



# 30<sup>th</sup> Street Corridor Economic Development Master Plan

Milwaukee, Wisconsin

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# Introduction



The City of Milwaukee is in the midst of an ambitious effort to transform the 30th Street Corridor (“the corridor”) into a major modern employment center and economic hub for the Near North area, the City and the region. This effort has included multiple preliminary studies and planning efforts, as well as the purchase of the 84-acre former Tower Automotive Site. The Site will be redeveloped as a modern industrial park known as Century City, and will serve as a centerpiece for revitalization in the corridor. The objective of the 30th Street Corridor Master Plan (“the Plan”) is to provide a realistic, market feasible and implementable vision to achieve this transformation and revitalization of the corridor.

The City engaged a multidisciplinary team headed by S. B. Friedman & Company (“SB Friedman”) that included AECOM, Cross Management Services and Norris & Associates (“Consultant Team”) to complete this Plan. The Plan involved the following components and tasks:

- A market study to identify target economic sectors that will be successful within the corridor and generate jobs for residents of the corridor and the City. This was complemented by a housing needs analysis and an analysis of commercial viability at key nodes along the corridor.
- Review of sites susceptible to change, including vacant and underutilized properties to identify opportunity sites within the corridor with the highest potential for redevelopment.
- Determination of possible infrastructure needs and upgrades including stormwater, rail, roads and sidewalks that could enhance the corridor’s redevelopment potential and improve quality of life for residents.
- Interviews with key informants including corridor business owners, brokers, and development commissions regarding business needs, strengths and weaknesses of the corridor, and development trends within the corridor.
- Facilitation of workshops with key stakeholders to share findings, obtain feedback and input regarding analysis findings, and collaboratively develop a preferred redevelopment vision for key sites within the corridor.
- Development of a preferred redevelopment vision based on a collaborative process with stakeholders, analysis of site suitability, and market demand.
- Preparation of implementation strategies and action steps to achieve the desired transformation of the corridor into a modern business center.

As defined in the following “Study Area and Context” section, the 30th Street Corridor encompasses an 880 acre area within the City of Milwaukee. As such, it includes a range of distinct neighborhoods that entail different issues and opportunities. This plan takes a targeted approach, focusing at a high level of detail on specific areas with the highest potential to catalyze development and stimulate economic development within the corridor in the near term. For these areas, the plan offers preferred concept plans that outline a redevelopment vision that has strong local stakeholder support. It also proposes policies and other high-level strategies to preserve existing businesses in the rest of the corridor and address other areas of the corridor susceptible to change over the longer term.

In addition to being an economic development master plan, which guides the Redevelopment Authority of the City of Milwaukee’s economic development programs and actions, the Plan’s recommendations also update the City’s comprehensive area plan for the 30th Street Corridor study area. The 30th Street Corridor study area constitutes a district within the City’s comprehensive area plan with detailed site-specific recommendations. For the most part, the Plan builds on and refines the City’s comprehensive area plan. However, where new data analysis and community input led to a refinement of the recommendations presented in the comprehensive area plan, this Plan takes precedence.

# Study Area and Context

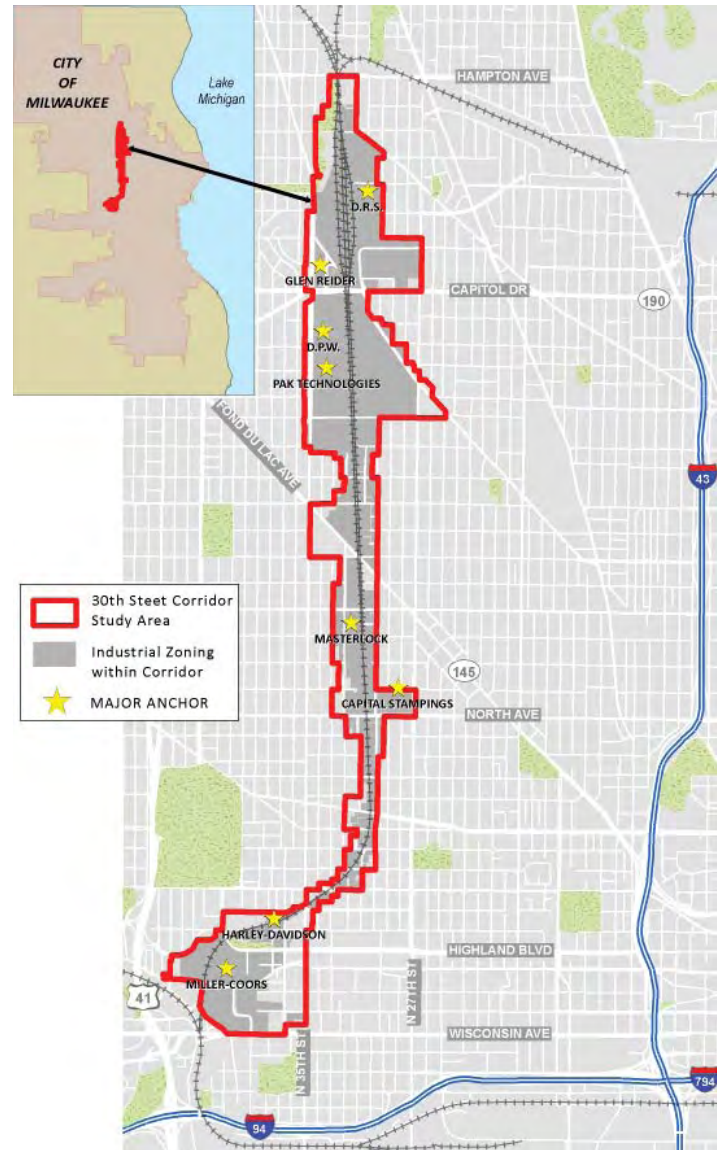
The 30th Street Corridor is home to a mix of business sizes and types that draw employees from all over Milwaukee and the southeastern Wisconsin region. It is located primarily within the City's Near North and Fond du Lac and North planning areas, and crosses a number of neighborhoods, including Lincoln Creek, Sherman Park, Metcalf Park, Walnut Hill, Miller Valley and Washington Park. The core of the corridor is generally bounded by Hampton Avenue on the north, 27th Street on the east, Wisconsin Avenue on the south and 35th Street on the west. There are approximately 880 acres of land within the study area, of which 518 acres is zoned industrial. The industrial zone includes several major employers, including MillerCoors; Harley-Davidson Motor Company; DRS Power and Control Technologies, Inc.; and Master Lock. As in other parts of the city, active uses in heavy industrial (IH) zoned land have become less common over the last 15 years.

The Canadian Pacific railroad runs north-south through the middle of the corridor and most of the industrial businesses are located within close proximity of the rail line. Major streets that run east-west through the corridor are Hampton Avenue, Capitol Drive (State Highway 190), North Avenue and Highland Boulevard. Major north-south streets are Fond du Lac Avenue (State Highway 145), 27th and 35th Streets. The corridor is also approximately two to three miles west of eight exits on Interstate 43; the southern portion of the corridor is within close proximity to Interstate 94.

The 30th Street Corridor has been the focus of several planning initiatives over the past decade, many focused on the former Tower Automotive site now known as Century City. These include the following:

- Land Use Concepts for the Tower Automotive Site (2003)
- Redevelopment Plan for the W. Capitol Dr. and N. 35th St. "Century City" Project Area (2005)
- Action Plan for the Revitalization of the 30th Street Industrial Corridor (2008)
- 30th St. Industrial Corridor Economic Asset and Opportunity Analysis (2008)
- TID Economic Feasibility Study: Proposed N. 35th St. and W. Capitol Dr. Tax Increment District (2009)
- Project Plan for N. 35th St. and W. Capitol Dr. TID (2009)

## Study Area Context



Several catalytic development projects are now underway or in the planning stage within the corridor, including the Century City Business Park on the former Tower Automotive site, the Bishop's Creek mixed use redevelopment project at the northern border of the corridor and the residential redevelopment of the former Esser Paint Factory at the southern end.



# Stakeholder Input and Preparation of Preferred Concept

Stakeholder input played a critical guiding role in the creation of this Plan. Input was sought through a Plan Advisory Group (or “PAG”), a series of three public workshops and a number of stakeholder interviews. The PAG consisted of stakeholders who attended public workshops and otherwise offered input during the planning process. A list of PAG members is contained in Appendix A. A series of three workshops was held to gather recommendations and responses to plan proposals. The recommendations gathered through these forums informed the findings and recommendations presented in the Plan. What follows is a summary of the public participation process and recommendations derived from it.

The workshops and main accomplishments of each were as follows:

## **Existing Conditions Workshop**

- Presentation of Existing Conditions Analysis (physical survey and market study)
- Visual Preference Survey
- Group Discussion of Existing Conditions, Visioning and Recommendations

## **Preliminary Concepts Review Workshop**

- Recap of Industrial Sector Analysis
- Presentation of Concept Plans for Key Catalytic Sites
- Group Discussion and Refinement of Concept Plans

## **Final Plan Review Workshop**

- Presentation of Preferred Concept Plans
- Public Comments Incorporated into Final Plan

Interviews were conducted with key stakeholders and other parties with particular knowledge of the corridor or industry trends, including business owners and brokers of industrial property. Their feedback generally fell into one of two categories: site-specific or industry-specific. A summary of interviewees is contained in Appendix A.

# Plan Organization

This plan is divided into the following chapters:

## **Chapter 1: Core Plan Recommendations**

Recommendations are based on the study's key findings and stakeholder input. Recommendations for the entire corridor are presented first, then the Chapter drills down to specific subareas and catalytic sites, presenting recommendations for each one. Transportation and stormwater related concerns are also presented in this Chapter.

## **Chapter 2: Physical Conditions Analysis**

An analysis of land use and infrastructure conditions was conducted in order to inform the Plan's recommendations. It begins by orienting the reader to the corridor and identifying sites susceptible to land use change and/or redevelopment in the near term. It then highlights land use conflicts, or instances where incompatible land uses are located in close proximity to one another. The transportation section addresses issues such as traffic separation, street width, and rail ownership considerations. The chapter concludes with a consideration of stormwater management concerns in the corridor.

## **Chapter 3: Market Analysis**

The driving force behind the Core Plan Recommendations is the industrial market analysis contained in this chapter, which seeks to identify target industries for Century City. The target criteria seek to identify industries that have the greatest regional competitive advantage, real estate demand, growth potential, and matching workforce. Also included in this chapter are summaries of retail and residential market conditions to help inform retail and residential concepts for the catalytic sites presented in Chapter 1.

## **Chapter 4: Implementation**

Implementing the recommendations contained in the other sections of the Plan involves a series of policies and programs. This section outlines important considerations for the development and marketing of the Century City Business Park; land use regulations, stormwater and transportation improvements to enhance the corridor.

## **Appendices**

Located at the end of this report are lists of Plan Advisory Group members and stakeholder interviews; a full methodology for the industrial market analysis discussed in Chapter 3; and detailed existing conditions maps.







# I. Core Plan Recommendations



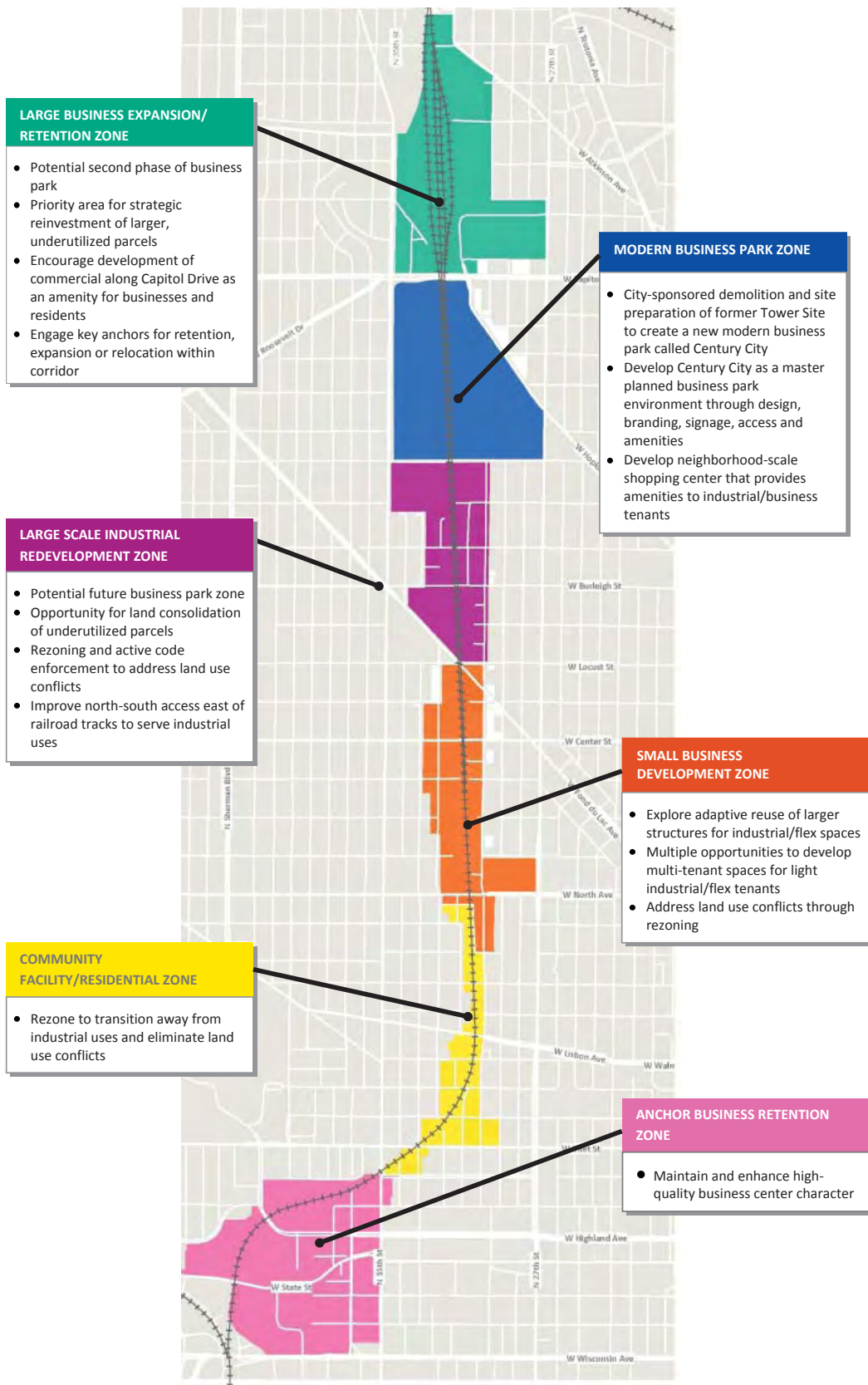
## Strategic Subzones in the 30th Street Corridor

*This section outlines the key recommendations that arose from the physical site analysis and market analysis performed by the Consultant Team, as well as from public input and prior studies. It begins by dividing the corridor into subzones based on the character of each area, with strategies proposed for each one. It then drills down to specific catalytic sites within each subzone that have the greatest redevelopment potential to spur wider revitalization. Finally, it offers preferred development concepts for each site and addresses stormwater and other infrastructure considerations that should be accounted for within the context of redevelopment.*

The corridor is large and differs markedly from one end to the other. A prior economic development study by SB Friedman, the “City of Milwaukee 30th Street Corridor Land Use Study,” was conducted to identify strategic areas within the corridor for reinvestment, rezoning, and industrial preservation. This study divided the 30th Street Corridor into five subzones based on the typical land use characteristics within each contiguous area. This Plan stretches farther south to encompass a larger area than the prior study did, so a sixth subzone has been added to reflect the expanded geography. The subzones are, in order from north to south:

- **Large Business Expansion/Retention Zone:** retention of key anchors and potential second phase of modern business park
- **Modern Business Park Zone:** redevelopment of the former Tower site as the Century City Business Park
- **Large Scale Industrial Redevelopment Zone:** rezoning and active code enforcement to address land use conflicts; potential future business park zone
- **Small Business Development Zone:** explore adaptive reuse of larger structures for industrial, flex, and multi-tenant users
- **Community Facility/Residential Zone:** rezone to transition away from industrial uses and eliminate land use conflicts
- **Anchor Business Retention Zone:** retention of key anchors

# Overall Strategic Subzones





The geographic boundaries, character and development potential of each subzone is described below. Recommendations for specific sites within the subzones are described in the next section of this Chapter.

### Large Business Expansion/Retention Zone

The Large Business Expansion/Retention Zone is bounded on the north by the Bishop's Creek development, on the south by Capitol Drive, and 35th Street on the west. Its eastern boundary is generally defined by 30th Street, but it stretches farther east to include both Eaton Corporation and Aldrich Chemical. The area benefits from the presence of a number of relatively large manufacturing employers, including DRS Technologies, Inc., Glenn Rieder, and Vapor Blast, as well as the Milwaukee Technology Incubator Center, which helps develop "green" technology and minority-owned high technology companies in the corridor. At the same time, some employers have left or are in the process of leaving, including Citation Foundry and Eaton.

Because of the significance of the larger anchor businesses, it is important that the industrial redevelopment strategy in this zone focus on retaining these existing businesses and ensuring that vacant or underutilized parcels are developed into high quality uses. The City should take steps to prevent existing underutilized properties in this zone from deteriorating and to transform them into higher value, job generating industrial uses. This would include consolidating site ownership, preventing non-compatible land uses from further encroachment in the zone, and seeking to add amenities such as retail and green space that improve the climate for business. This transformation will be critical to creating a high quality environment that is attractive to new businesses and to retain existing corridor anchors. Furthermore, due to its close proximity to Century City, the overall character of this zone will impact the general image and appeal of the planned business park. Based on these considerations, it is recommended that the City use appropriate policy tools, including redevelopment plans and code enforcement, to maintain and enhance the area. More specific policy actions are contained in the implementation section.

### Modern Business Park Zone

The Modern Business Park Zone is defined by Capitol Drive to the north, Townsend Street on the south, and 35th Street to the west, while its eastern boundary runs from 31st Street to Hopkins to 35th Street. This zone includes the Century City Business Park: the most significant near term redevelopment planned for the corridor and the core component of the economic redevelopment strategy for the corridor. It is anticipated that Century City will attract new businesses and jobs to the corridor, demonstrate public and private reinvestment in the area, and have a catalytic effect on surrounding properties such as those in the Large Business Expansion/Retention Zone.

For Century City to succeed, it should have all the physical and market characteristics of a modern business park, as discussed in the Market Analysis Chapter. For example, access to the site should be improved, while a buffer zone should be created between the business park and surrounding residential neighborhood. These concepts are incorporated and illustrated later in this Chapter within the "Catalytic Sites" section. Century City also needs an appropriate institutional framework to market the site, provide support to businesses and take care of ongoing maintenance, as discussed in the Implementation Chapter.

