directly fronting University Avenue on both sides of the street along its generally east-west path between Prior Street and the Minnesota State Capitol Building on Park Street in St. Paul. We chose this stretch of the Avenue because it contains the highest concentration of station areas, wherein each station area boundary contacts the next with a quarter-mile radius. This stretch of contiguous station areas also contains some of the largest and most numerous locations that have been designated for future redevelopment.

The catalog, as manifested in the accompanying maps, primarily documents the appearance of land plots and buildings that face the Avenue. By not extending laterally from the Avenue, focus is maintained on identifying those features that are most relevant to its image, and, conversely, those that are most likely to be evaluated for future development. The study area diverges from the Avenue onto cross streets and land areas beyond the frontages only to address areas where city plans extend behind the frontage buildings because they are at risk of changing.

Two outside sources of data were used in this study: tax parcel data from the Twin Cities Metropolitan Area and maps of areas of proposed development provided by the city. The parcel data—published by Metropolitan Council in collaboration with the seven counties of the Twin Cities metropolitan area—contains details about individual taxed land units along University Avenue. We used it as the data framework in which to input and compare the data provided by the city and the data collected in the field. A significant research challenge was that tax areas do not directly correspond to the boundaries of built features, so we made an initial effort to manually divide the parcels into meaningful subunits that represent individual structures (i.e. buildings and parking lots). By individualizing each built feature along the Avenue in the data set, the subsequently collected research data could be assigned to spatially appropriate locations and shapes.ⁱⁱ

ⁱⁱ In spite of high standards of data collection, perfect spatial fidelity of map features should not be expected. This is due to geometric imperfections in the original tax parcel data and limitations posed by user error. Statistics based

The additional sources of external data were the Station Area Plans published in conjunction with the Central Corridor Development Strategy. These documents include maps that identify specific buildings and land areas that city planners have anticipated as sites of future development. These areas are designated as either having ‘future development potential’ (FDP) or being ‘open space candidate sites’ (OSCS). We manually transcribed this information onto the base map of tax parcel data using GIS software.ⁱⁱⁱ

Field observations of the appearance and nature of structural features along the Avenue followed a

upon the acreage of individual parcels were contingent on these same inconsistencies, so must be taken to represent best estimates rather than absolute values.

ⁱⁱⁱ Note that there is a temporal lag between when the Station Area Plans were published—2008 for Fairview, Snelling, Lexington, Dale, and Rice, and 2010 for Hamline, Victoria, and Western—and when the field research was conducted, in the spring of 2011. Therefore, some components of the city plans might not be up to date with new construction and demolition.

classification scheme that codified the potential variables. The goal in designing this scheme was to create categories that consistently, accurately, and elegantly reflect the Avenue as perceived by observers, developers, and residents alike. Because we hope this chapter to be a valuable resource for future studies of the Avenue, the designations had to be readily understood and be general enough to be sufficiently inclusive yet detailed enough to be representative. What came of this effort is a series of sixteen nominal categories that include designations of architectural style, land-use (or lack thereof), and other considerations that reflect appearance, form, and place. They have been field-tested and revised multiple times to achieve the greatest fidelity to what is casually observable on the Avenue. A list of the categories along with individual discussions follows – photographs are included where examples are necessary:

Parking lot: Parking lots account for a substantial proportion of the land surface area along the Avenue, both affronting it and behind other buildings.

Vacant lot: There are many empty land parcels up and down the Avenue, as well as tucked behind frontage buildings. These appear as empty, concrete spaces, sometimes used as improvised parking. Others may be overgrown with weeds or else obscured from view by fences or trees.

Green space: These include municipal parks as well as substantially large landscaped green spaces on commercial properties.

Municipal building: Considering that the purpose of the categorization scheme is to interpret the Avenue’s character as it relates to potential future development, it is necessary to categorically separate publicly-owned, institutional structures from other commercial and residential buildings along the Avenue. Such structures include municipal buildings like public schools and hospitals. This designation overrides a description of a structure’s appearance because they are likely to receive special considerations from city planners’ when recommending future

development spaces that may supersede the quality of their image.