### Large Scale Industrial Redevelopment Zone

The Large Scale Industrial Redevelopment Zone is bounded on the north by Townsend Street, on the south by Locust Street, and by 30th Street on the east. Its western boundary runs on 35th Street between Townsend and Concordia, then on 33rd Street until Burleigh, where it doglegs around 34th Street to Fond du Lac. This zone has a high concentration of sites that are used for recycling or are underutilized or vacant. Land use conflicts are also a major concern, with residences directly abutting industrially zoned land. In addition, preservation of viable industrial land for industrial use is an important economic development goal given the loss of industrially zoned land in recent years.

These conditions present the opportunity for land

consolidation to create larger parcels for redevelopment, and given close proximity to Century City to the north, the area could also serve as a potential expansion zone for Century City over the longer term. The recommendations for this zone center on improving its overall appearance and functionality through the enforcement of appearance, building and maintenance codes, and minimizing land use conflicts through buffering, strategic rezoning. Over the longer term, the City should work to encourage opportunistic or private assembly of viable development sites and the gradual replacement or upgrade of street infrastructure to serve modern industrial sites. Where smaller vacant or underutilized parcels abut active businesses, the City should prioritize these parcels for complementary uses such as parking lots, loading docks, yard space, and truck access.

### **Small Business Development Zone**

The Small Business Development Zone is bounded on the north by Locust Street, by Lloyd Avenue on the south, on the east by 32nd Street and 33rd Street, and on the west by 30th Street and Capitol Stampings. While this zone includes some large employers, such as Capitol Stampings and Master Lock, it is relatively closely hemmed in by residential uses on either side, and parcel dimensions are inappropriate for modern larger-scale business uses. Given the proximity of residential uses and lack of sites for large operations, this zone seems most suitable for start-ups and other small businesses that can benefit from the proximity to larger operations to the north as well as low-cost real estate in existing buildings that may be suitable to small business use. Where appropriate, adaptive reuse of existing buildings could provide relatively inexpensive space for small enterprises.

In addition, the portion of the zone on the south side of North Avenue could be redeveloped as commercial to support and continue the revitalization of the avenue to the east and west of the zone. It is currently occupied by several vacant and underutilized lots. Transitioning the area to more active uses would bolster surrounding employers and increase the area's attractiveness to small businesses.

### **Community Facility/Residential Zone**

The Community Facility/Residential Zone begins just south of North Avenue and extends south until McKinley Boulevard. The western boundary of the site is generally on the west side of the railroad, while the eastern boundary is generally defined by 30th Street. Parcel dimensions are for the most part unsuitable for industrial uses, and the adjacency of residential uses creates numerous land-use conflicts.

This area should be largely rezoned for residential use, while allowing for commercial uses and community facilities where appropriate. One example of the adaptive reuse of a former industrial building for residential is the planned redevelopment on 31st Street south of North Avenue.

The City currently owns significant amounts of land within both the industrial and residential areas of this zone and therefore will play a direct role in the area's redevelopment. The City is planning to redevelop the former Esser Paint site at Galena and 32nd Street as housing. A community garden has also recently been developed just south of this site.

### **Anchor Business Retention Zone**

This area south of West McKinley Boulevard and north of West Wisconsin Avenue is defined primarily by large facilities associated with MillerCoors, where 800 employees work, and Harley-Davidson Inc., which has approximately 900 employees. A peninsula of single-family housing extends westward into the area from the neighboring residential area between West Highland Boulevard and West Kilbourn Avenue. Given the economic and symbolic significance of these two employers to the City of Milwaukee and lack of opportunity for additional industrial development, policy in the Anchor Business Retention Zone should be geared towards maintaining and enhancing the area's character as a high-quality corporate business center.

## Catalytic Sites

Some of the strategic subzones identified above contain specific properties or clusters of properties that have the required critical mass and/or are strategically sited such that, if redeveloped, they could potentially trigger wider revitalization of the surrounding area. These sites also frequently pose significant challenges that impede private redevelopment, including environmental contamination, significant demolition costs, infrastructure deficiencies, and the lower densities that are typically achievable with industrial redevelopment. In the face of these challenges, public leadership is often needed to spur high-quality redevelopment at these locations. In this study, such properties are designated as catalytic sites. Their redevelopment may result in the alleviation of blighted conditions, attraction of new businesses, and/or creation of new jobs. In the near term, there are several locations within the 30th Street Corridor that have the scale and strategic location required of catalytic sites. This subsection describes each site and its catalytic potential, and outlines preferred concept plans for each one.

Five catalytic sites were identified in the planning process. Century City has the greatest priority for its opportunity for comprehensive redevelopment as a business park. The Phase II Century City area, north of Capitol Drive, is envisioned as a future priority. The Capitol Drive Corridor includes proposed commercial properties east of the railroad tracks, adjacent to Century City, as well as a proposed “flex” site to accommodate either industrial or retail development at the southeast corner of 35th St. and Capitol Drive. These sites are discussed below as the Century City Redevelopment Area.

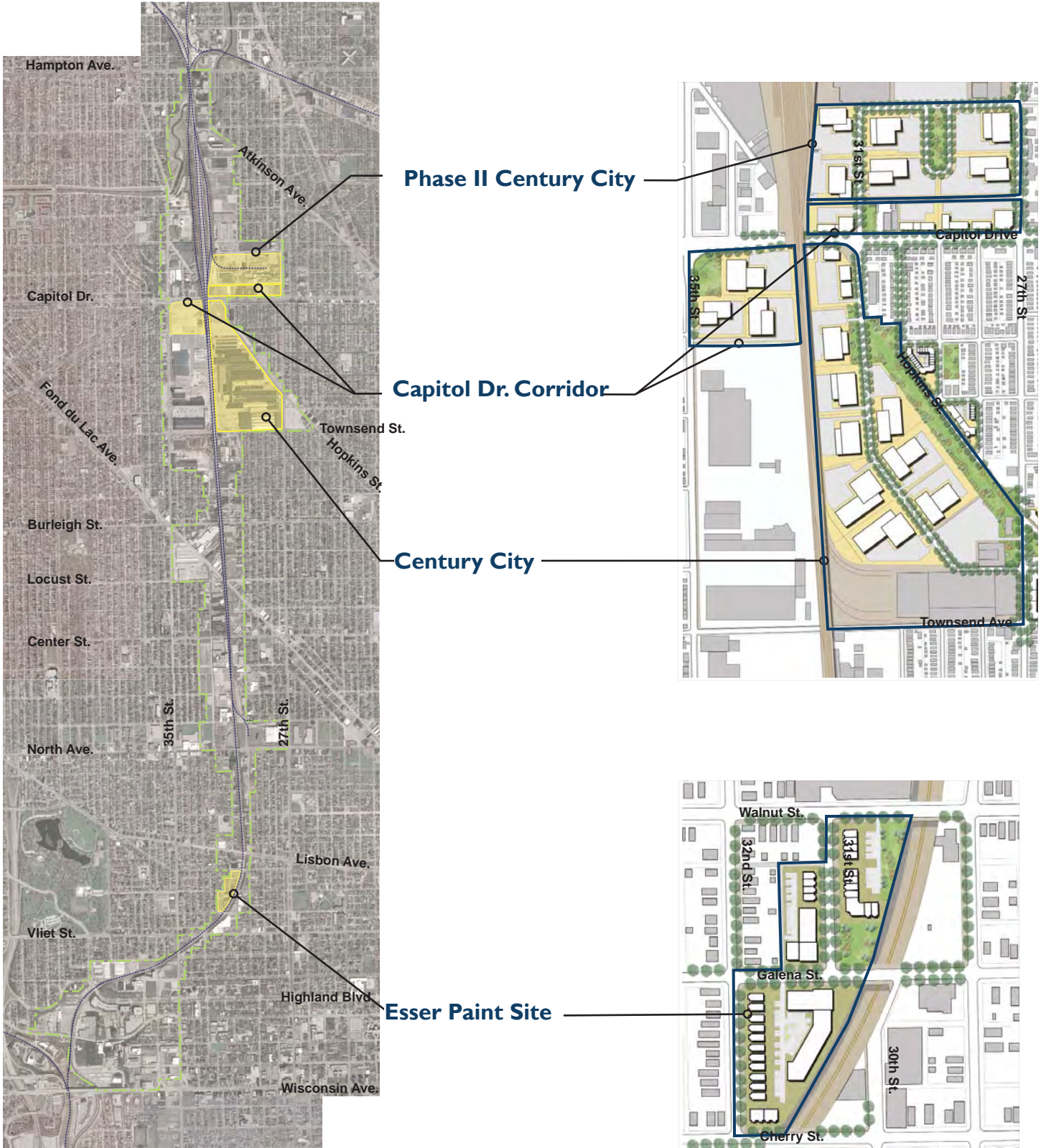
Residential development is incorporated into several opportunity sites. Infill residential redevelopment is proposed for the neighborhood east of Century City. The Esser Paint site is a redevelopment opportunity for neighborhood residential in the Walnut Hill neighborhood.



Existing structures on the Century City site: the A.O. Smith administration building (Building 1A, right), Building 65 (center), and the Talgo site (left, in the background).



# Catalytic Sites: Key Map





View looking north to Century City, from Townsend Ave



## Century City Redevelopment Principles

The goal of the concept plan is to provide a framework for development of a high-quality, modern business park environment, sensitive to the fact that land in the City is expensive to redevelop and should be maximized.

The proposed plan for Century City seeks to balance the needs of future businesses locating on-site as well as of existing neighborhood residents. This redevelopment effort is an excellent opportunity to enhance the adjacent neighborhood. The proposed plan gives attention to on-site amenities, such as green space that provides an attractive site feature while also incorporating usable open space and stormwater management features. Buffering between the business park and adjacent neighborhood is also important to avoid any land use conflicts, as are common in other areas of the corridor.

Based on preliminary findings from the market study, transportation analysis, and stormwater study, as well as considering input from the City and stakeholder groups, the following principles were developed to guide the proposed Century City concept plan:

- Reserve the parcel at the southwest corner of Capitol Drive and 31st Street for retail/commercial use
- Include residential development on east side of Hopkins between 26th and 27th Streets
- Facilitate site security, with limited points of entry
- Accommodate potential future passenger rail station at or near Capitol Drive
- Connect stormwater Best Management Practices (BMP) systems to the extent possible, to reduce the number of storm sewer connections
- Make concepts compatible with footprints of any buildings that might be preserved, such as Building 1A
- Preserve rail access for most sites adjacent to rail right-of-way
- Create a flexible development plan to accommodate a range of industrial sectors; appropriate net parcel sizes are five to seven acres, with a target floor-area ratio (FAR) of 0.25 to 0.30.



# Century City Redevelopment Area: Potential Buildout



- Key**
- Proposed Development**
- (a) Retail/Commercial
  - (b) Business/Industrial Park
  - (c) Industrial/Retail
  - (d) Open Space
  - (e) Multi-Family Residential
- Existing Uses**
- (f) Active Open Space
  - (g) Day Care
  - (h) A.O. Smith Admin Bldg
  - (i) Building 65
  - (j) Talgo

## Proposed Land Use

Several land uses are proposed within the Century City Redevelopment Area, as follows.

### Business/Industrial

Century City itself is being planned as a business park focused on industrial uses. The Phase II Century City site is envisioned as a potential expansion of Century City, and therefore incorporates additional business and industrial uses. The redevelopment site at the southeast corner of 35th St. and Capitol Dr. is also expected to include industrial, although there may be potential for retail at this site as well.

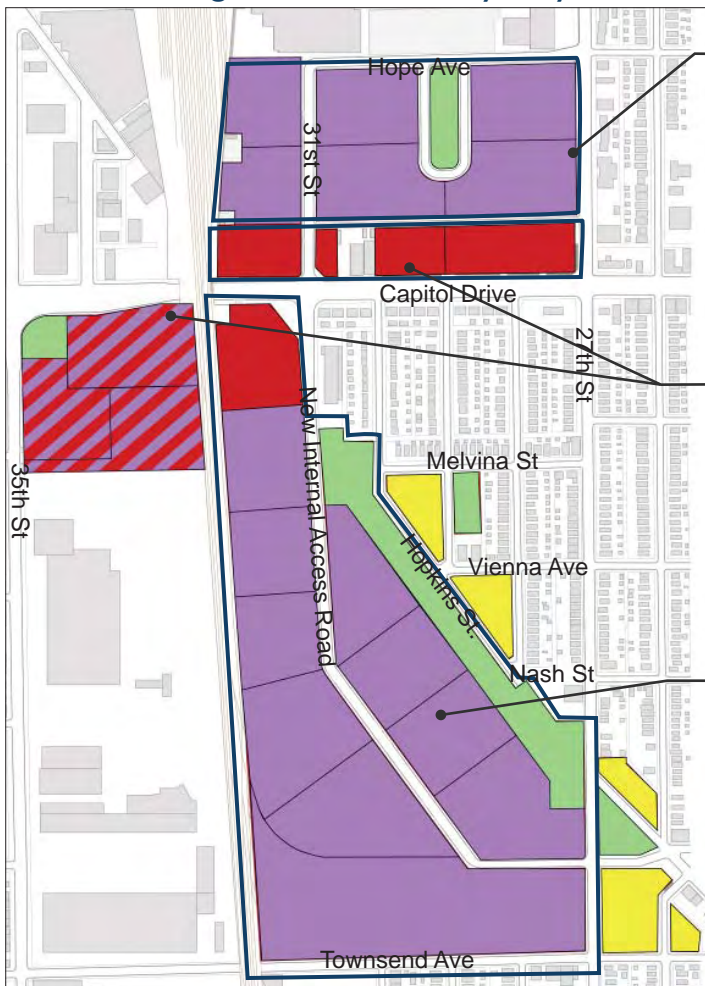
### Retail

It is recommended that the Capitol Dr. corridor focus on retail uses. In particular, the portion of the Century City site at Capitol Dr. is envisioned as a key site for convenience retail uses that serve as an amenity for the proposed Century City Business Park and surrounding residents.

### Park and Open Space

Park and open space is proposed to buffer Century City from the residential neighborhood to the east; this open space could not only serve as an amenity to the surrounding community but also incorporate small-scale stormwater treatment Best Management Practices. Likewise, the open space at Hope Ave. in Phase II Century City would do double-duty as a public amenity and stormwater park.

## Land Use Diagram with Century City Redevelopment Subzones



### Phase II Century City

Developable acres	27.7 acres
Industrial acreage	23.2 acres
Open Space	1.3 acres
New Right-of-Way	3.2 acres

Prototypical Industrial Parcel Size	2.9 - 4.6 acres
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### Capitol Drive Corridor

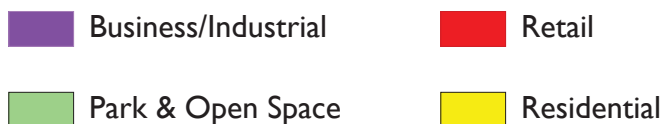
Developable acres	19.5 acres
Open Space	1.6 acres
New Right-of-Way	N/A

Prototypical Industrial Parcel Size	3.2 - 5.0 acres
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### Century City

Total site area	74.6 acres
(Existing Talgo site	16.3 acres)
Total developable acres	58.3 acres
Industrial acreage	41.9 acres
Commercial acreage	3.9 acres
Open Space	7.8 acres
New Right-of-Way	4.7 acres

Prototypical Industrial Parcel Size	3.5 - 6.4 acres
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## Residential

A mix of infill residential uses is proposed in the neighborhood east of Century City. Multi-family residences are recommended, with an emphasis on rental housing for low- and moderate-income senior citizens, in keeping with the findings of the market study. The City should explore building design options that are sensitive to the neighborhood context and mass, like townhomes, while accommodating elevators for elderly residents with limited mobility.

## Transportation Roadway Network

The preferred concept plan illustrates a number of proposed transportation recommendations to enhance site access and improve traffic flow. The feasibility of any recommendations addressing roadway and intersection alignments illustrated in the conceptual plan will need to be determined via in-depth study addressing factors such as anticipated traffic volume, turning movements, and intersection geometries, and anticipated effects on nearby intersections or streets.

Following is a summary of the recommendations:

### Intersection Realignment at 31st/Capitol

Several existing challenges are addressed in the proposed intersection realignment at 31st/Capitol. The segments of 31st St. extending north and south from Capitol are proposed to be aligned for improved traffic flow, clear access between the two opportunity sites, and enhanced pedestrian crossings. This realignment illustrates recommended reduction in curb radii, particularly at the southwest corner of the intersection, and reduced travel lanes, while still accommodating truck traffic by avoiding acute angle turns and sight line issues.

The straightening of the northern portion of 31st St. also enhances the redevelopment potential of the parcels adjacent to the rail, with the addition of land transferred from the realigned right-of-way, although it impacts the parcels on the east side of the street. Note that, although

the proposed realignment of this portion of 31st St. impacts the existing Cornerstone Achievement Academy and Systems Engineering, this recommendation does not suggest near-term relocation of either use; improvement of the intersection could be phased in to best meet the needs of Milwaukee Public Schools and the affected business.

### Realignment of Existing Hopkins St. and Reestablishment of the Neighborhood Street Network

The realignment of the Hopkins St. right-of-way is proposed to connect with 30th St. south of Capitol Dr., rather than extending to 31st St. as currently configured. This realignment would be the basis for establishing a new character for Hopkins St., which would be reconfigured as a residential street incorporating street parking and improved pedestrian amenities. Design elements within the right-of-way would help buffer the business park from the neighborhood.

Further, the realigned Hopkins St. would reestablish the neighborhood street network by reconnecting several neighborhood streets, including Melvina St., Vienna Ave., and potentially Nash St., to Hopkins St.; however, the segment of Hopkins between 27th and 28th Sts. would be recommended for termination to discourage cut-through vehicular traffic, although pedestrian access is recommended to be preserved.

These proposed street reconfigurations give attention to existing and anticipated traffic flow to avoid routing traffic, particularly trucks, onto residential streets. For example, although direct access to 27th St. from northbound traffic on Hopkins would be maintained, the traffic pattern on 26th St. between Nash and Keefe could potentially be routed one-way southbound, to further discourage cut-through traffic from Keefe and Hopkins into this residential neighborhood. Redirecting traffic on this segment of 26th St. might better meet the traffic flow within the neighborhood; currently, 26th St. accommodates two-way traffic north of this segment of 26th St., where traffic is directed northbound, so the southernmost block does not currently have access from the neighborhood to the north.