Historically designated: Like municipal buildings, placement in this category does not involve a consideration of built appearance because they represent a special set of considerations beyond their aesthetic qualities. These include only officially recognized designations of historical places.

Industrial: This category includes industrial spaces. These generally include warehouses and manufacturing facilities.

Automobile service or sales: These commercial structures are prevalent along the Avenue and have a distinct architectural style. They are characterized by large windows, contiguous parking lots, and garage doors into their car service areas.

Big-box commercial center: This designation includes large department stores, one-stop-shopping buildings, and strip malls.

Chain business: These include primarily fast-food restaurants and retail chain establishments that occupy buildings whose architecture is unique or typical of that chain. Some of these, especially fast-food restaurants, have architectural styles that would be recognizable no matter how the building facade was retrofitted. Others are distinguished solely by features that are vernacular to that particular, widespread chain—for example a prominent awning displaying a corporate logo. Buildings in this category are distinct from big-box commercial center structures because the scale and scope of their retail is smaller and they are not contiguous with larger strip mall developments.

Arts and Crafts and Pre-War brick styles: These, mostly brick-construction buildings, are typically one to three stories tall and were built prior to World War II. They are common along the entire length of the Avenue and can be coherently related by their designs and patina. Within this category, the most architecturally distinct styles are those influenced by the Arts and Crafts movement of the early 20th century.

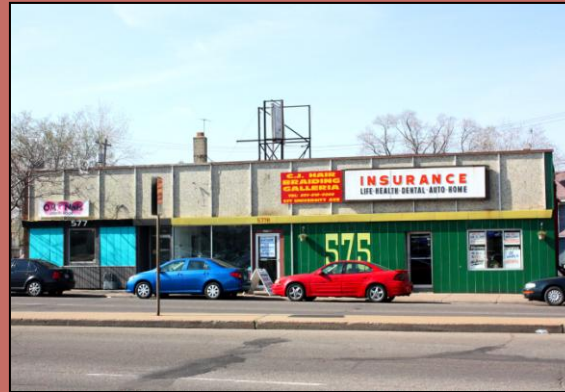


A typical brick building.

Buildings in this category that have multiple stories often contain a mix of residential and commercial spaces, with apartments and lofts on the upper stories.

Art Deco / Moderne / International: This category contains buildings that follow one of these three distinct but historically similar design movements. These appear on the Avenue both as structures that date to their relevant design periods, as well as modern revivalist reiterations.

St. Paul Eclectic Cube: This is a building style that is unique and typical of St. Paul residences and a term recognized by architects, historians, and scholars. The designs of these buildings borrow some of the tenets of the Prairie School of architecture and typically have wood-paneled siding, overhanging eaves, and hipped roofs. Along University Avenue, many of these typically two- and three-story buildings have been converted from residential uses to business or multi-use purposes. Most were constructed prior to the Second World War.



Two examples of Pre-War eclectic structures.



A St. Paul Eclectic Cube.

Pre-War eclectic: These are buildings constructed prior to World War Two that do not have distinct or cohesive architectural character. They contain multiple, significantly incongruent facade schemes that are either contemporaneous with the original construction or were added afterwards.

Post-War minimalist: These are structures that were built after World War Two whose appearance are plain or stark and not ornamental. They lack design features or details that make them distinct and they rarely reflect

anything about the nature of the land-use that they support. Several architectural indicators are common of these buildings: use of cheap or uniform construction materials, linearity of window frames and building edges, and drab exterior decoration schemes. Additionally, buildings in this category may include ones that were built before the War whose facade has been substantially obscured by new construction. There are many substantially different structures that fall in this category along the Avenue, yet it is not too inclusive to be insufficiently

descriptive. Carefully consider the appended photographs to get a sense of the aesthetic implications of this category.



Two examples of Post-War minimalist buildings.

Post-War ornate: Unlike the Post-War minimalist buildings, these contain design features and architectural adornments that distinguish them from one another and affect a sense of place. The architecture of buildings in this category may include design styles that iterate classic styles and often also reflect something about the types of land-use they support, beyond what is expressed in simple signage. Again, an examination of the attached pictures of exemplary structures is useful for a consideration of this category.