### New Internal Access Road

A new internal road is proposed to access the Century City site. This street could be either a public or private roadway; if public access is permitted, then traffic calming elements such as curb extensions at pedestrian crossings should be considered to reduce speeds and dissuade cut-through traffic while accommodating trucks accessing the site.

Note that, as illustrated on the conceptual plan, the access road would be a two-way street but the southern exit point to 27th St. is illustrated as an exit-out point, opposite a realigned Keefe Ave. This exit is located between the existing Talgo building and Building 65, the former headquarters of the A.O. Smith Corporation. Site ingress and egress is anticipated to be coordinated through communication with local industries for effective routing of deliveries.

### Rail Access

Although rail service is not expected to be a key feature affecting redevelopment opportunity, the conceptual plan retains flexibility for businesses that might require rail service. Rail access is preserved for the parcels in Century City just east of the railroad.

A future passenger rail station can be accommodated within the study area. Although not specifically sited on the concept plan, a train station could be sited east of the railroad, either immediately north or south of Capitol Dr. In general, siting of a train station at this location should allow good visibility and access from westbound traffic, with associated parking sited behind the station, off Capitol Dr. frontage.

### Existing Street Alignment



### Proposed Street Re-alignment





## Open Space System

The proposed concept plan gives consideration to the need for open space amenities for the business park as well as for the surrounding neighborhood. A variety of open space types is proposed, including active and passive recreation, walking paths, and stormwater features, to enhance and expand existing open space features.

Currently, open space in the Century City Redevelopment Area is limited to a park at Melvina St. and 29th St., which includes a playground and basketball and tennis courts. The existing open space east of 29th St. is recommended to be retained and either improved or reprogrammed, depending on the needs of the community. The area aligned with the existing 29th St. right-of-way—the basketball courts—is recommended for relocation to accommodate the re-connection of 29th St.

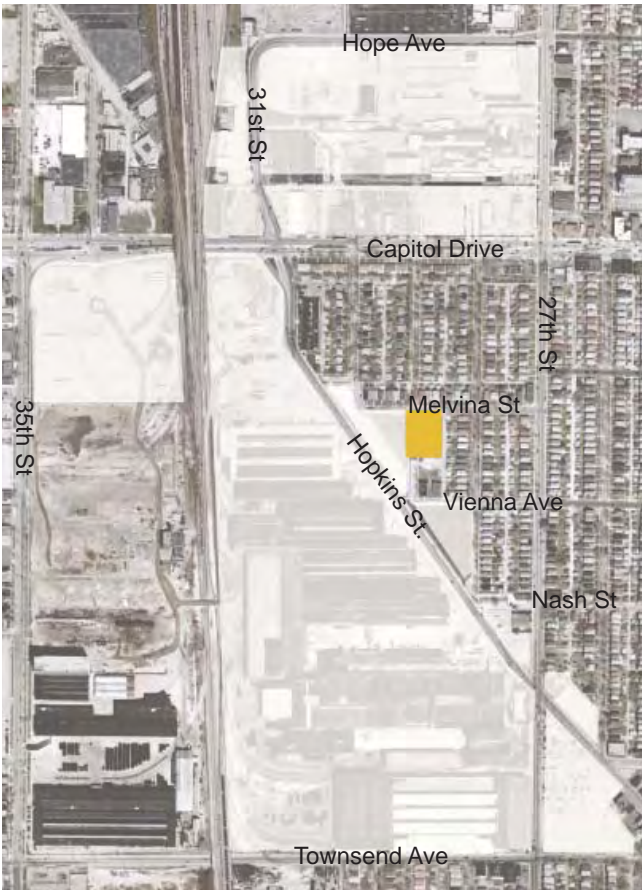
A linear green space is proposed on the west side of the new Hopkins St. alignment, incorporating multiple uses and functions. This open space would be an amenity to

neighborhood residents as well as to businesses at Century City and their employees, who would have an opportunity to eat lunch outside or go for a walk during breaks.

The open space is envisioned as a series of outdoor rooms, with active and passive recreational uses to be linked by a walking or multi-use path. Any recreational uses relocated from the existing park would ideally be sited in this area. It is recommended that input on potential programming be sought from the community as well as business stakeholders.

Regardless of the programming, public safety considerations must be addressed to facilitate “eyes on the street” around the clock. The residential development proposed on the east side of the realigned Hopkins St. will assist public safety by providing visibility to the green space.

## Existing Open Space



## Proposed Open Space System







Existing basketball courts at 29th St. and Melvina St.



Existing playground

### Proposed Linear Green Space





## Stormwater Management

Currently, the redevelopment sites are almost entirely impervious, with the exception of the vacant land at the Esser Paint site. Given the limited perviousness, any integration of stormwater best management practices (BMPs) will have a notable improvement on stormwater management in the study area, particularly over time as small-scale BMPs are incorporated into the redevelopment sites.

For the proposed Century City concept plan, approximately nine acres of the site is dedicated to open space that would incorporate stormwater management areas. This is an appropriate starting point for the purposes of this study; however, detailed stormwater modeling would be required in order to establish recommendations for each site.

Not included in this land area are small-scale stormwater management solutions to be integrated as feasible throughout each site, such as permeable pavers, porous

pavement, vegetated swales, and raingardens. These small-scale stormwater best management practices may be used even for compact sites and may be incorporated into parking lots, planted medians, or parkways.

Stormwater BMPs may also be integrated into buildings, such as green roofs and stormwater cisterns that collect water to be used for irrigation.

Generally, the concept plans follow the recommendations from the recent stormwater study for the corridor, “Developing a Regional Approach to Storm Water Management in the 30th Street Industrial Corridor.” However, within the Phase II Century City area, the concept plans illustrate redevelopment adjacent to the existing MMSD drop shaft and structures, to maximize the larger development parcel resulting from the shift in the 31st St. alignment. The concept plans, however, accommodate the MMSD structures and access and address stormwater management needs through the creation of the green space at Hope Ave.

## Recommended Stormwater Best Management Practices



Examples of recommended stormwater BMPs, clockwise from top left: swales integrated into a neighborhood playing field, permeable pavers, permeable pavement with slotted curb facilitating stormwater flow into swales, and bioswales incorporated into parking areas.

# Century City

The Century City site is the most important catalytic site in the study area, with significant opportunity for redevelopment of the site into a high-quality, modern business park. The proposed plan is intended to be flexible, accommodating a range of industrial sectors. The parcel at the southwest corner of Capitol Dr. and 31st St. is anticipated to be redeveloped as a retail amenity for the business park and surrounding community.

Recommended transportation improvements include a new internal access road with limited access points, intersection realignment at Capitol Dr. and 31st St., and enhanced connectivity to the adjacent neighborhood. Rail access is recommended for preservation. The proposed green buffer is envisioned as not only a screen between the industrial uses and residences but also as an open space with stormwater management features.

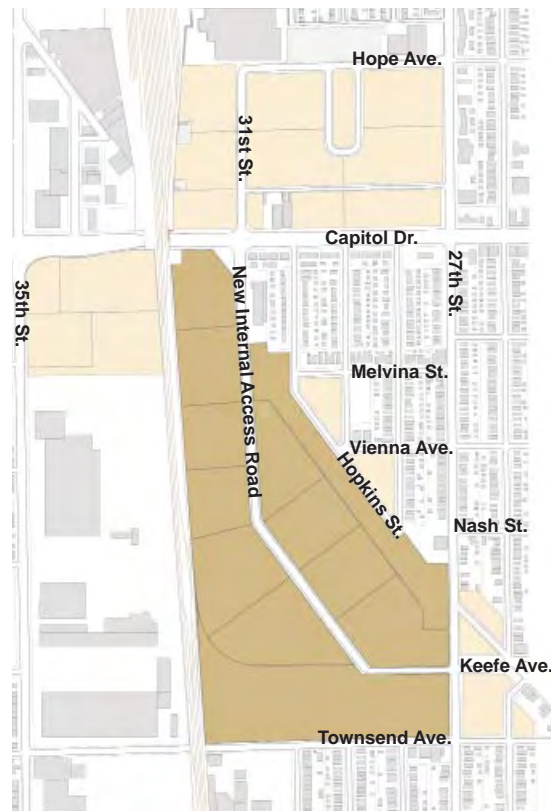
## Proposed Plan



## Development Program

Developable acres	74.6 acres
Industrial	496,200 sq. ft.
Commercial	34,150 sq. ft.
Open Space	7.8 acres
New Right-of-Way	4.7 acres

## Key Map





# Phase II Century City and the Capitol Drive Corridor

## Phase II Century City

The area north of Capitol Drive is envisioned as a potential future extension of the development momentum from Century City. Recommended uses within the Phase II Century City area include business or industrial uses.

The realigned intersection at 31st and Capitol Dr. described above would also serve as an improvement to Phase II Century City and the corridor in general. Building off the intersection improvements, a realigned interior street network would improve site access and circulation for this area.

The existing Stormwater Plan includes the City-owned parcel with existing Milwaukee Metropolitan Sewerage District (MMSD) infrastructure as a proposed neighborhood stormwater / BMP facility. However, given the realigned 31st St. right-of-way and the resulting larger parcel with enhanced development potential, this plan proposes a more visible open space amenity further east while retaining access to the MMSD infrastructure. These small-scale stormwater best management practices may be used

even for compact sites and may be incorporated into parking lots, planted medians, or parkways- the planted strip between a curb and sidewalk. Stormwater BMPs may also be integrated into buildings, such as green roofs and stormwater cisterns that collect water to be used for irrigation.

## Capitol Dr. Corridor

The Capitol Dr. Corridor includes the commercial/retail uses east of tracks (excluding the retail parcel at the southwest corner of 31st St. and Capitol Dr., which is considered to be part of Century City), as well as the industrial uses at the southeast corner of 35th St. and Capitol Dr. Small green spaces are incorporated into both the retail and business/industrial areas.

Internal access for the retail uses east of the railroad tracks is facilitated by a lane between the businesses along the Capitol Dr. Corridor and Phase II Century City. Rear access for the businesses fronting Capitol Dr. would enhance the street frontage by reducing the auto-oriented character of the current development by siting parking areas to the rear of the businesses.

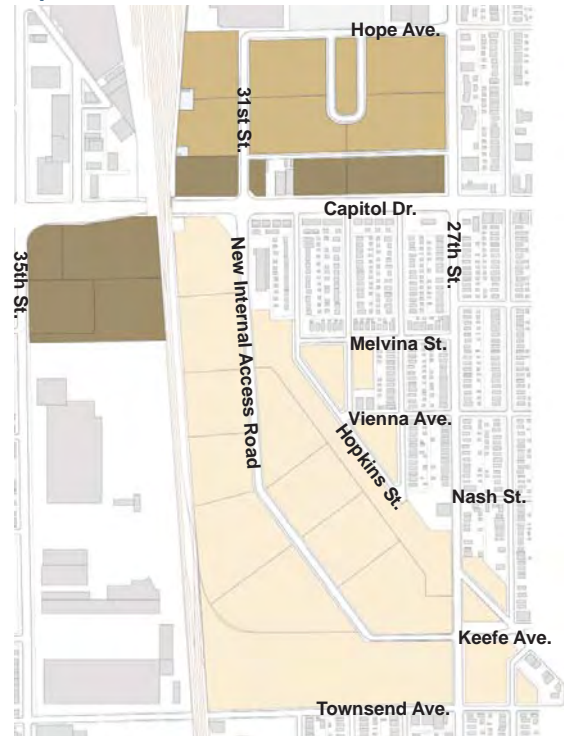
## Proposed Plan



## Development Program

	<b>Phase II Century City</b>	
	Developable acres	24.7 acres
	Industrial	288,750 sq ft
	Open Space	1.3 acres
	New Right-of-Way	3.2 acres
	<b>Capitol Dr. Corridor</b>	
	Developable acres	21.7 acres
	Industrial (west of railroad)	157,600 sq ft
	Commercial/Retail (east of railroad)	89,100 sq ft
	Open Space	2.1 acres

## Key Map



View looking south from Phase II Century City and Capitol Dr. Corridor, from Hope Ave.





# Century City Residential Outlots

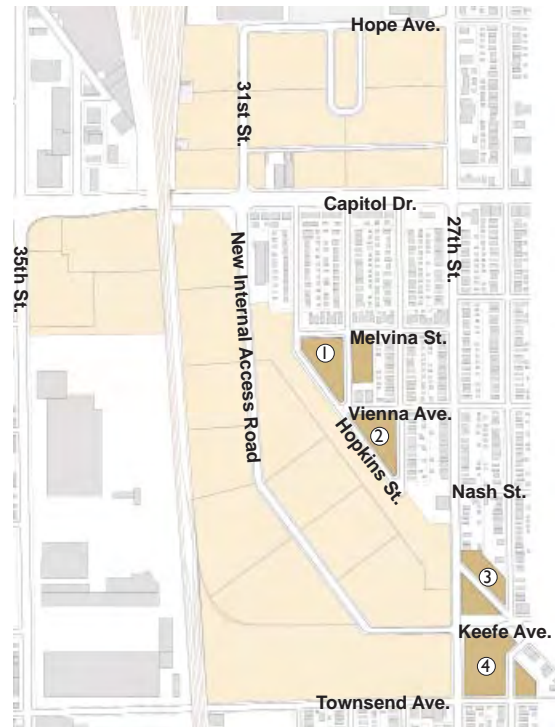
Adjacent to the Century City site, residential redevelopment is proposed to enhance the existing neighborhood by providing housing types that meet community housing needs. Given the demographic profile of the 30th Street Corridor (explored in the market study in Appendix B), this will likely mean housing for seniors with low and moderate incomes.

Multi-family housing is proposed for the triangular blocks at 29th St. at Melvina and Vienna Avenues. These new homes would have excellent access and views to the green amenity on the west side of Hopkins St. In addition, any changes or improvements to the existing playground and park should consider input from the community, to best address neighborhood families' needs and preferences.

Further south, at 27th St., Hopkins St., and Keefe Ave., additional multi-family residential units are proposed. The residential units oriented to 26th St. continue the development pattern of the single-family residences south of Townsend, and they provide screening of the multi-family buildings' parking area from the public way.

A new open space is introduced as a continuation of the green buffer and enhancement to both the new residential proposed as well as the A.O. Smith administration building, if retained. This triangular block is slightly irregular to reflect the realignment of Keefe Ave., which is proposed to jog south between 26th and 27th Streets to align with the exit drive from Century City.

## Key Map



## Development Program Parcels 1 and 2

Multi-family residential      50 units

### Proposed Plan: Parcels 1 and 2



## Development Program Parcels 3 and 4

Multi-family residential      110 units

### Proposed Plan: Parcels 3 and 4



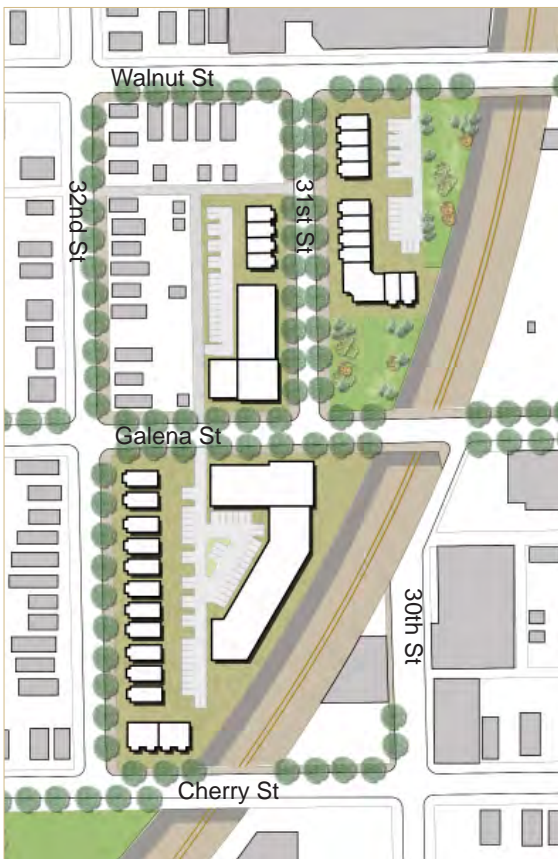


# Esser Paint Site

The proposed redevelopment site at the Esser Paint Factory is slated to include single-family homes, and multi-family units. The proposed plan maximizes the units on these irregular parcels while reflecting the existing development pattern in the surrounding Walnut Hill neighborhood. Additionally, higher density multi-family is shown along the tracks, while the scale and character of existing single-family is matched toward the west of the site along 32nd Street.

The only open space amenity in the immediate neighborhood is the Hmong American Friendship Garden at Cherry St. and 32nd St. Additional open spaces are proposed for the development facing 31st St., between Walnut and Galena Streets.

## Proposed Plan



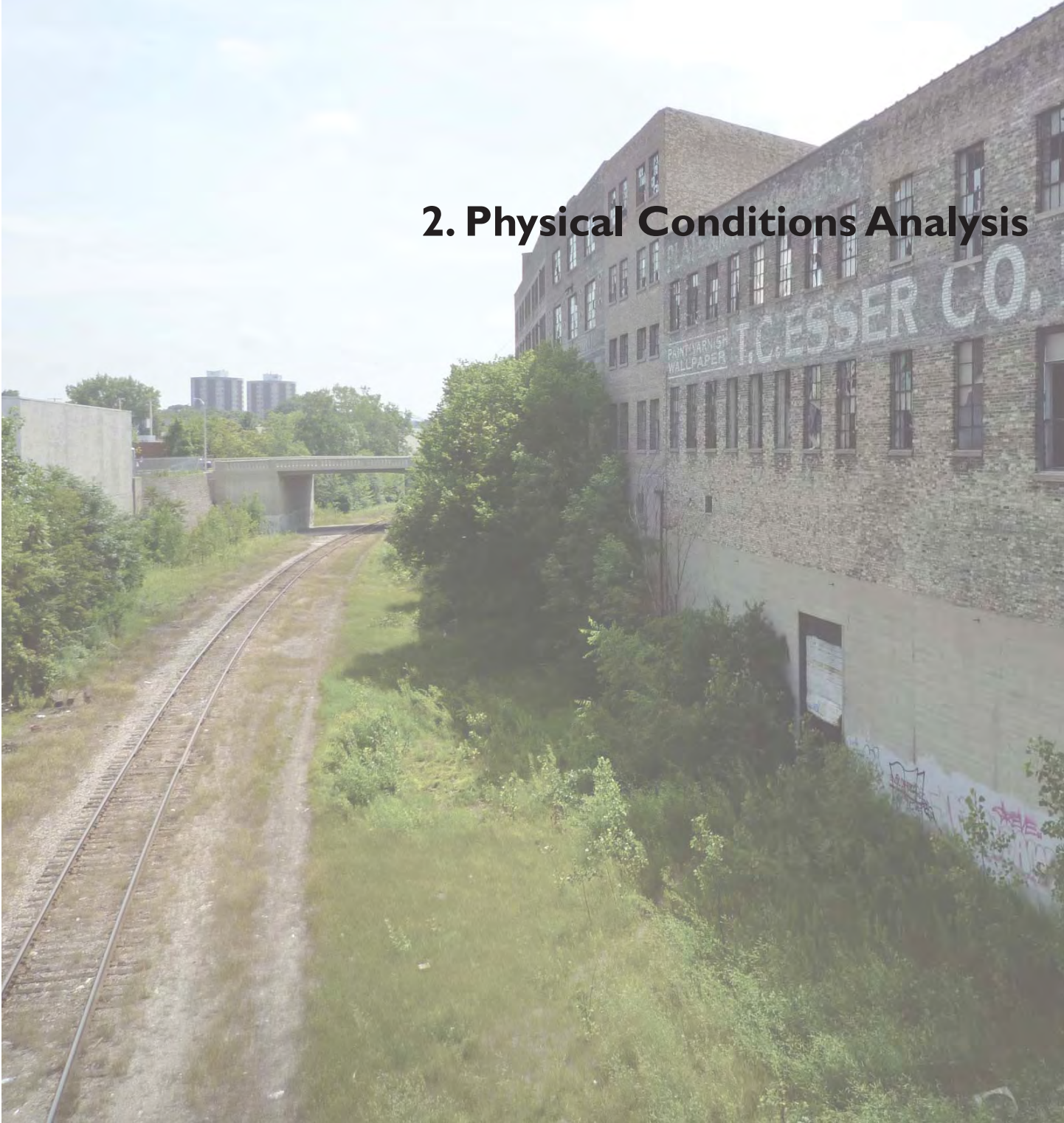
## Development Program

Single-family homes	11 units
Multi-family residential	110 units
<b>Total</b>	<b>121 units</b>

## View looking northwest from 30th and Cherry Streets



## 2. Physical Conditions Analysis





*As part of the Plan, extensive surveys of land use and infrastructure were conducted in order to determine the current physical condition of the corridor. Sites that are vacant, underutilized, or otherwise susceptible to change in the near term were identified. Land use conflicts were documented in various areas of the corridor, including both heavy industry sites next to residences and truck traffic impacting residential areas. The Transportation Analysis section examines key truck routes, street widths and traffic conflicts, as well as rail access and suitability within the corridor. The chapter concludes by considering stormwater and wastewater management issues in the corridor.*

## Orientation and Sites Susceptible to Change

This section presents an overview of the corridor in four sections – north, middle, south and far south – to orient the reader and describe some of the primary sites and land uses contained within it. (See maps in Appendix C.) Of particular interest are sites that are expected to change, either due to vacancy, underutilization, or mismatch between the current use and the character of the area in which it's located. In some instances, change may occur through private market activity, while other sites may require intervention by the City to facilitate transformation. Public involvement in particular sites is discussed in greater detail in Chapter 1 and Chapter 4.

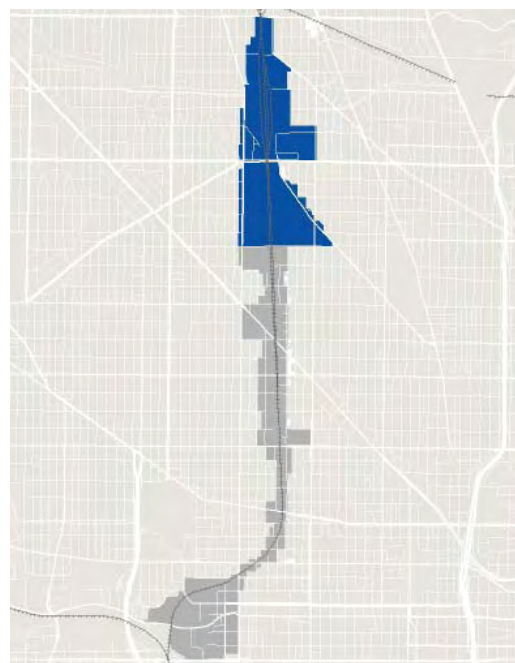
### Northern Section

The Northern section is located between Hampton Avenue to the north and Townsend Street to the south. This section is home to some of the corridor's larger, anchor businesses including DRS Technologies and Glenn Rieder, although a transition is underway with the formerly vacant Citation Foundry site now used by a recycling operation and Eaton announcing its intentions to relocate out of the corridor.

The former Tower Automotive site is also located in this area. The City is in the midst of clearing and remediating the eastern portion of the former Tower Automotive site as the Century City Business Park. The south end of the site is currently occupied by Talgo Inc.'s train manufacturing plant, although uncertain public financing conditions for high speed rail could result in the facility either expanding or closing in the near future. The redevelopment project also includes triangular parcels east of Hopkins abutting residential neighborhoods.

There are several other City-led or assisted development projects in this area. The Department of Public Works (DPW) Field Headquarters facility is located on the Western portion of the former Tower Automotive site and was completed in 2006. Bishop's Creek is a multi-phase, mixed use development project at the northern boundary of the corridor that will include affordable rental housing, dormitories for the nearby Holy Redeemer Christian Academy, retail, office and a performing arts theater. The first phase of this project is complete, providing 55 units of low-income family housing. A second phase, which would provide dormitory housing for up to 40 students, is underway.

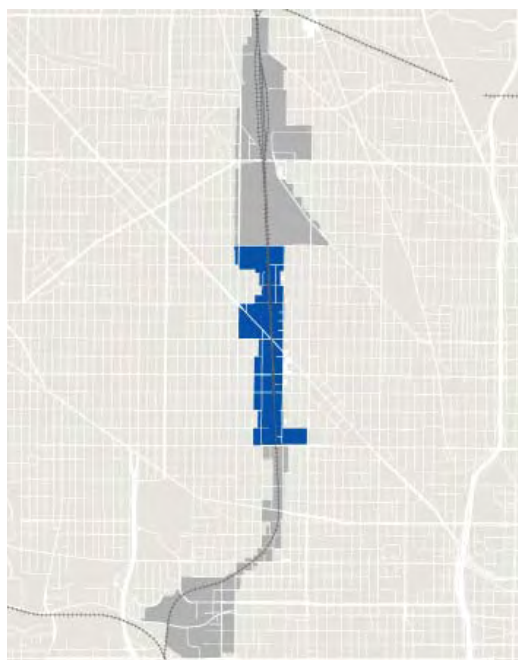
The corridor's northern section has larger parcels of vacant or non-contributing properties that would require minimal assemblage for redevelopment, which would make these properties more attractive to business looking to locate within the corridor. Key sites among these are the Citation Foundry site and the portion of the Tower site located at the southeast corner of Capitol Drive and 35th Street, both of which are privately owned. The former is currently being used for salvage, while the latter is currently being marketed for sale. The Citation Foundry site is an eight acre site located just south of Aldrich Chemical. Given the current condition and configuration of the buildings, this site would likely need to be demolished and redeveloped in order to serve a high-quality industrial user.



## Middle Section

The middle section, bounded by Townsend Street to the north and North Avenue to the south, is largely populated by medium-sized businesses, with the exception of Master Lock and Capitol Stampings which are larger industrial users. The significant amount of vacant and underutilized buildings and land, as well as properties for sale, presents opportunities for redevelopment. This section of the corridor also has the highest number of land use conflicts. These conflicts exist primarily between industrial and residential uses and include direct adjacency between the two uses and/or the presence of truck traffic and loading issues on residential access streets.

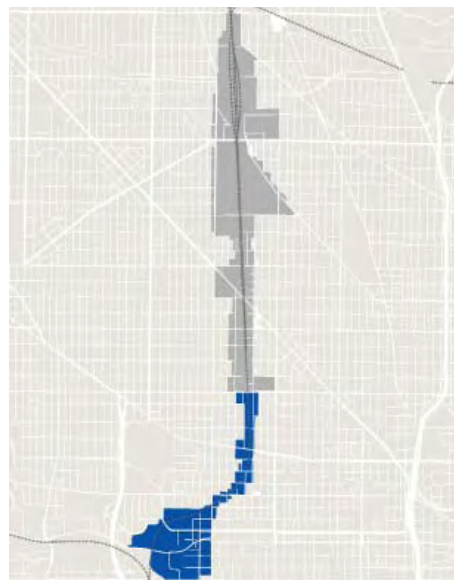
There is also a high concentration of recycling companies located within this section, particularly in the area between Townsend and Locust Streets, and numerous vacant or underutilized buildings are located between Locust Street and North Avenue. Given their sporadic distribution, they lack the critical mass needed for a larger near-term redevelopment opportunity. Privately-initiated redevelopment may occur in a more piecemeal fashion, particularly if larger catalytic projects (e.g., Century City) occur nearby. Several small parcels have been the focus of private market land consolidation, such as Integrated Mail's facilities on 35th Street just south of Townsend Street. This section of the corridor appears to be the one with the least defined character.



## South And Far Southwest Sections

The south and far southwest sections are bounded by North Avenue to the north and Wisconsin Avenue to the south, with Highland Boulevard dividing the two sections. There are a few smaller businesses including Pennebaker Roofing, Schuster Metals, and Adams Industries in the south section. The land that is currently zoned industrial in this area is, for the most part, located immediately along the railroad tracks. Otherwise, there are significant amounts of vacant land within the industrially zoned areas north of Highland, much of which is owned by the City. There are also a number of small repair shops interspersed in what is predominantly a residential area. The far southwest section is dominated by Harley-Davidson and Miller, and is largely stable.

The south section is largely residential, which could present challenges to any potential industrial redevelopment. Another challenge to industrial redevelopment is the presence of small parcels with various owners that would require extensive land assembly to put together a suitable site. The key sites susceptible to change in the near term are the former Esser Paint Factory between Walnut Street and Cherry Street, and North Avenue between 27th Street and 30th Street. The former is located in a predominantly residential neighborhood and is unlikely to be redeveloped without public involvement due to the need for extensive environmental remediation in portions of the site. The latter mainly consists of vacant and underutilized lots, but is surrounded by recent reinvestment to either side on North Avenue.





# Land Use Conflicts

The 30th Street Corridor has notable challenges due to land use conflicts, particularly due to the proximity of active industrial uses to residential uses and areas of inadequate infrastructure. Schools and daycare facilities are also in conflict with industrial uses in some areas. The main conflicts between industrial and residential/educational uses arise from direct adjacency between the uses, either sharing property lines or located across a street or alley, as well as the presence of truck traffic and resultant loading issues on local access streets. Truck traffic also has the potential to affect land uses along streets that lead to and from the regional transportation network, especially when the land uses along the route include residences.

Although buffering is a common method of reducing industrial impacts to less intense uses, this strategy is not effectively implemented along the corridor. Heavy industrial uses are insufficiently buffered from the street and adjacent residences, particularly in the middle part of the corridor. Likewise, parking lots within the study area are generally insufficiently screened from the public way.

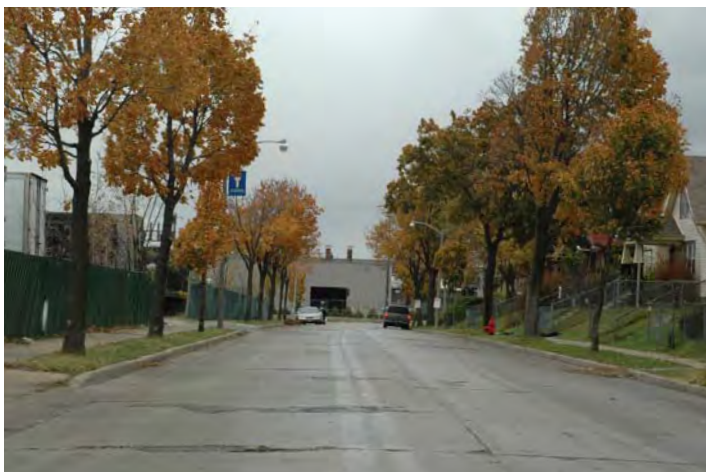
## 30th Street Effects of Industrial Adjacent to Residential

In general, land use conflicts between industrial and residential uses are greatest where a transition between uses occurs on an adjacent property or across a street, rather than across an alley. Where industrial land uses are located across a street from residential, special design requirements such as buffering become extremely important.

30th Street itself generally has a residential character, aside from the active truck traffic serving industrial uses. The typical land use pattern along this section of 30th Street includes residences lining the east side of the street, and industrial uses focused along the west side of the street. The residential areas along 30th Street between Townsend and Center are impacted by the proximity of industrial uses, typically located across the street and, in limited instances, sharing a property line.

Although even general industrial uses might create land use conflicts in this context, the issues are exacerbated by the operations of heavy industrial uses such recycling or salvage businesses. Several of the more intense uses are operating on property zoned for lighter industrial uses, indicating that either recycling activity may not have been approved by the City, or that it is grandfathered in the code as a nonconforming prohibited use.

Further, the Zoning Code defines residential buffer standards applicable to industrial uses located adjacent to or across a street or alley from certain non-industrial uses. Even for grandfathered uses, some buffering requirements apply to existing uses; according to the DCD Planning Administration Section, the prior zoning code in effect before 2002 also held some residential buffering provisions. However, none of the existing industrial uses along 30th St. appear to meet these requirements.



Residential and heavy industrial uses face each other along 30th St., south of Townsend.






Truck traffic navigates the narrow 30th St. road way.

## Land Use and Truck Loading Issues



### Legend:

-  Insufficient Buffering of Industrial Use
-  Truck Loading/Access Issues
-  Study Area Boundary

### 30th Street Effects of Truck Traffic

The truck traffic issues in the study area that create land use impacts are concentrated on 30th St. between Townsend St. and Center St., where industrial uses back up to the rail right-of-way and have street access from 30th St. only. Trucks accessing these businesses travel by arterial routes surrounding the site and then transition to the local, residential street network. Issues arising from truck traffic include noise and aesthetics, difficulty navigating tight turns typical within the limited right-of-way, and visual issues where driveways are not sufficiently screened.

30th St. has a narrow right-of-way, measuring as little as 50' in some blocks-- a width that is suitable for a minor street with residential character but inappropriate for accommodating truck traffic associated with industrial uses. This narrow right-of-way also accommodates street parking, sidewalks and parkways, causing difficult truck navigation that can damage curbs or cars parked on the street due to tight curb radii and limited area for trucks to swing into driveways. Wide curb cuts to facilitate the truck movements are present in some locations on 30th St., which diminish the pedestrian environment due to the potential for conflict between vehicles and pedestrians.

### General Truck Traffic Implications

Generally, truck traffic along the key arterials accessing the study area, including Capitol Dr., Townsend St., Center St., 27th St., and 35th St., appears to be sufficiently accommodated along these corridors. Land uses along the east/west arterials accessing the site typically include more intense uses than residential, primarily commercial uses, so there are minimal land use effects caused by truck traffic. However, the north/south streets accessing the study area have a more residential character toward the south end of the site, where truck traffic may result in minor impacts to the adjacent land uses.

Although truck traffic along 27th St. and 35th St., which are the main north/south arterials, appears to be relatively intermittent, minor land use issues arise due to the shift in land use from industrial at the north end to residential at the south end, while the streets still function as arterials, with a mix of local and through traffic. Further, with the shift in land uses, there is an associated narrowing of right-of-way.



# Transportation

## Truck Transport and Street Network

An efficient truck transportation network to and through a site is shaped by conducive signalization and roadway configurations, freedom from congestion, adequate alignment for turning movements, and good access to the industrial properties themselves. However, the street network serving the 30th Street Corridor is constrained due to its inconsistent directional and clearance signage, limited pavement widths and vertical clearances, and a minimally restrictive truck route map that prohibits truck traffic from only limited streets. These conditions result in difficult turning movements and truck traffic on minor, residential streets rather than arterials. Further studies of both the regional roadway network and site characteristics affecting local access and circulation patterns are needed to develop solutions for these issues.

## Regional Truck Access

Although the industrial uses located on the corridor were historically focused on the rail corridor along 30th Street, truck access is a key requirement for industrial businesses in the study area. The corridor has good access to the surrounding highway network, linking to the regional road network as follows:

- Approx. 1.5 miles west of Interstate 43
- Approx. 5 miles east of U.S. Route 45
- Approx. 1 mile east of U.S. Route 41
- Approx. 2 to 5 miles north of I-94; North Ave., at the southern end of the industrial core of the site, is approximately 2 miles from Interstate 94.

The regional road network is accessed locally from several key arterials. The main east/west arterials accessing the corridor include Hampton Ave., Capitol Drive, Locust St., and North Ave. Fond du Lac Ave., running diagonally from northwest to southeast and intersecting the middle of the site, is also a key arterial. The key north-south arterials are 27th St. and 35th St., which flank either side of the corridor and provide access to Interstate 94.

The right-of-way width for 27th south of Capitol is 66', which is dedicated to travel lanes, parking lanes, and sidewalks. The typical right-of-way width on 35th St. south of Townsend is even tighter, measuring only 60'. Ideally, there would be a limited buffer between the roadway and sidewalk, but a parkway is lacking for typical conditions of these streets within the study area. In addition to limiting space available for buffering pedestrians and the residences on these high-traffic streets, these right-of-way constraints have further impact at intersections, as described in the Truck Transport and Street Network section below.

## Residential Buffering

In general, there are very few instances of installed residential buffers for industrial uses as currently required by the Zoning Code. The Code defines residential buffer standards applicable to industrial uses located adjacent to or across a street or alley from certain non-industrial uses. Even for grandfathered uses, some buffering requirements apply; according to the DCD Planning Administration Section, the prior Zoning Code in effect before 2002 also held some residential buffering provisions.