Contemporary brick box residential: This category describes large, multi-unit apartment and condominium complexes made of brick. It may also include buildings that have mixed commercial and residential uses. Distinguishing this residential style from the Post-War minimalist and ornate categories is worthwhile because of the prevalence of this combination of construction materials and land-use in new, large-scale construction projects on the Avenue.



Two examples of Post-War ornate buildings.



A building typical of the contemporary brick box residential category.

Once the categorization scheme was fully codified and revised, we collected the field data by recording observations taken on foot. The height of each building was also recorded as a secondary descriptive category.

VIII. OUR FINDINGS

The City of St. Paul's two major planning documents for the future of University Avenue are systematic depictions of the type of transit-oriented developments planners would like to see emerge on the auto-oriented

corridor. However, the plans do not identify the appearance and height of buildings and properties on the Avenue. The parcels appear as plain polygons, characterized only by their relationship to future development, such as: "Areas of Preservation," "Areas of Change," and "Sites with Future Development Potential." To fill this gap in the publicly-available plans, this study graphically overlays the built reality of the Avenue with the planners' vision and analyzes trends that emerge upon comparison of the 'existing' with the 'potential.' This section will refer to the spatial patterns evident in the station area maps at the beginning of the chapter as well as Table 2, which offers a statistical profile of areas of trends in planned development.

So, what major trends emerge upon comparing the physical appearance of University Avenue as it exists today with the sites city planners have identified as potential sites of development and/or green spaces? The first trend, readily perceptible in the patterns on our maps, is what we may call the Bell Curve development principle. If we imagine the stretch of the corridor as a line graph, with each

station as an equidistant point, then the city's plan is analogous to a series of bell curves with the peak of each curve—representing the highest concentration of land to be developed—generally occurring at the station area point and the trough of the line occurring at the margins of each station area. In other words, transit-oriented development tends to occur as a gradient, with lower-density development dispersing toward the edges within a 5-minute walk.

Scholars have identified this trend throughout mixed land-use and TOD projects across North America. Planners anticipate the greatest amount of activity surrounding stations and are aware that the physical appearance around stations will garner the most attention from riders as they consider whether this is a good place to get off or not; thus, they seek to concentrate development in the immediate vicinity of the stations.¹⁹

Consequently, when the location of an appearance type on the TAD/TOD spectrum cannot explain why planners have labeled it as a site of preservation or change, the Bell Curve development principle can serve as an

alternative explanation. For instance, planners have not branded an industrial/warehouse site at the far margin of the Fairview station area as a site to be changed, whereas the majority of other industrial/warehouse sites are branded as future development or open space candidate sites. The Bell Curve principle also helps to explain appearance type values that do not indicate that planners intend to generally preserve or develop the type. For instance, 44.7% of automobile service and sales sites are designated for future development. Thus, the appearance type proxy for at-risk-of-changing is not explanatory. However, considering the Bell Curve, we can see that those auto sites nearest station areas are designated for large-scale change, whereas those at the margins are slated for preservation.

The second major trend we found deals with the geographical concept of contiguity. When a parcel occupied by a built structure is surrounded by land to-be-developed, that isolated structure is generally planned for development regardless of its appearance type. For instance, only 5.7% of the total surface area of St.

Paul Eclectic Cubes is to be re-developed. There are only two instances where Eclectic Cubes have been designated for change and in both cases the structures stand alone among several vacant lots to be redeveloped. This guilt-by-association trend likely has to do with the planners’ principle of fit. When trying to achieve congruity of design so that there are smooth transitions in built form along University, planners have likely found it easier to designate an entire area for change rather than conceive of how to accommodate the isolated building in the area’s midst. Again, this trend helps to explain outliers in our data.