## Parking Lot Screening

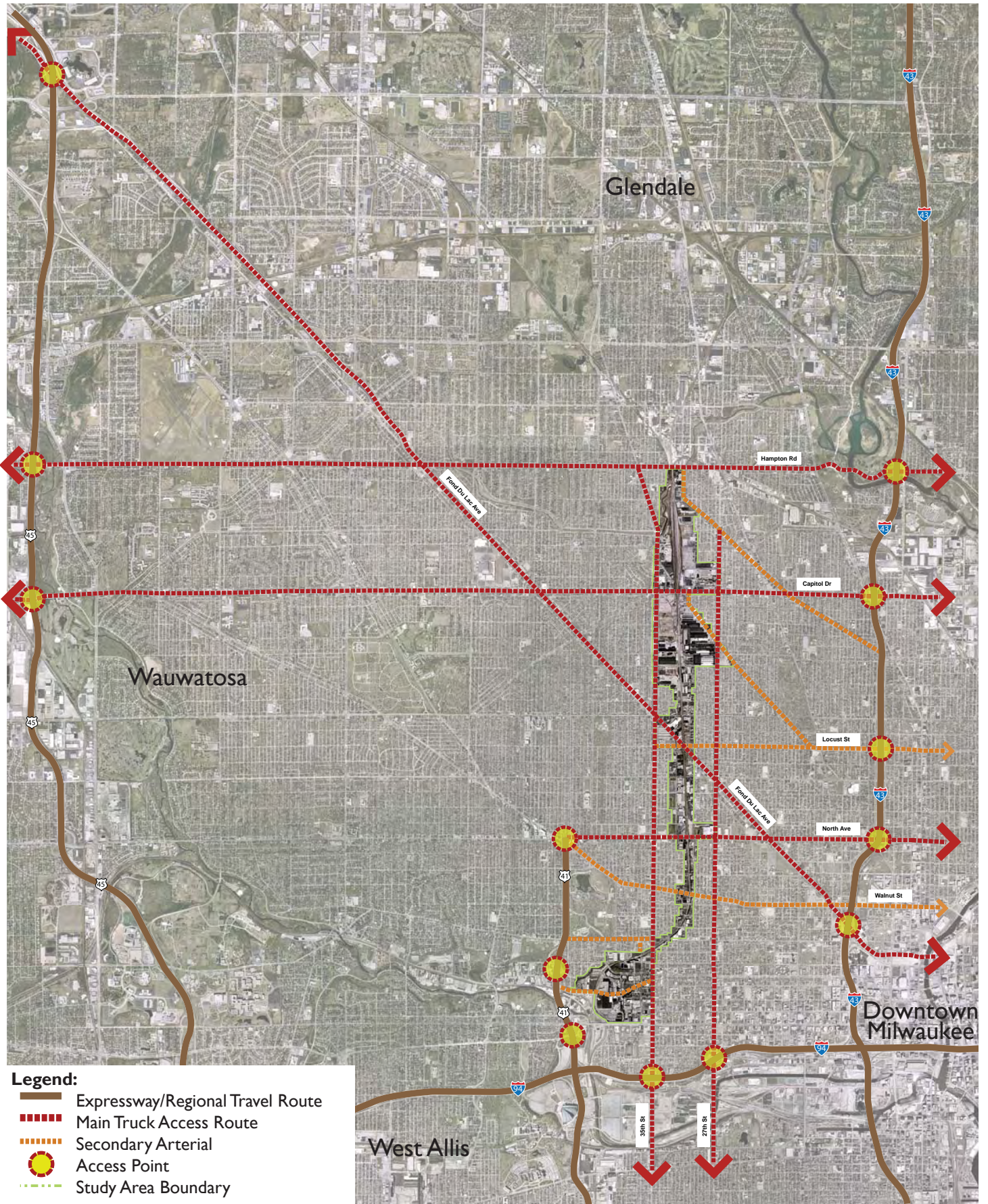
Parking lot screening is typically sufficient for prominent, newer businesses on the corridor, but often lacking for smaller uses. Examples of the parking lot screening requirements, as per the Zoning Code, include the Master Lock facility and the Miller parking lot at 37th and State.



Many long-time active industrial uses, particularly on 30th St., are insufficiently buffered from the surrounding residential area.



# Regional Truck Access



- Legend:**
- Expressway/Regional Travel Route
  - Main Truck Access Route
  - Secondary Arterial
  - Access Point
  - Study Area Boundary



Note that, although 30th Street itself lends its name to the corridor and, therefore, the study area's identity, it is a relatively minor street with notable constraints. 30th Street itself is not contiguous and is therefore not a convenient north/south access route for traversing the corridor. It has significant disconnections through the study area, including from the existing Eaton site south to Capitol Drive, and from Melvina Street south through the Century City site to Townsend.

The main truck access roads to the corridor have good connections to highway entrance and exit ramps. Secondary access routes include arterial streets with less direct connections or streets that otherwise connect to the surrounding arterial network. The Miller and Harley-Davidson sites at the south end of the corridor have excellent access to the regional transportation network via the expressway.

Typically, operators of trucks who regularly access a site are acutely aware of potential congestion and restricted movements that may take place. Drivers typically select routes with the least congestion and easiest navigation depending on the location within the area or preferred route out of the region. However, many businesses on the corridor rely on third-party providers for their shipping needs; because truck operators may not be assigned to the same route consistently, drivers would benefit from clear signage helping them navigate within the corridor.

### Access and Circulation within the Corridor

Several existing features affect clear access and circulation within the corridor. Challenges associated with truck traffic, such as truck height, weight, length and turning radii must specifically be considered for the corridor. Issues affecting specific corridors are also identified below.

#### General Truck Flow

Generally, trucks including 18-wheelers face few limitations in the routes they use to, and through, the corridor. Although the City developed a map identifying streets with limited truck access, the regulations are not extremely restrictive. This type of map and level of restriction is relatively typical; many cities have similar truck access regulations that permit truck access on the majority of their streets. Weight limits are determined at the state level and are not a notable constraint on the corridor.

#### Vertical Constraints

The lack of consistent and sufficient vertical clearances is a physical constraint to ideal truck traffic movement. Viaduct heights within the corridor with clearance of 13'-0" have been observed, whereas a standard clearance that accommodates trucks is a minimum 13'-6" and is ideally 15' or greater. Viaduct clearances vary at different locations along the corridor, and not all of them are currently marked.



The Miller site handles its truck traffic from the Valley.



Viaduct at Capitol Dr.

### Lateral Constraints

Lateral encroachments, or constraints to turning movements due to obstructions along the roadway, also pose a significant issue along the corridor. As is typical for an urban context, location of utilities and other structures close to the roadway, coupled with a limited right-of-way, result in short turning radii and tight turning movements. Although conducive for slowing typical automobile traffic, short turning radii make it difficult for trucks to navigate right turns, requiring significant clearance for swinging beyond the designated lane. These space constraints also limit pedestrian accommodations including sidewalks and bus shelters, and they impede pedestrian circulation due to an increased street crossing distance and resultant potential for conflict with automobiles.

### Roadway Configurations and Land Use Implications

Existing travel lane widths are excessively wide in areas on most arterial streets within the study area; twelve feet is a generous lane width for local truck traffic, but in many cases the existing travel lane is several feet wider. In addition, general vehicular speeding is facilitated by generous street parking along arterials, with the parking lane used for speeding traffic.

There is a shift in character from the north end of the corridor to the south end, on both 27th and 35th Streets. To the north, industrial uses are typically located on at least one side of the arterial, whereas residences become a more prominent land use on the arterials toward the south end of the corridor. The need to mitigate the impacts of traffic is greater to the south, given the concentration of residences, schools, and parks.

However, although the right-of-way decreases in width toward the south, the street design does not reflect the change in character. For example, the right-of-way on 27th Street narrows south of Capitol Drive, but parkways are typically absent from the narrower right-of-way for the remainder of the corridor to the south.

Typical land uses on the east/west arterials accessing the site include primarily non-residential uses, so traffic calming opportunities will have a lower priority than on the north/south streets which have a more significant presence of residential and public land uses.

### Disconnected Street Network

There are several areas where the street network is disconnected from the surrounding context, including the neighborhood west of Hopkins and south of Capitol, and west of the rail between Auer St. and the Symet facility. Where feasible, particularly in the location near the Century City site, opportunities should be sought for reconnecting residential streets within the greater street network, with consideration given to avoiding significant cut-through traffic of both general vehicular traffic as well as trucks.



Vienna Ave. disconnection, just east of Hopkins St.

### Disconnected Street Network East of Hopkins





## Street Network and Constrained Intersections

### Constrained Intersections

Constraints at the following intersections were identified in the existing conditions analysis due to unsuitable configurations, inappropriate signalization, pedestrian constraints, or other issues. As indicated on the diagram, constrained intersections are present primarily in the north to middle sections of the corridor, and they are focused along Capitol, Fond du Lac Ave., 30th St., and 35th St.

#### a. Capitol/31st St.

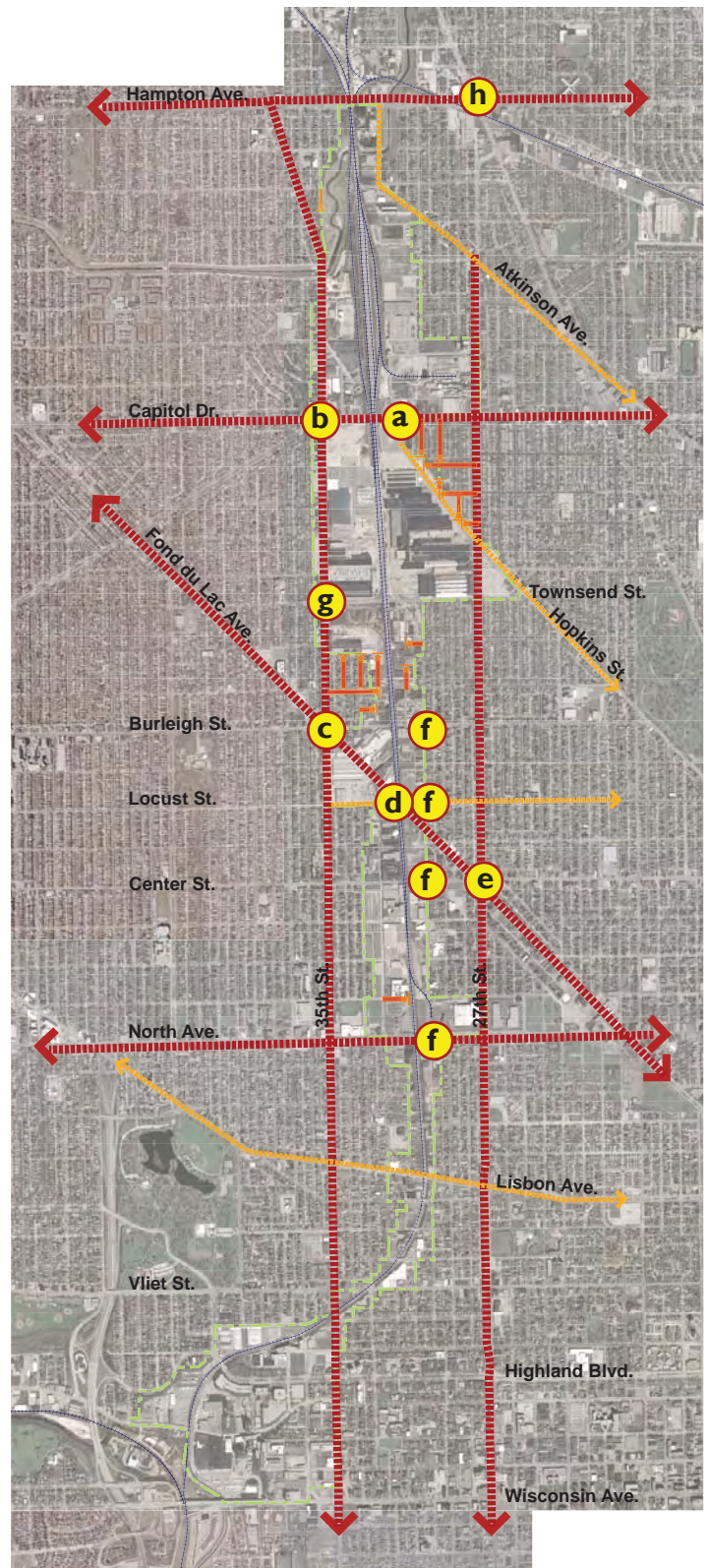
- Two truck lanes leading south on 31st from eastbound Capitol seem excessive and unnecessary, although this accommodation was designed to handle through-traffic for traffic volumes much higher than existing.
- 31st St. alignment at Capitol is not straight; traffic lanes are aligned at an angle to correct the configuration, resulting in multiple traffic islands and extremely long crossing distances particularly on the south side of Capitol.
- Sidewalk extending from southeast corner is not buffered from traffic.
- This intersection will need particular attention given that it is an access point to the proposed Century City site.

#### b. Capitol/35th St.

- Each part of signal cycle is dedicated to relatively small numbers of vehicles, due to multiple possible traffic movements, complicated by termination of Roosevelt Drive just west of the intersection.
- Pedestrian constraints exist due to disconnected sidewalks, lack of consistent crosswalks, and long crossing distances.
- Long turning radius at southeast corner facilitates fast traffic and further deteriorates pedestrian environment; sidewalk extending from the corner is not buffered from traffic.
- This intersection will need particular attention given that one of the catalytic sites identified for this project is adjacent to the intersection.

#### c. Fond du Lac/Burleigh/ 35th St.

- Left turns are very difficult from southbound 35th St.; traffic light has a very brief signal split, and observation indicates that only one vehicle is typically able to turn during each light cycle.



#### Legend:

- Main Truck Access Route
- Secondary Arterial
- Constrained Intersection (refer to text for key)
- Disconnected Street Network
- Study Area Boundary

- On 35th St., lanes are narrow and availability for a turn lane is limited.
- Utility poles create lateral encroachments constraining the intersection.
- Pedestrian constraints include unclear and complicated crossings, especially to traffic island from Fond du Lac and 35th, on south side of Burleigh.

**d. Fond du Lac/Locust**

- Poor visibility due to rail viaducts over intersection; there are left turn restrictions from Fond du Lac to Locust due to the intersection configuration.

**e. Fond du Lac/Center/27th**

- Small triangle of land created by this staggered six-way intersection reduces queuing space available for turning vehicles.
- Left turn restrictions are present due to the configuration; from Fond du Lac to westbound Center is the only permitted left turn movement, and a left turn lane is present.
- Complexity of intersection creates indirect pedestrian paths with long crossing distances.

**f. 30th at Burleigh, Locust, Center, and North**

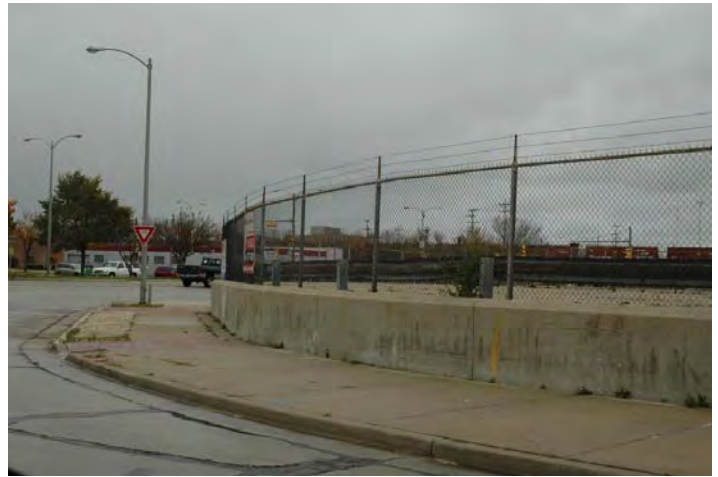
- Unsignallized intersections with two-way stop signs only for 30th St. traffic: difficult for trucks accessing businesses on 30th St. to make left turns to eastbound lanes.

**g. 35th/Townsend**

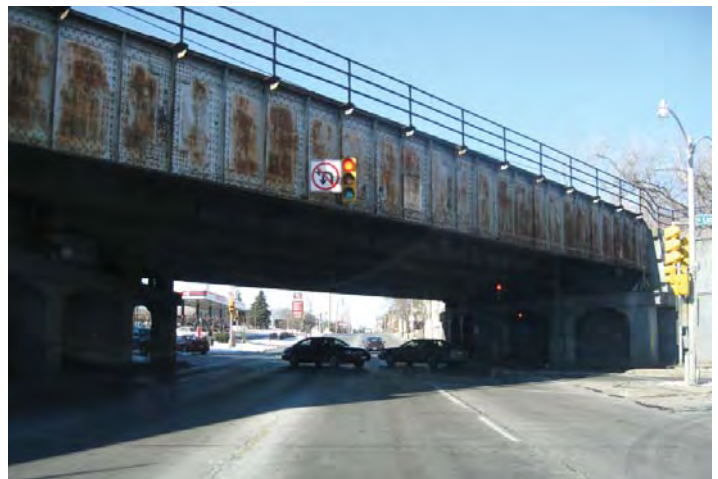
- Turns onto 35th from Townsend appear to be challenging due to relatively narrow lane/street width and tight curb radii.
- Utility poles create lateral encroachments constraining the intersection.
- Depression below tracks east of the intersection creates additional vertical constraint.

**h. Teutonia/ Hampton/27th**

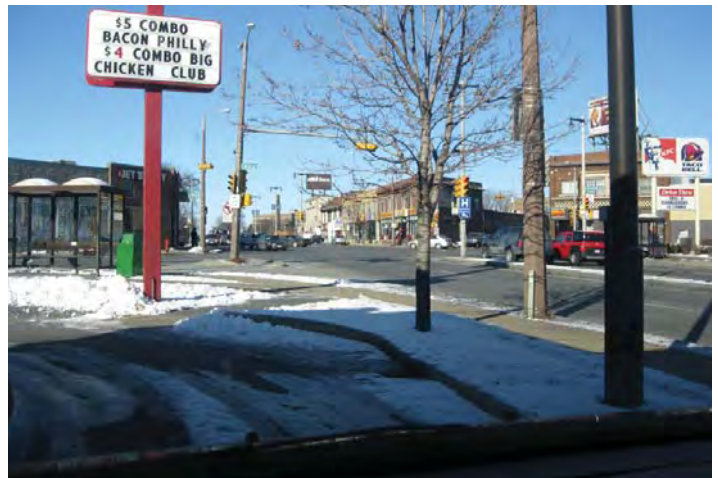
- Complex five-way intersection is further complicated by dedicated rail lanes for all turning movements and by at-grade rail crossings; rail traffic is relatively light, however, and not a significantly constraining factor.



Long turning radius at southeast corner of Capitol Dr. and 35th St.



Poor visibility at viaduct over Fond du Lac and Locust St.



Utility poles create lateral constraints at the intersection of Fond du Lac, Burleigh, and 35th St.



## Rail

Although the railroad serves as the defining legacy characteristic of the 30th Street Corridor, only a few businesses, including Talgo, Miller Brewing, and Harley-Davidson, are currently using rail for shipping. Physical conditions and access are generally conducive, but shipping needs are more suitable for trucking rather than rail transport.

Generally, rail service is feasible for businesses with close proximity to rail for both the origin and destination of its materials and goods, high volumes, and regular service needs. However, as discussed below, only a few businesses along the corridor currently meet these characteristics and therefore capitalize on this asset.

### Feasibility and Competitiveness of Rail Service

Feasibility of rail service generally depends on close proximity to an active rail line for both a given business as well as its materials providers and distribution points, distance travelled and weight of the goods, lack of physical constraints such as topography or unsuitable spur configurations, and level of service required. High volumes and regular service needs, as well as long-distance transport of heavy goods, keep shipping by rail competitive. High volumes of rail are also best served in areas with limited at-grade crossings, to avoid disruptions to vehicular traffic flow.