Where distance from station and contiguity fail to account for change, building and surface appearance type succeeds. The third major trend is that the appearance types most discordant with the principles of TOD are the most likely to be changed. Based off the results of our primary descriptive statistic – the percent of each appearance type to be changed – we found that 78.0% of all big-box stores, 72.9% of all chain businesses, 66.3% of all industrial/warehouse sites, 88.1% of all surface parking lots, and 96.4% of

Cataloged Appearance Type	% of Total Surface Area of Appearance Type to be Developed, by Acreage
Parking Lot	88.1%
Vacant Lot	96.4%
Green Space	26.3%
Municipal Building	6.2%
Historically Designated	0.0%
Industrial	66.3%
Automobile Service or Sales	44.7%
Big-box Commercial Center	78.0%
Chain Business	72.9%
Arts and Crafts and Pre-War Brick Styles	31.9%
Art Deco – Art Moderne – International	28.8%
St. Paul Eclectic Cube	5.7%
Pre-War Eclectic	27.8%
Post-War Minimalist	28.4%
Post-War Ornate	0.0%
Contemporary Brick Box Residential	0.0%

all vacant lots are designated for change. Taken in sum, the surface areas of these properties makes up 54.6% of the total surface area of our study area. This number alone signifies

the massive scale of redevelopment city planners intend for University Avenue, ideally ridding the corridor of its auto-oriented, semi-industrial, low-density, and gap-filled appearance.

The appearance type most at risk of change based on the city's plans – vacant/empty land at 96.4% – would actually total 100% if we did not include two parcels near the intersection of Snelling and University. However, upon further study, we found that these sites became vacant after the city drafted its planning documents. Thus, we should consider Filling-in the Avenue to be the most robust principle of the Central Corridor visionaries.

Surface parking lots are designated for redevelopment especially where they exist in large, contiguous masses, such as those associated with malls, big-box, and chain fast-food locations. Furthermore, of all the acreage to be changed, surface parking lots constitute approximately 60% of the total. Big-box stores are second at 16%, so parking lots constitute the vast majority of appearance type that planners hope to develop. Conversely, of the approximately 12% of parking lots

slotted for preservation, many are associated with small-scale, independent commercial sites. These typically take up only a small space on the Avenue's frontage or else are tucked behind their associated businesses.

Predictably, planners would like to redevelop the majority of big-box stores. Of these sites, the Plan suggests that 83% of the total acreage be developed into new built forms and 17% become open, green space. The notable exceptions to the planners' map are the CVS on the northwest corner of Snelling and University, the SuperTarget at Hamline near I-94, and the Aldi discount supermarket in the Lexington station area. While the planning documents do not explain why they exempt these businesses, a simple evaluation of the landscape informs us that, unlike the big-box sites slotted for redevelopment, the CVS and SuperTarget are not part of larger mall complexes, and so could be more easily accommodated with new development surrounding them. As for the Aldi, unlike any other big-box site, it has small set-back from the sidewalk on University that basically meets the

Avenue. Traditional TOD favors just such design because it allows for smoother transitions in development, as there is no surface parking lot between the sidewalk and building to dominate the streetscape vista.²⁰ It is possible that the Aldi store could serve as a model for acceptable building design and placement for other large-format retailers who want to locate on University, and was thus judged as preservable.

Planners would also like to redevelop land devoted to chains at a ratio similar to big-box stores. Within this trend, however, we found that of the 72.9% of those to be changed, approximately 83% are fast-food businesses with drive-through access. Chain businesses appear less implicated in future development plans when they are retail oriented and exist outside of strip malls, integrated with surrounding buildings with a small set-back from the Avenue.

Lastly, of the appearance types most discordant with traditional TOD, industrial/warehouse sites account for about 7% of the total acreage to be redeveloped, the third greatest type to be redeveloped behind surface parking

lots and big-box stores. The sites in this category to be preserved tend to be beyond the view of someone standing on the Avenue. All of the industrial sites within a half block of the Avenue, however, were designated for change.

The fourth major trend in our findings also derives from the appearance type along the Avenue. The inverse of the preceding trend, we found that building types consistent with traditional TOD principles are preserved, verifying our hypothesis that indeed, planners put theory into practice. For instance, no contemporary brick box residential building types are to be developed. These units embody the kind of medium- to high-density residential land uses that planners envision for the future and that are scarce on University today, meaning that those that do exist are highly valued by planners. Furthermore, they display an architectural style and facade quality that match those typically found in orthodox TOD developments elsewhere. Practically, however, brick box units would be difficult to re-develop. These are new private and public-private developments, nearly all

built between 2000 and 2010, which likely have not paid back their initial investment.

Another building type consistently slotted for preservation that corresponds with traditional TOD principles are St. Paul Eclectic Cube houses. Amongst all Eclectic Cubes on University today, only 5.7% are branded for re-development. Although these units do not support medium to high densities, they represent a unique regional architecture traditional to St. Paul and thus contribute to a “sense of place.” Recalling the TOD principle of place-making, planners likely chose to keep Eclectic Cubes amongst such mass-scale planned destruction to better enrich the existing forms of the Avenue that are without analog. Considering that many planned higher-density buildings are liable to be designed as brick boxes – a residential form found in other regions – preserving St. Paul Eclectic Cubes may help to offset the relatively placeless residential forms of tomorrow.

Post-war ornate buildings fall within the same “place-making” category as St. Paul Eclectic Cubes because they too are unique

architectural forms relative to other forms but also amongst each other. That is to say, these buildings do not look like other buildings classified as post-war ornate. Again, such a unique status arguably contributes to a sense of place and thus within the precepts of TOD. Of the roughly 5 acres of land proximal to University presently occupied by ornate buildings, none are slotted for redevelopment.

The fifth trend also emerges from appearance types slotted for preservation. This trend, however, is not embedded in TOD planning literature and thus deserves a unique position. Of the 35.6 acres presently devoted to hosting municipal building sites, only 6.2% is to become new development or an open space. Municipal buildings appear to be given a free pass due to the disruption and dislocation of public services their re-development would cause. Indeed, the entire to-be-developed percentage derives from a single municipal building – a police station located near the highway on Hamline Avenue. Without context, the parcel’s data do not suggest this building would be slotted for change. It was built in 2007,

has a building value of \$2.7 million, and appears as an architecturally coherent and “nice” building. However, much of the property is devoted to parking and, more importantly, falls within a vast stretch of back-lot parking lots upon which planners have designed a full-scale, high-density, showcase model of TOD. Thus, the site appears to be a casualty of contiguity.

We also found that among Arts and Crafts and Pre-War brick styles, planners intend to change 31.6% of the total surface area today. Unlike the aforementioned values, this percentage does not fall within a meaningful quartile to inform us that planners consistently consider it a valuable or expendable appearance type. Because brick parcels account for roughly 5% of the total surface area of the study area – a significant number – we sought to go beyond the quantitative data to identify any potential trends. Upon spatial analysis, we found that building upkeep is an important qualitative variable in differentiating brick buildings to be preserved and those to be developed. Most of the buildings to be developed are in a state of disrepair and/or near

stations, whereas those spared are well-maintained and/or at the margins of the station area. Furthermore, with an average year built of 1915, these brick buildings are amongst the most historic on University and affect a sense of place; thus, it is likely that planners are willing to preserve these buildings in pursuit of their place-making goal.

Similar to brick styles, we also found that there is a small to moderate level of interest in redeveloping Moderne, Art Deco, and International Style appearance types. Planners have marked 28.8% of their total surface area for change. The population of these buildings on the Avenue is small, however, so this value only reflects proposed modification of three sites. Of those three, two are immediately contiguous with the actual station at the Snelling stop. The third site, which cannot be explained by the Bell Curve principle because it is at the very farthest margin of the station area, is in a state of disrepair. The large Art Deco building, within the Hamline station area boundary, is presently being used as an internal-landfill structure for used books and CDs. So, excepting these three sites, the other buildings in this

category are all slotted for preservation, likely due to their distinguishable architectural style and historic nature.