In the context of the 30th St. corridor, these conditions are generally favorable, and several businesses along the corridor rely extensively on rail service. The businesses at the southern end of the corridor, Miller Brewing Co. and Harley-Davidson, have a greater need for regular rail access than the other businesses in the corridor. These businesses have a higher volume and more regular service requirements than other industries along the corridor; further, Miller Brewing is located at the junction of the

Wisconsin and Southern and Canadian Pacific lines, thereby increasing its access to both materials providers and distribution points. Further north, Talgo's operations require rail access for its construction and maintenance of passenger rail cars. Just south of Century City, several salvage companies also utilize rail service.

Generally, these businesses are exceptions along the corridor. Most of the other businesses in the study area have a greater reliance on truck shipping rather than rail, thereby decreasing the overall rail shipping volumes and general service needs of the corridor that could help keep rail competitive. Further, where rail access is present, the availability of multiple modes of delivery can help keep shipping costs down given the competition between trucking and rail service.

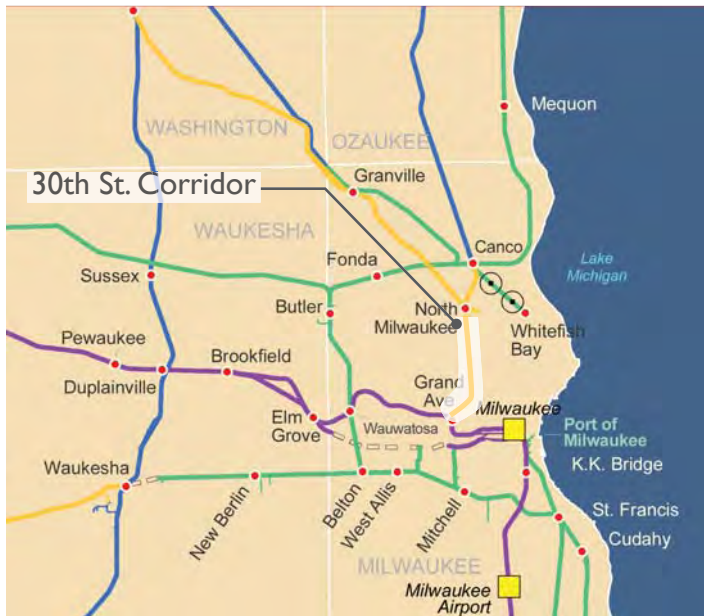
The main disadvantage of the corridor in terms of rail service is the current limited use; service has been significantly reduced from historic peaks, and existing businesses do not capitalize on this resource. Due to the general underutilization of the rail line serving the corridor and significant excess trackage, the study area currently does not appear to sustain regular and frequent service. Access to rail along the corridor is not anticipated to be a significant factor driving future redevelopment due to the excess capacity and relatively limited demand for direct access.

Compared to other industrial corridors in the region, including the Menomonee Valley and the Northwest Industrial Land Bank, the 30th Street Corridor has a similar degree of rail access. At all three areas, only a limited number of businesses have direct access to rail. For parcels with direct rail access, the legacy railroad service arrangements may influence the cost and availability of service; rail jurisdiction, as described below, is another factor affecting feasibility of rail service.

### Rail Jurisdiction and Operations

The railroad track is owned by the Canadian Pacific Railway, with car delivery service provided by the Wisconsin and Southern Railroad. These two institutions directly influence service within the corridor. The Union Pacific Railroad is also important in the City of Milwaukee and, although it does not directly access the corridor, it creates indirect effects on pricing and preferred siting for businesses with rail requirements, due to its extensive local/regional network and significant freight activity.

As the owner of the track, Canadian Pacific has control of access to the industries along the track, whereas Wisconsin and Southern has limited operating authorization. Businesses seeking rail service would coordinate directly with Canadian Pacific, who would either deliver a railcar to the customer themselves or would pay Wisconsin and Southern a per-car fee to deliver the car to the site from the railyard. For smaller or lower-priority orders, the latter situation may be more likely.



#### Legend:

- Wisconsin and Southern Railroad
- Canadian Pacific Railway (Soo Line Railroad)
- Union Pacific Railroad
- Canadian National
- Amtrak Station

**Source:** Wisconsin Department of Transportation, "Wisconsin Railroads and Harbors 2010."

By contrast, businesses along higher volume single-service corridors such as the Menomonee Valley, which is served only by Canadian Pacific with no additional railway jurisdiction, benefit from faster and better streamlined deliveries. Likewise, Miller Brewing can receive deliveries exclusively through Canadian Pacific because of its strategic location at the junction of two rail corridors. Although not a significant coordination issue, deliveries are generally faster and smoother when a single railroad controls the entire move.

### Proximity to Transloading Facility

Transloading facilities provide a good shipping option for small industrial operations that have intermittent freight deliveries as well as limited site facilities or rail car accommodation. Generally, transloading facilities receive intermediate goods, which may be stored temporarily at the facility until the end user is ready for processing, then ship via truck. Typical intermediate goods might include pre-cut lumber for furniture, scrap steel, or building materials suitable for covered storage. Goods transferred via a transloading facility are generally easy to move.

The existing transloading and warehousing facility located north of the site at 5300 N. 33rd St. is an asset to the corridor with its provision of additional nearby shipping options. The Wisconsin and Southern Railway manages the transloading facility and coordinates deliveries. Industries on the corridor that are not served by rail, or that have shipping volumes insufficient to justify rail service, benefit from the proximity of the transloading facility.

Although salvage companies tend to locate near sources of scrap, the proximity to the transloading facility may have the unintended consequence of encouraging salvage uses in the study area. Salvage uses benefit from locating reasonably close to their materials sources to reduce transportation costs and coordination to deliver the materials from the facility to the site.



# Stormwater

Existing surface conditions along the 30th St. Corridor are mostly impervious, comprising paved surfaces such as asphalt pavements, streets, and parking lots. Impervious surfaces contribute to increased stormwater runoff and decreased water quality through pollutant loads, a particular problem for areas with large parking lots, trucks, and heavy industrial uses. Due to the extent of surface imperviousness along the corridor, even minor increases in the amount of green space will both improve water quality and abate stormwater runoff. While a high degree of imperviousness is not uncommon for urban industrial areas, attention should be given to redeveloping properties to incorporate stormwater best management practices (BMPs) within their building and site redevelopment strategies.

There are limited areas of green space along the corridor, associated with parks and yards in the residential areas and locations along the Lincoln Creek Watercourse. Within the study area, Lincoln Creek is channelized, although there is a natural buffer west of the railroad. The majority of the stormwater runoff in the northern portion of the study area is directed to Lincoln Creek.

The City has implemented some stormwater BMPs and water quality projects within the corridor. Several stormwater bioretention/filtration facilities are located within parkways along 27th St. between Capitol Dr. and Roosevelt Blvd. Two stormwater treatment units, which treat approximately 10 acres each, are located within the right-of-way on W. Hope Ave. and N. 31st St.

The sanitary and storm sewer infrastructure serving the study area is separated for areas north of W. Concordia Ave. and combined south of Concordia. Although the study area has been impacted by stormwater events over the past 20 years, records indicate that most of the problems have been associated with sewer backups rather than with overland flooding caused by stormwater runoff. Sewer backup issues are not directly associated with area stormwater facilities and their capacity; rather, flooding during heavy storm events is primarily due to sewer surcharging, the inability of old foundation drains to convey the flow to the sewer system, or the lack of sump pumps.

Further study indicates that leaky laterals on private property that collect stormwater runoff can account for 75% of the sewer system infiltration and inflow, which can



Lincoln Creek, near Bishop's Creek redevelopment site.



Existing conditions are mostly impervious, particularly at the Century City site.

greatly reduce the amount of volume or capacity reserved for sanitary flows and cause the sewer system to surcharge or back up. The Milwaukee Metropolitan Sewerage District (MMSD) has identified the areas within their jurisdiction that have leaky private laterals and has initiated work to repair the laterals.

Surface runoff addressed through stormwater management techniques can abate some of the surcharging issues, especially in the combined sewer area. Incorporating stormwater BMPs such as rain barrels, porous pavers and pavement, and bio-detention swales may assist in abating flood issues.

A detailed analysis of the northern portion of the study area, north of Townsend Ave., is included in the report “Developing a Regional Approach to Storm Water Management in the 30th Street Industrial Corridor.” The analysis addresses applicable policies, current and proposed City stormwater projects, and actions and initiatives for publicly and privately owned land that would provide a stormwater management strategy for this portion of the corridor. It also includes recommendations illustrating conceptual level planning and engineering of capital improvements for specific projects on several private sites and within the right-of-way.



Bioretention area on 27th St., north of Capitol Dr.







### 3. Market Analyses

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# Industrial Market Analysis

*In order to inform Plan recommendations and concepts for the different catalytic sites, SB Friedman conducted a market analysis for industrial real estate within the Corridor. Shorter market profiles were also created for residential and commercial property. What follows is a summary of these analyses; the full methodology for the market study and more detailed analysis is available in Appendix B. The industrial analysis sought to identify industries with the greatest potential to provide jobs and demand real estate in the near future. The industrial analysis also looked at the characteristics of successful business parks to make recommendations about the design of Century City Business Park. The retail and residential profiles address likely near-term demand for retail space and housing, respectively.*

Century City is the centerpiece for this Plan and for the City's efforts within the Corridor: it is the largest redevelopment site and has the greatest catalytic potential. In order to ensure its success, it is critical to not only address physical site concerns, but also economic and market considerations. The purpose of the industrial market analysis is to identify competitive industries in Milwaukee that are likely over the long term to generate growth, demand real estate, and provide jobs, as well as identify the infrastructure and workforce needs of these industries. The City and other economic development entities can then design and market Century City appropriately to attract these industries.

To achieve this goal, a methodology was created to identify target industries based on four criteria that correspond to competitiveness, real estate demand, workforce skill match and employment goals. These four criteria were as follows:

- 1. Competitiveness:** Industries should have a competitive advantage by locating in the Milwaukee region. Competitive advantage within a region is the result of a number of factors, including the presence of a critical mass of firms within the region, a well-developed network of suppliers to the industry, research linkages to universities, the presence of professional industry organizations, and connections to government agencies. The Information Technology industry in Silicon Valley and movie industry in Hollywood are examples of locations where firms have clustered to take advantage of such competitive factors. For this analysis, competitiveness was assessed by adapting an existing industrial cluster analysis study for Wisconsin<sup>1</sup>, and conducting a number of interviews with industry representatives and economic development professionals.
- 2. High Transaction Volume:** Industries should exhibit high demand for real estate as measured by the number of properties being leased/purchased or permits being issued for industrial use in Milwaukee County. This is important, because some industries are able to expand production without demanding more real estate (i.e., through process efficiencies, reduced staffing, and/or reduced space per employee). Since the aim of the analysis is to identify industries that could potentially occupy tenants, it is crucial to verify that businesses are actively seeking to move or expand their physical footprint. Leasing data from CoStar and permit activity from the City's MPROP database were used to analyze industrial real estate activity.

<sup>1</sup>The MPI Group. 2005. [The Wisconsin Manufacturing Study: An Analysis of Manufacturing Statewide and in Wisconsin's Seven Economic Regions](http://wmep.mpi-group.net/Full2005Study/The%20Wisconsin%20Manufacturing%20Study.pdf). Prepared for the Wisconsin Manufacturing Extension Partnership. <<http://wmep.mpi-group.net/Full2005Study/The%20Wisconsin%20Manufacturing%20Study.pdf>>. Accessed July 12, 2010.

- 3. **Workforce Match:** The industries should have an adequate supply of employees with the necessary workforce skills required by the industries. This was measured by the proportion of employees in occupational categories important to that industry. The greater the ratio of workers employed in relevant occupations, the easier it is for businesses to get workers with good skills, and the less they need to worry about staffing shortages as they experience growth. Data from the Bureau of Labor Statistics was used to create benchmarks for the workforce of each industry in this step.
- 4. **Positive Growth Trends:** The industries should have strong growth prospects as measured by the projected increase in manufacturing output (the total value of goods and services produced), and employment in the near future. This growth should be both in absolute terms as well as relative to other industries in the region. All else being equal, an industry that outperforms other industries in a given region is likely to demand more real estate. To assess these criteria, forecasts for employment and output were purchased from Moody's Economy.Com and analyzed.

## Industrial Sector Analysis Components





## Final Target Industrial Subsectors and Selection Criteria

Target Industrial Sector (3 Digit NAICS)	Competitiveness	Transaction Volume		Workforce Match	Growth Potential
	Local Competitive Advantages	% of Manufacturing Transactions since 1990	Number of Real Estate Transactions Since 1990	% of Occupations with LQ>1	Future Output Growth (Annual)
Fabricated Metal Product Manufacturing	HW, SN	18%	26	74% - 86%	2.2% - 4.6%
Machinery Manufacturing	SN	18%	26	82% - 83%	1.7% - 4.6%
Computer and Electronic Product Manufacturing	HW, M7, SN	10%	14	69% - 70%	2.4% - 7.6%
Food Manufacturing	HW, M7, SN	8%	12	57% - 63%	0% - 0.4%
Electrical Equipment, Appliance, and Component Manufacturing	SN	6%	8	75% - 84%	6.6% - 10.1%
Miscellaneous Manufacturing	SN	6%	8	77%	4.4%

HW: Heavy Water User  
M7: Milwaukee 7 Target Industry  
SN: Strong Local Supplier Network

The analysis examined all industries as categorized by the North American Industry Classification System (NAICS), which classifies businesses based on their primary economic activity. For each of the four criteria, industries were analyzed at the four-digit code level.

The results of the analysis are summarized in the chart above at the industry subsector (three-digit NAICS) level, followed by an interpretation of the results. On the ensuing pages, a detailed profile for each industrial subsector is provided. A more detailed description of the methodology and results is contained in Appendix B.

The chart shows the final target industrial subsectors and the criteria that were analyzed to arrive at them. Subsectors are groups of industries with similar characteristics: for example, the Electrical Equipment, Appliance, and Component Manufacturing subsector consists of the Electrical Equipment Manufacturing, Electric Lighting Equipment Manufacturing, and Other Electrical Equipment and Component Manufacturing industries. It is important to note that not all of the 4-digit industries that compose the target subsectors (3-digit) were selected. The list of individual industries is included in the individual subsector profiles later on in this section.

## Local Competitiveness

All industries were first vetted against the MPI Group's study of southeast Wisconsin. The study, published in 2005, was commissioned by the Wisconsin Manufacturing Extension Partnership to identify competitive industries in Wisconsin, with the state divided into seven distinct economic regions. The study defined competitiveness based on 12 different variables: the presence of well-developed networks of local suppliers, productivity, relative industry earnings, specialization and regional economic importance<sup>2</sup>. If an industry was not in the MPI study's final list of competitive industries for southeast Wisconsin, it was excluded from analysis. According to the MPI analysis, all final subsectors have well-developed networks of local suppliers, which helps them maintain a competitive advantage. Other competitiveness factors were identified through the Consultant Team's research and stakeholder interviews. In terms of infrastructure, Milwaukee has a water supply that is both plentiful and low-cost, so it has a competitive advantage vis-à-vis industries that use a lot of water. Looking at local institutional support, the City is also trying to consolidate a water technology industry cluster, and the Milwaukee 7 is focused on two subsectors, food manufacturing and control instruments, trying to facilitate greater collaboration around research, technology, and supplier relationships, again contributing to institutional advantage of these subsectors.

## Transaction Volume

The industrial market study looked at property transactions involving manufacturing tenants between 1990 and 2010<sup>3</sup>, categorized by industry, to determine which industries were most actively pursuing new real estate. The results indicate that fabricated metals and machinery manufacturing accounted for the lions' share of real estate transactions over the last 20 years, followed by food, electrical equipment, and miscellaneous manufacturing. This provides strong evidence that the target industries are not just the most competitive in Milwaukee, but also have the greatest real estate demand (and therefore the most potential to locate at Century City).

<sup>2</sup>To assess competitiveness, industries were grouped together using these 12 variables with a mathematical technique known as cluster analysis. Linear discriminant analysis, a statistical method, was then used to explain the groupings and weed out competitive sectors from declining and non-base sectors. A more detailed explanation of the methodology can be found in Appendix B.

<sup>3</sup>Transactions between 1990 and 2006 were derived from the City's MPROP database, which only records activity when building permits are issued, so the analysis excludes releases in existing buildings. From 2007 onward, transactions were available from CoStar Tenant, a commercial subscription database that has a more comprehensive (but shorter) record of leasing activity.

## Workforce Analysis

The employment location quotient ("LQ") measures the proportion of a region's workforce employed in a given occupation relative to the nation as a whole. Occupation refers to the type of work performed by employees; each business typically employs people from several different occupations. For example, a business in the food manufacturing subsector might employ food science technicians, bakers, sales and marketing staff, food service managers, maintenance workers and shipping clerks. An LQ greater than one indicates that the region has a greater concentration of employment in that occupation compared to the rest of the country. For example, if the LQ for bakers in Milwaukee were 1.3, it would mean that Milwaukee's concentration of bakers (relative to other occupations) is 30% higher than the rest of the nation. In this way, the LQ for occupations reveals a region's workforce specialization.

This step in the analysis used BLS data to determine the occupational composition of each industry. The percentage of an industry's employment for each occupation with LQ greater than one was added together for each industry. Therefore, the higher the percentage, the more specialized the Milwaukee labor force is for that particular industry (80% for a specific industry would mean that 80% of all occupation categories required for that sector have an LQ greater than one and Milwaukee has a specialization advantage for the vast majority of occupations in that industry). As the results show, the final target industries benefit from a Milwaukee workforce that is relatively specialized for their occupational needs. Industries without significant specialization were removed from the list of candidate sectors. The ranges in the table reflect the fact that the four-digit industries in each subsector do not all have the same rate of workforce specialization.

## Growth Potential

To estimate future industry growth, projections of output between 2010 and 2020 was purchased from Moody's Economy.Com for each target industry. The annual figures were used to calculate an average rate of growth over the projection period. Industries with negative output growth



were excluded, with the exception of some food manufacturing industries that are being targeted by regional economic development initiatives. In general, the growth rates of these industries in Milwaukee are projected to exceed the growth rate for those same industries nationally and the overall growth rate in Milwaukee, demonstrating again that these industries are the most competitive in the City. The ranges in the table reflect the fact that the four-digit industries that compose each subsector do not all have the same projected growth rate.