The eighth trend considers the greening of the study area, which planners consider an important proxy for “improving the image of University Avenue.” Today, a mere 6.2 acres of green, open space exist between Prior Street and the State Capitol Building, or 1.9% of the total study area. Planners propose to more than quadruple that amount after opening the Central Corridor. In the city’s plans, its drafters have devoted 27.9 acres, or 8.4% of the total surface area, to new, open, green space. It is important to note that of the 26.3% of existing green space to be developed, all of it is proposed to remain open space, our data are simply skewed because we have counted that space as both green space to be preserved and to be developed based on the overlay of the city’s plans.

The final trend follows in line with the city’s desire to increase density and to give the Avenue a more traditional “urban” feel by raising the average height of buildings.²¹ We expected the future development sites

to target buildings with one or two stories and for planners to generally preserve buildings that are more than two stories in height. While we did not statistically test for this trend with a more rigorous methodology, we surmised that if this was the case, then the average height of all buildings to be preserved would be greater than that of all buildings to be developed. Indeed, we found that buildings to be developed have an average of 1.73 stories, whereas buildings to be preserved average 2.06 stories. This statistic suggests that planners considered taller buildings to be qualitatively better than shorter buildings regardless of appearance type. Again, however, this finding is only significant as far as it can form the hypothesis of a future, more rigorous statistical test.

Whereas it is useful to identify trends positively, it is also important to do so negatively. That is, to identify trends that do not exist that one would expect to find considering design principles of TOD and the city plans. There is one major non-trend worth mentioning in this section. In traditional TOD design, corner

buildings are to “hold the corner” with facades on both sides of the street and to rise above nearby buildings.²² This is because such buildings have a unique ability to become landmarks because they are more visible to passers-by than mid-block locations.²³ Yet judging our data and corresponding maps, there is no correlation between building orientation, height, or appearance type in the planners’ targeting of corner buildings for preservation or development at station intersections. While there are plans for major re-development at Snelling, Hamline, and Lexington that primarily attack surface parking lots, each of these Station Area Plans still maintain single and two-story corner buildings at the same intersections. In fact, the only station areas that do not maintain any single or two-story corner buildings at their major intersection are Fairview and Rice. So, in the case of corner buildings, the city plans do not consistently apply theory to practice.

While it is necessary and useful to identify the major trends and non-trends individually, it is just as necessary and useful to consider the trends and non-trends together so that

we may assess the broader implications of the Central Corridor development plan relative to the pre-construction built form of the Avenue. The following section addresses such overarching themes.

IX. DISCUSSION

The re-development of University Avenue and its immediate surroundings, as recommended by a collective of St. Paul city planners, business owners, and community members, represents one of the most ambitious cases of proposed Transit Oriented Development in North America. Its visionaries have suggested that an overwhelming 61.7% of the existing built form in our study area be transformed into an environment with an anti-automobile prerogative. For instance, readers consulting the study area map will immediately notice that nearly the entirety of the south end of University from Snelling to Lexington Avenue has been slated for redevelopment. That swath is presently devoted to the physical appearance types most

discordant with TOD values – vast stretches of surface parking lots that serve big-box developments and strip malls, and upon which islands of chain retailers and restaurants stand; vacant land underutilized for its prime geographical location; industrial sites considered blights on the landscape; and automobile service stations and dealerships that cater to non-transit users. If planners realize their vision with the help of private developers, then medium- and high-density mixed-use structures, relieved by green, open space between them, will succeed the present built environment between these major thoroughfares.

The massive scale of the proposed changes will likely have significant implications for the TOD planning movement and its perceived efficacy. Transportation and urban planners across the world have their eyes on the Central Corridor project. This is largely because the corridor itself is unique and presents a major planning challenge. The light rail line will connect two major central business districts in close range of each other, the twin cities of Minneapolis and St. Paul. That is a major reason why there

is government funding in the first place.²⁴ However, to achieve their development goals and return the \$1 billion public investment, planners will have to overcome an environment characterized by an eclectic mix of suburban-like corporate space and incoherent urban forms that underutilize space. The corridor's planners mean to make this environment coherent. In the process, they are also trying to replace active machines with active humans. They are trying to turn inside-out the one-stop shop by creating commercially comprehensive market squares beneath the open sky. They are also trying to add more green streetscaping. And, perhaps most abstractly, they are trying to turn University into a memorable place. As we have shown, these goals mirror those of traditional TOD. However, according to one of the movement's most active proponents, Robert Cervero, TOD is in a bad place. Only about 3% of all TOD projects have developed into legitimate TOD sites.²⁵ The unique placement of University Avenue, the large area with potential for re-development, and the great interest in the project offer

planners an opportunity to persuasively exhibit the utility of TOD. If the plans are never fully effectuated, its shortcoming may not break the planning movement, but it will certainly put its practicality into further doubt.