## Subsector Profiles

Once the analysis was completed, profiles for each target subsector were created to summarize relevant information about each one at a glance. The information contained in each profile includes:

- A description of the goods and services that the subsector produces
- The final (4-digit) target industries composing the subsector
- The largest real estate deals recorded for that subsector
- The typical lot size and building size of operations
- Infrastructure requirements
- Workforce requirements
- Industry outlook

The subsector profiles are presented on the following pages.

## 311 Food Manufacturing

Profile: the Food Manufacturing subsector processes fruits, vegetables and livestock into products for human consumption. This subsector includes everything from dried fruits, nuts and cake mixes to frozen pizzas and packaged meat.

### Industries (4-digit NAICS level)\*

3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing
3118	Bakeries and Tortilla Manufacturing
3119	Other Food Manufacturing



### Major Transactions in Milwaukee

Palermo's Pizza  
Unilever  
Kangaroo Brands  
Great Skott Foods

### Workforce Needs

Packaging and filling machine operators, food batchmakers, bakers and hand packagers constitute the greatest percentage of this subsector's workforce needs.

### Outlook

Future output growth is currently projected to be flat, but successful efforts to build supply-chain relations between food manufacturers in the region could lead to an upgraded outlook.

Growth Rate (2010-2020)	
Employment	0.0%
Output	0.10%
Output-National	0.70%

### Characteristics of Food Manufacturing Transactions

Median Building Size (SF)	24,000
Building Range (SF)	10,783 - 133,052
Median Lot (Acres)	3.6
Lot Range (Acres)	0.8 - 13.2
Infrastructure Needs	Water

\*Excludes industries in the Food Manufacturing subsector that were less competitively advantaged



### 333 Machinery Manufacturing

Profile: Machinery Manufacturing industries produce machines--tools that perform work using gears, levers, and other mechanisms. Production processes include welding and assembly to join parts, as well as stamping, bending and forging to manufacture individual parts. Products include wind turbines, air conditioners, furnaces, and pumps.



Large-format gear cutting at Rexnord Industries

#### Industries (4-digit NAICS level)\*

- 3334 Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing
- 3336 Engine, Turbine, and Power Transmission Equipment Manufacturing
- 3339 Other General Purpose Machinery Manufacturing

#### Major Transactions in Milwaukee

- Ingeteam
- Rexnord Industries
- General Electric
- Pentair

#### Workforce Needs

Assemblers, machinists, engine and machine assemblers, and mechanical engineers constitute the greatest percentage of this subsector's workforce needs.

#### Outlook

The brightest spot in the Machinery Manufacturing subsector is the Engine, Turbine and Power Transmission Equipment industry, which is projected to increase in employment, output and concentration over the next decade. Both the Ventilation and Other General Purpose Machinery industries are also projected to experience output growth over the next decade.

Growth Rate (2010-2020)	
Employment	0.3%
Output	3.70%
Output-National	3.40%

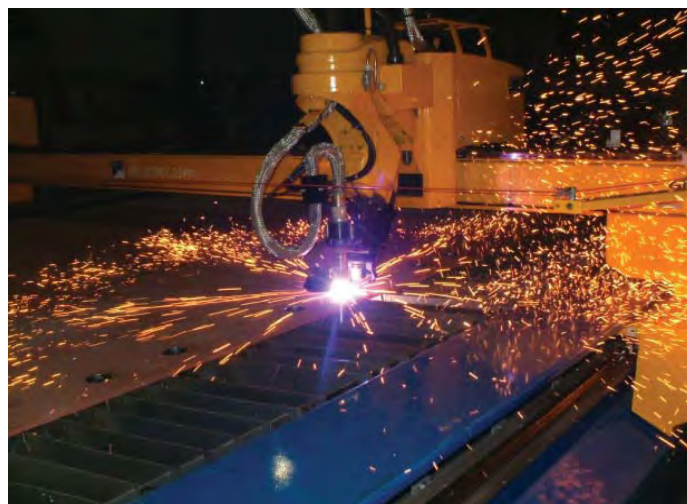
#### Characteristics of Machinery Manufacturing Transactions

Median Building Size (SF)	27,380
Building Range (SF)	5,000 - 150,465
Median Lot (Acres)	3.0
Lot Range (Acres)	1.1 - 9.9
Infrastructure Needs	Electricity, natural gas

\*Excludes industries in the Machinery Manufacturing subsector that were less competitively advantaged

## 332 Fabricated Metal Product Manufacturing

Profile: Fabricated Metal manufacturers transform metals into a variety of components such as bolts, railing, valves, and pipes. Processes used in this subsector include forging, stamping, bending, coating, and machining.



### Industries (4-digit NAICS level)\*

- 3321 Forging and Stamping
- 3323 Architectural and Structural Metals Manufacturing
- 3327 Machine Shops, Turned Product, and Screw, Nut, & Bolt Manufacturing
- 3328 Coating, Engraving, Heat Treating, and Allied Activities
- 3329 Other Fabricated Metal Product Manufacturing

### Major Transactions in Milwaukee

Busch Precision  
Carlisle Tire & Wheel  
Argon Industries  
Caleffi North America  
Badger Railing

### Workforce Needs

Machinists, computer-controlled machine tool operators; cutting, punching and press machine operators; plating and coating operators; and line supervisors constitute the greatest percentage of this subsector's workforce needs.

### Outlook

Future output growth between 2% and 5% per year. Employment growth is greatest in the Machine Shops industry at 2% per year. Machine Shops and Architectural and Structural Metals appear poised for the greatest growth within this subsector.

Growth Rate (2010-2020)	
Employment	0.2%
Output	3.50%
Output-National	3.70%

### Characteristics of Fabricated Metal Transactions

Median Building Size (SF)	21,600
Building Range (SF)	6,000 - 145,748
Median Lot (Acres)	2.5
Lot Range (Acres)	0.9 - 8.0
Infrastructure Needs	Electricity, water

\*Excludes industries in the Fabricated Metal subsector that were less competitively advantaged



### 334 Computer & Electronic Product Manufacturing

Profile: companies in the Computer & Electronic Product subsector produce computers and other high-tech equipment to monitor systems in many fields, including medicine and the military. Products include solar cells, electromedical devices, CT scanners, radar systems, industrial controllers, and parking meters.



Johnson Controls staff in a battery manufacturing lab

#### Industries (4-digit NAICS level)\*

- 3342 Communications Equipment Manufacturing
- 3344 Semiconductor and Other Electronic Component Manufacturing
- 3345 Navigational, Measuring, Electromedical, and Control Instruments Manufacturing

#### Major Transactions in Milwaukee

- Traffic and Parking Control Company
- General Electric
- Taylor Dynamometer
- Johnson Controls
- Xymox Technologies

#### Workforce Needs

The Computer & Electronic Product subsector is engineering-intensive: engineers and production workers are needed in almost equal numbers. Assemblers are the most-needed production workers, followed by electrical engineers, industrial engineers and mechanical engineers.

#### Outlook

The Navigational, Measuring, Electromedical and Control Instruments industry is poised for significant growth in Milwaukee, with output and employment projected to expand over 7% and 5% per year respectively. Significant growth is also anticipated for the Communications Equipment and Semiconductor industries. This subsector will likely experience a large increase in competitive advantage.

Growth Rate (2010-2020)	
Employment	4.3%
Output	6.60%
Output-National	3.70%

#### Characteristics of Computer & Electronics Manufacturing Transactions

Median Building Size (SF)	37,929
Building Range (SF)	5,928 - 127,046
Median Lot (Acres)	4.0
Lot Range (Acres)	1.7 - 8.5
Infrastructure Needs	Water, electricity, fiber

\*Excludes industries in the Computer & Electronic Product subsector that were less competitively advantaged

## 335 Electrical Equipment, Appliance, & Component Manufacturing

Profile: companies in the Electrical Equipment subsector produce equipment that use, generate and distribute electricity. Products include batteries, fuses and switches, motors, generators, and lighting fixtures.

### Industries (4-digit NAICS level)\*

- 3351 Electric Lighting Equipment Manufacturing
- 3353 Electrical Equipment Manufacturing
- 3359 Other Electrical Equipment and Component Manufacturing

### Major Transactions in Milwaukee

Yaskawa Electric America  
Helwig Carbon Products  
Derco Aerospace



A Yaskawa Motoman industrial robot

### Workforce Needs

Electrical and electronic equipment assemblers; electromechanical equipment assemblers; coil winders, tapers and finishers; and line supervisors constitute the greatest percentage of this subsector's workforce needs.

### Outlook

The Electrical Equipment subsector has been transformed in the last decade due to competitive pressures. After undergoing consolidation, it appears ready to rebound, with annual output growth projections above 6% and employment growth nearly 4% per year. This subsector is positioned to increase its competitive advantage over the next decade.

Growth Rate (2010-2020)	
Employment	3.5%
Output	9.60%
Output-National	6.20%

### Characteristics of Electrical Components Manufacturing Transactions

Median Building Size (SF)	40,360
Building Range (SF)	7,094 - 139,726
Median Lot (Acres)	6.1
Lot Range (Acres)	2.63 - 10.0
Infrastructure Needs	Electricity, fiber

\*Excludes industries in the Electrical Equipment subsector that were less competitively advantaged



### 339 Miscellaneous Manufacturing

Profile: companies in the Miscellaneous Manufacturing subsector produce a wide range of products. The medical equipment industry produces goods that include contact lenses, prosthetics, and braces.

#### Industries (4-digit NAICS level)\*

3391 Medical Equipment and Supplies Manufacturing

#### Major Transactions in Milwaukee

Lakeside Manufacturing  
Herslof Optical Company  
Trioptics



Staff at Trioptics assemble optical test equipment.

#### Workforce Needs

Team assemblers; dental laboratory technicians; first-line production supervisors; other assemblers and fabricators; and inspectors, testers, sorters, samplers, and weighers constitute the greatest percentage of this subsector's workforce needs.

#### Outlook

The Medical Equipment and Supplies industry is expected to grow at an annual rate of over 4% and gain competitiveness over the next decade.

Growth Rate (2010-2020)	
Employment	1.1%
Output	4.40%
Output-National	3.50%

#### Characteristics of Miscellaneous Manufacturing Transactions

Median Building Size (SF)	40,900
Building Range (SF)	7,500 - 160,000
Median Lot (Acres)	2.0
Lot Range (Acres)	0.47 - 9.78

\*Excludes industries in the Miscellaneous Manufacturing subsector that were less competitively advantaged

## Survey Of Modern Business Parks

The industrial sector analysis provides a reasonable insight into the industries that will be generating jobs and real estate demand in Milwaukee, and can be used to inform the City's decisions regarding which industries to design and market Century City around. At the same time, there are more general but no less critical business park requirements that most companies consider when evaluating a prospective site for their future operations. To generate a list of these "shovel ready" criteria, SB Friedman reviewed contemporary business parks in the Milwaukee region and drew from its substantial work on other business parks. The following Milwaukee-area business parks were reviewed:

### **Menomonee Valley Industrial Center (MVIC).**

Located east of Miller Park between I-94 and the river, the MVIC is a high-quality business park with a net acreage of 60 acres and an average lot size of 6 acres. Amenities include an extensive nature trail, shared stormwater management facilities and convenient access to I-94, I-43 and Miller Parkway, as well as Mitchell International Airport. Major tenants include Palermo's Pizza, Charter Wire, Derse, and Ingeteam. Planning began in 1998, while the first tenant moved in in 2005. MVIC is at 80% absorption, with 12 total acres remaining on three sites.

## Menomonee Valley Industrial Center



## Northwest Business Park I

This business park is located in northwest Milwaukee, between Calumet Road, 76th Street, 91st Street, and the railroad tracks. It is part of the northwest industrial Land Bank, and provides almost 500 net acres for business users, with an average lot size of 7 acres. Major tenants include GE Healthcare, Derco Aerospace, and Helwig Carbon Products. It is in close proximity to Northridge Mall Shopping Center and has rail access. The park opened in the 1990s and is at full occupancy today.

## Northwest Business Park





### Franklin Business Park

Located in Franklin off Ryan Road, this business park provides 353 net acres for tenant use, averaging 6 acres per lot. Major tenants include Proteus Packaging Corporation, Diamond Nexus Labs, and Valpak Direct Marketing. The park is approximately 2 miles west of I-94, and is 15 minutes from Mitchell International Airport. The park opened in 1994 and expanded over several phases. As of December 2010, the park is over 97% sold, with 19.5 acres remaining on 5 sites.

### Oak Creek Business Park

Under development by WisPark, Oak Creek Business Park was in the engineering stage at the time of research. Between 170 and 200 acres will be available, with lot sizes ranging from 3 to 25 acres. The business park occupies the southeast corner of Oakwood Road and Howell Avenue, and is 5 minutes from I-94. Though adjacent to a railroad, no rail access is planned due to a conservation easement separating the park and rail line.

Franklin Business Park



Oak Creek Business Park



## Characteristics Of Successful Modern Business Parks

Based on the survey of business parks, the City should consider the following factors for Century City Business Park (some of which are already in place) in order to attract users.

**Parcel Size.** Surveys of comparable modern business parks in the Milwaukee region indicate that parcel sizes typically range from 5 to 7 acres, although larger and smaller parcels are not uncommon. Parcels that are less than 2 acres are rare, and anything smaller tends to make access an issue. Floor-Area Ratio (FAR) should be targeted between 0.25 and 0.30. This is roughly in line with other manufacturing-focused business parks in the region and also in line with the City's focus on relatively job-intensive businesses.

**Critical Mass.** A modern business park needs a minimum of roughly 40 contiguous acres to create a cohesive business park environment and support the level of amenities expected by users.

**Scarcity of Urban Business Park Land.** High quality business park land is expensive to create in the City, so the amount of saleable land should be maximized while still providing a high level of amenities.

**Create a Modern Business Park Environment.** On-site amenities such as walking paths, landscaping, and business support services will make Century City more competitive. Buffering can be used creatively to both provide additional amenities and adequately shield businesses and residences from each other. Branding and signage will also help create a cohesive identity and improve the business park's visibility.

**Shape of Parcels.** Rectangular shaped sites are preferred.

**Appropriate Zoning.** Proof of appropriate zoning or letter of commitment to rezone the property is desired. Given that the City presently has full site control, this should be easy to address.

**Ownership.** Sites should be under single ownership – assemblage can cause delays and present other issues. Since Century City is under single ownership, it has an advantage here.

**Highway Visibility and Access.** Businesses prefer good visibility and access from an Interstate/major roadway. Century City is located less than 2 miles from I-43 and within 3 miles of I-94.

**Access to Multiple Transportation Modes.** Century City has immediate access to rail and is within ½ an hour of General Mitchell International Airport.

**Rail.** Rail is unlikely to be a key marketing feature, as described in Chapter 2, but some flexibility should be retained in the site plan to accommodate rail users. Specifically, parcels adjacent to the railroad should be reserved for rail users initially; once the majority of the site is sold, the rail-abutting parcels could be marketed to non-rail users.

**Surrounding Uses.** Surrounding uses should be attractive and compatible with potential users. This is important to establish Century City's identity as a place for business. It is also a potential challenge, given the proximity of residential neighborhoods to the east, but it can be addressed through adequate buffering.

**Infrastructure.** Utilities (electricity, water, wastewater, natural gas) must be properly sized, with adequate system capacities to meet the needs of the project. Otherwise, the ability to upgrade services within three to six months is essential. High-speed Internet access (T-1 level of service and/or fiber optics) is also necessary to have a competitive modern business park. In the context of Century City, separating utilities that were combined for Tower Automotive is crucial.

**Purchase Conditions.** Property should be sold at a competitive price and confer fee-simple title. For the Milwaukee area, business park sites typically sell for \$60,000 to \$100,000 an acre; a price in the lower end of the range would be considered particularly competitive.



## Retail Market Profile

**Expansion.** Businesses often seek a site which meets current needs and provides contiguous acreage to accommodate future expansion needs. Parcel layout at Century City should take this into account and allow buyers to combine adjacent parcels where necessary. Expanding Century City north of Capitol Drive as part of a future phase can also accommodate new or existing users who outgrow their original sites.

**Mix of Users.** Century City Business Park will probably not be dominated by any one sector. Given the conclusions of the industrial market analysis, there does not seem to be enough transaction volume from any one industrial subsector to sell out a “themed” business park. Instead, Century City should be designed to accommodate users from a variety of industries within the parameters specified above.

The market study also profiled the market for retail development in the 30th Street Corridor. The retail market profile identifies sites with the greatest potential for future retail development based on location, current use and anticipated changes in neighboring areas. It also assesses the market potential for new retail in the corridor, and sets out a hypothetical development program.

Two sites were identified in the retail market profile:

- 1. Century City Business Park:** The north end of the business park between Capitol Drive, the railroad and 31st Street has sufficient frontage and is immediately adjacent to future businesses. Support services such as a copy shop, restaurant or dry cleaners would benefit from that proximity while enhancing the business park’s amenity level.
- 2. Capitol Drive Corridor:** The north side of Capitol Drive between 27th Street and 31st Street and south side between 35th Street and the railroad benefits from extensive frontage on Capitol Drive, although the railroad overpass limits visibility somewhat. The corner lot on 35th Street and Capitol Drive is privately owned and actively marketed for retail use. The remaining properties on the north side of Capitol Drive are occupied mainly by auto-oriented commercial uses. Due to the presence of active uses and multiple owners, the north side is unlikely to be redeveloped in the near-term, but it presents a longer-term opportunity to transition to more pedestrian-oriented retail.

## Corridor Retail Sites—Century City Business Park (1) and Capitol Drive Corridor (2)



A market analysis performed by SB Friedman in 2009 for the 35th and Capitol Drive Tax Increment District feasibility study found that the Century City Business Park site could support up to approximately 200,000 square feet of retail. The estimated development potential assumes that the site located at the southeast corner of Capitol Drive and 35th Street develops as a community level retail shopping center anchored by a grocery store or standalone home improvement store. The study notes that because of the relatively saturated competitive environment, either anchor would likely cannibalize existing grocery or home improvement stores within the market area. The Century City retail site could accommodate 45,000 square feet of retail. The program for the Century City site could be as follows:

Tenant	Square Feet
Drugstore	14,000
Discount General Merchandise Store	10,000
Restaurants	7,000
Auto Parts and Accessories Store	7,000
Inline/Storefront	7,000
<b>TOTAL</b>	<b>45,000</b>



# Residential Market Profile

The residential market was profiled as part of the market study. The residential market profile identifies sites with the greatest potential for residential development based on location, current use and anticipated changes in neighboring areas. It also assesses the potential for new residential in the corridor given demographic and supply conditions, and sets out a hypothetical development program.