Planners also face the challenge of place-making on University while adhering to the goal of transit-supportive land uses. This dilemma arises due to the concept of place-making, which is integral to TOD projects that aim to be sensitive to their local communities and thus more politically legitimate. Place-making calls for enriching the existing character of the landscape by preserving distinct regional and architectural traditions. In the case of University Avenue, such traditions include the St. Paul Eclectic Cube and post-war ornate structures like the Spruce Tree Centre on the southwest corner of Snelling and University. It also includes auto-oriented forms like the many automobile dealerships on the east end of our study area and Moderne-styled drive-ins like Porky's in the Fairview station area. Thus, there is significant tension between

place-making as an integral aspect of TOD with the auto-oriented history of University. The planning dilemma, then, is to choose between retaining built forms of the Avenue's past so that it may emerge as a memorable place, even though it betrays the foundation of TOD as an anti-automobile planning tool, and, alternatively, stripping University of many its auto-oriented relics to create a more pedestrian-friendly environment, but simultaneously destroying its historical essence and potential to be a "place."

The corridor's planners appear to have made no consistent choice upon which side of this dilemma to fall. Roughly 45% of all acreage devoted to automobile service or sales is to be developed and 55% preserved. These values are not skewed to one side or the other to make a definitive call. Planners seem to have deferred the judgment of historicity and instead labeled auto-sites for development or preservation based on their proximity to station areas. Thus, when it comes to analyzing the planners' selection of appearance types to be preserved as a proxy for what they believe constitute University's "placeness," they preserve

those distinct regional and historical stylistic traditions that host non-auto-oriented uses, such as the St. Paul Eclectic Cube, more consistently than those with auto-oriented uses.

Lastly, when considering the appearance types found along University Avenue and their relationship to city development plans as a way to predict what along the Avenue is most likely to change, it is essential to remember that changes in the city's long-term plans and zoning code in anticipation of new transit service are not the only factors that drive post-transit investment. Trends in the broader real estate market and economy also matter. Planning documents, no matter how benignly conceived, are not determinations. Still, however, light rail is a significant commitment from the public sector to the private – in the case of the Central Corridor, a \$1 billion commitment – so it is also important that one does not dismiss the significance of the city plans simply because one believes in the ultimate authority of the free market.

X. CONCLUSION

The primary purpose of this chapter was to provide the public with a robust catalog and description of the physical appearance of University Avenue as it exists before the installation of Central Corridor LRT. This is a necessary documentation to create a baseline from which measurements of future change along the Avenue can be made. Just as we compared our baseline data with city plans, future researchers should compare our baseline data with what has since changed and evaluate how closely that future change aligns with the city's initial plan.

One of the most astute observations that can be made about the urban form of University Avenue is that its appearance is expressive of its developmental history. In its structures and undeveloped tracts, it reflects waves of investment and disinvestment, architectural periods, urban design trends, and transportation usage. Just as remnants of the streetcar era reflect compact communities constructed at a time when the Avenue was more pedestrian-oriented, less dense Post-

War structures indicate a historical shift away from transit use. In these historical manifestations, we have to reflect that the installation of Central Corridor LRT may represent the cusp of a new, historically significant era of development. If future development is systematically directed by the design principles established by the city prior to the line's construction, then it is likely that the emergent built form will both smooth out the Avenue's marginal uses and construct a revised history by selective preservation. If however, LRT fails as a significant regional planning tool, we can expect that the incomplete realization of developer's schemes will add another palpable layer to the Avenue's already eclectic mix of built forms.

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