Two potential residential sites were identified in the market profile:

- 1. Century City Outlots:** The two triangular outlots east of Hopkins and north of Nash, as well as the outlots east of 27th Street on either side of Hopkins, are part of the proposed Century City Business Park. These blocks could be redeveloped as residential and reintegrated into the existing residential neighborhood east of Century City, with appropriate buffering from the business park. Closing Hopkins between 27th and 28th Street would deter through-traffic and improve the area's attractiveness as a residential neighborhood.
- 2. Former Esser Paint Factory:** Located between Galena Street, Cherry Street, 32nd Street, and the railroad, the former Esser Paint factory is a brownfield site in the middle of a residential neighborhood. Immediately north of the factory on either side of 31st Street are lots that have been cleared by the city. Given the strongly residential character of the neighborhood, there could be an opportunity for infill housing on the factory site and vacant lots.

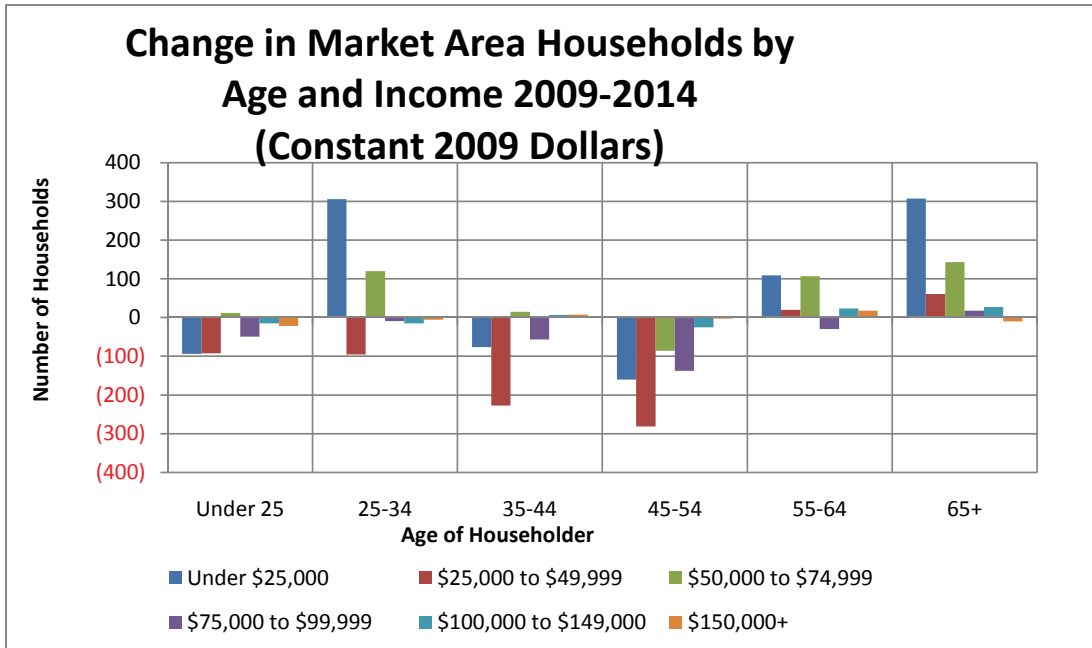
## Century City Outlots



## Esser Paint



Demographic analysis suggests that households between the ages of 55 and 64, 65 and older, and 25 to 34 with incomes less than \$25,000 and incomes between \$50,000 and \$74,999 will experience the most growth between 2009 and 2014. More than 600 households in the 55 and over groups and 400 households in the 25 to 34 age group will be added, while only 170 family apartments and 47 “grand-family” apartments were recently created or are under construction. This suggests an opportunity for senior housing and some limited potential for additional family housing.



**Source:** ESRI and SB Friedman





## 4. Implementation Plan





The purpose of this chapter is to provide strategies and supporting actions to implement the recommendations contained in Chapter 2. Successful implementation will require active involvement and coordination of multiple public agencies and private actors. The implementation matrix on the following pages outlines the steps and timeframe for each action, as well as the parties responsible for each step. The four main strategic actions include: strategic recommendations focused specifically on business park development, and general recommendations for land use, transportation and stormwater management in the corridor, as a whole. Business park development is singled out for special attention because of Century City's importance as both the most catalytic and near-term development opportunity – indeed, it is already in the implementation stage, with demolition and remediation ongoing. Both the strategies specific to Century City and corridor-wide strategies are described in greater detail in the narrative section that follows the matrix.

## Milwaukee 30<sup>th</sup> Street Corridor Master Plan IMPLEMENTATION MATRIX

### Timeframe

Short Term	1-2 years
Medium Term	2-5 years
Long Term	>5 years
Phased	Phased as development occurs

Strategic Action	Key Steps	Timeframe	Primary Responsibility
<b>1. Strategic Business Park Development</b>			
A. Form Business Park Investment Entity	Determine entity's composition (public, private, non-profit, public-private)	Short Term	RACM and economic development entities, PAG
	Appoint key stakeholders to board (e.g., government, business, community groups)	Short Term	RACM and economic development entities
B. Complete Site Design and Develop Site Infrastructure	Develop detailed master plan for Century City	Short Term	City and economic development entities
	Develop trunk infrastructure (including roads, utilities, stormwater and buffering)	Short Term	RACM
	Parcelization: Adapt to suit mix of tenants; reserve sites with rail access for rail users until buildout	Phased	Investment Entity
C. Finance Ongoing Management and Marketing Expenses	Initial funding provided by City and/or state sources	Short Term	RACM and Investment Entity
	Pursue longer-term funding from grants, establishment of BID, and/or special assessments.	Short Term	Management/ Investment Entity
D. Translate Institutional Support into Commitments from Partners	Pursue sponsorships and/or partnerships with stakeholders	Short Term/ Long Term	RACM and Investment Entity
	Gain support and outreach assistance from entities such as MAWIB and Milwaukee 7	Short Term/ Long Term	City and Investment Entity
E. Designate Permanent Management Entity of Business Park	Transfer management of business park to permanent managing entity (e.g., BID or non-profit)	Long Term	RACM, Investment Entity

<b>2. Land Use Regulatory Framework</b>			
A. Rezone Key Parcels	Rezone key parcels to reduce land use conflicts and support desirable redevelopment (see Appendix C)	Short Term	City
B. Enforce Code Requirements for Recycling/Salvage Uses	Verify current zoning and special use permits and identify violations	Short Term	City
	Apply and enforce existing zoning code provisions to non-conforming prohibited uses	Short Term	City
C. Implement and Enforce Buffering and Screening Requirements	Enforce residential buffering requirements for IO- and IH-zoned sites in the corridor	Short Term	City
	Encourage businesses to apply for BID and other grant funds to defray cost of landscaping upgrades	Short Term	City and Investment Entity
	Upgrade fence requirements for businesses along public rights of way	Short Term	City
D. Prepare Redevelopment Plans for Key Redevelopment Zones	Assess feasibility of establishing Redevelopment Plans for key areas such as Phase II Century City	Short Term	City, economic development entities
	Initiate planning process for feasible Redevelopment Plans	Long Term	City, economic development entities

<b>3. Transportation</b>			
A. Improve Priority Intersections and Streets	Undertake detailed study of constrained streets and intersections in corridor	Short Term	City
	Improve access to Century City and Capitol Drive Corridor	Short Term	City
	Improve 30th Street to facilitate traffic movements and reduce impact on residences	Phased	City
	Improve other constrained intersections identified on p. 40	Medium Term / Long Term	City
B. Develop a Truck Access Program	Meet with affected businesses and trucking companies to gather data and input on truck usage patterns	Short Term	City, WisDOT, and economic development entities
	Decide on recommended access routes	Short Term	City, WisDOT and economic development entities
	Implement program with signage, enhanced signalization and enforcement mechanisms	Medium Term	City



C. Implement Traffic Calming Measures	Identify key residential streets for implementation of traffic calming	Short Term	City
	Work with Public Works and WisDOT to install traffic calming retrofits	Long Term	City
D. Preserve the Relevance of Rail Corridors	Encourage businesses that could potentially use rail to locate at sites with existing spurs or adjacency to rail line	Phased	RACM and economic development entities
	Place complementary infrastructure such as fiber optic lines along rail corridor	Long Term	City, Canadian Pacific, Private Utility Companies
	If rail use continues to decline, convert underutilized rail corridors for limited-access trucking	Long Term	City and Canadian Pacific
E. Facilitate Relations between Businesses and Railroads	Coordinate service requirements and issues with rail users along the corridor	Long Term	City and economic development entities
<b>4. Stormwater</b>			
A. Integrate Stormwater BMPs in all Redevelopment within Corridor	Provide dual-purpose open space and stormwater detention improvements at Century City, Phase II Century City and Esser Paint sites	Phased	RACM
B. Implement Key Recommendations from <i>Regional Approach to Stormwater Management in 30<sup>th</sup> Street Corridor</i> Report	Construct stormwater improvements in right-of-way around Century City, including permeable surfaces, curb extension rain gardens and stormwater planters	Short Term	RACM/MMSD/DPW
	Retrofit existing properties with new on-site stormwater management improvements (i.e., Ruby Yard/DRS Technology site, Eaton Corporation and Vapor Blast Manufacturing)	Medium Term /Long Term	RACM/MMSD/DPW and Property Owners

# I. Strategic Business Park Development Recommendations

Due to its size, timing and potential community impact, Century City is the most critical redevelopment effort in the corridor at the present time. Success will require extensive planning, coordination and resources to result in a distinct area within the corridor that looks and feels like a modern business park environment. This section outlines processes that are required to create a vibrant Century City Business Park and, in the process, renew the 30th Street Corridor.

For most business parks, predevelopment tasks such as gaining site control, assembling land, clearing and remediation are challenging prerequisites that require a great deal of planning and resources to accomplish. However, in the case of Century City, the City has already made significant progress. The Redevelopment Authority of the City of Milwaukee (RACM) has acquired 84 acres of the former Tower Automotive site and is in the process of demolition and environmental remediation to convert the site into development-ready business park land. The processes that still need to be addressed now, or in the near future, are as follows:

## A. Form a Business Park Investment Entity

In order to ensure coordination of master planning, marketing and development of secondary infrastructure (such as stormwater and sidewalks), a dedicated Investment Entity should be formed or designated. The entity could be public or private, or could also take the form of a public-private partnership. Whatever its structure, it should be incorporated early on in the process due to the extensive coordination needed between phases. The entity would drive all aspects of developing, marketing and managing the business park, including:

- **Development of a Detailed Master Plan.** RACM, in consultation with the Investment Entity, would produce a detailed master plan for Century City based on the recommendations contained in this plan and further refinements. The master plan would include design guidelines, use covenants, engineering and siting requirements, and other stipulations.
- **Securing Financing and Developing Site Infrastructure.** The Investment Entity would acquire and channel public investment into the business park. It would also oversee the development of infrastructure, as described in further detail in the next section (B. Complete Site Design and Develop Site Infrastructure).
- **Business Attraction.** The entity would recruit prospective tenants and help RACM promote land sales. It should reach out to brokers as well as trade associations and major companies from target industries early on to educate them about Century City. Open houses and broker walkthroughs can be conducted once remediation is complete and infrastructure is in place. Coordination with Milwaukee 7 and other state, local and regional economic development entities may help extend Century City's marketing reach.
- **Branding and Signage.** The entity would form a unique identity for Century City and effectively communicate the Century City brand to target industries.
- **Site Management.** To the extent that any landscaping, streets, curbs or other common facilities within the business park are not publicly maintained, the entity would manage such maintenance, most likely through a BID or special assessment structure. In the longer term, this function would be taken over by a dedicated management entity once the business park is fully occupied and established.
- **Business Support Services.** The entity would connect Century City businesses with financial and technical assistance. It would help businesses identify customers and suppliers through industry research and help connect companies to training programs and hiring agencies. It could consider partnerships with the City, MAWIB, Milwaukee 7 and other agencies to broaden the network of businesses and employees reached. Support services could not only help to enhance the competitiveness of Century City businesses, but also increase the amount of local sourcing in which they engage.



## **B. Complete Site Design and Develop Site Infrastructure**

This includes planning, engineering and developing roads, buffers and stormwater facilities, as well as planning for rail access in case there is a tenant who wants a rail spur. Before marketing and sales can begin, roads and buffers should be in place to define the site as a location with a distinct identity, and to signal prospective companies that the business park will offer a high level of amenity.

Parcelization does not need to occur at this time, but can instead be shaped by the needs of the initial mix of tenants. As mentioned in the industrial market analysis, sites with access to the rail line should be reserved initially for tenants who want rail. Once the majority of sites are occupied, the remaining rail sites may be opened to bids from all prospects.

## **C. Obtain Financing for Ongoing Management and Marketing Activities**

Once predevelopment activity is complete, a source of funds will be needed to sustain the Investment Entity and its activities. Initially, this funding will probably come from the City and/or other public sources, either through outright grants or contracts for services. As the business park becomes established, more funding for ongoing operations and secondary capital improvements can come from a BID or special assessment, as well as public and philanthropic resources.

## **D. Leverage Institutional Support for Fundraising**

A broad base of government, civic and business support will be needed to ensure coordination and accountability to stakeholders. In the context of a dedicated Investment Entity, membership on the board of the Investment Entity would provide the most logical form of support. Rules would set a floor and ceiling on the proportion of board members from key agencies, including existing economic development entities, the City, State and County, economic development agencies, non-profit community groups active within the corridor, and businesses. Other forms of support could include sponsorships and/or partnerships between the managing entity and stakeholders. Regardless of the form of support provided, stakeholders should be carefully

selected to ensure fair representation. Supporting institutions and stakeholders could also potentially enhance the marketing efforts of the managing entity through referrals or joint promotions.

## **E. Designate Permanent Management Entity for Business Park**

Once the business park is established, a permanent management entity should be formed to administer the business park and support its occupants. While a BID may be the most obvious management entity candidate, other organizational structures are possible, including a Community Development Corporation (CDC) or other entity. The timeframe for this transition should be driven by the completion and occupancy of the business park rather than a static timetable.

## 2. Land Use Regulation

Apart from design and site requirements for Century City, any additional land use regulation beyond existing requirements should be carefully weighed and proposed only for specific situations. Given that the zoning code was recently revised, the existing provisions of the zoning code are generally appropriate for addressing many of the issues arising from the proximity of industrial uses to residences. These issues should work themselves out over time as the provisions of the Code are applied and enforced. Anticipated remedies will include identifying businesses not meeting existing building or zoning code requirements; determining whether other provisions may apply to specific businesses; and enforcing the codes. Rezoning will be appropriate in limited instances to support the overall vision of the Strategic Subzones described in Chapter 1 and to avoid future land use conflicts. (Refer to Appendix D for specific rezoning recommendations, which were initially considered in the City of Milwaukee 30th Street Corridor Land Use Study and revisited over the course of the current Plan.)

The City should take appropriate action to ensure that land included in future phases of Century City is effectively protected from piecemeal development inconsistent with the overall vision of high-quality industrial development. Regulatory tools, particularly Redevelopment Plans, can help protect the City's overall vision for the corridor as development momentum grows. Any major reinvestments affecting potential future redevelopment phases should be consistent with the City's industrial land use goals and plans for the study area. Regulations should stipulate the elimination of existing land use conflicts and avoid future conflicts, improve access to the site, and decrease transportation conflicts and other potential nuisances.

### **A. Conduct General Zoning Actions along the Corridor**

The City zoning map indicates that the most typical zoning classifications along the 30th Street Corridor include Industrial-Office (IO2), which is intended to accommodate older development and provide a buffer between residential areas and more intense industrial uses, and Industrial-Heavy (IH), which accommodates high-intensity

industry and is intended to be separated from residential neighborhoods by less intensive, non-residential districts.

However, there are numerous examples of parcels zoned IH that are adjacent or across a street or alley from residences, thereby straying from the intent of the IH zoning classification. In other instances, industrial areas that are currently interrupted by houses appear to have begun transitioning into future contiguous industrial districts, where a residential land use is located on land now zoned for industrial; this latter example of proximity between industrial and residential is not considered a concern.

Other uses that might be appropriate for transitioning between industrial and residential areas could include live-work units, which are generally allowed in two-family dwellings as a limited use and as of right in R01 and R02 districts. The residential districts in the corridor are generally RT3 and RT4, which would accommodate live-work as a limited use. Live-work units might be particularly appropriate in the Small Business Development Zone, located roughly between Locust St. and North Ave.

#### **Recommendations:**

Some zoning map amendments will be needed to reduce land use conflicts and to support strategic zone concepts, but rezoning should be considered in only limited situations. Where parcels zoned IH are adjacent to residential neighborhoods, consider rezoning to IO2, particularly where there is no current active use. See also Recycling/Salvage Use Requirements below to ensure that existing uses are allowed.

Further, potential rezonings of parcels zoned IH to a lighter industrial use should be evaluated in the following situations: where land zoned residential and industrial share a property line or are on the same block face, particularly where site constraints prevent buffering; where industrial and residential land load off a shared alley; or where the right-of-way is insufficient for accommodating loading. See Appendix D for site-specific rezoning recommendations.



Recycling use at 30th St. and Concordia Ave.; although it is located across the street from residences., the parcel is zoned for heavy industrial use.

### **B. Enforce Restrictions on Recycling/Salvage Uses**

Recycling or scrapping uses are considered “Salvage Operation (outdoor)” for the purposes of the zoning code. These uses are tightly regulated in the code; they are not permitted in IO1/2 and are allowed by Special Use permit in IL1/2, IM and IH. The presence of significant recycling and scrap operations within the corridor necessitates a discussion of existing nonconforming uses and the special use permitting procedure, taken up below.

#### **Nonconforming Prohibited Uses**

Although not currently permitted in the IO2 district, there are several active recycling uses in this district, indicating that either the use is not approved- perhaps going into operation under a different use category, or that it is grandfathered in the code as a nonconforming prohibited use if it has been in operation since 2002. For nonconforming prohibited uses, the issues arising from the land use conflicts should be reduced over time. Note, however, that a property transfer does not preclude a recycling use under new operation, as long as the use has not been dormant for over twelve months.

#### **Recommendations:**

For all existing salvage uses, verify current zoning classifications and special use permits, and determine whether each business is a nonconforming use or a violation. Refer to prior zoning code to determine requirements for grandfathered businesses; coordinate with the Building Inspection Department for appropriate enforcement.

### **Special Uses**

The Special Use procedure applying to new recycling uses requires formal application; public hearing, with notice of the hearing to property owners within 200 feet; and consideration of input from parties of interest, typically from a City department. The board of zoning appeals will not grant a special use without the finding that the following conditions are present: protection of public health, safety and welfare; protection of property; traffic and pedestrian safety; and consistency with the comprehensive plan.

The code specifies the following for protection of property:

“The use, value and enjoyment of other property in the neighborhood will not be substantially impaired or diminished by the establishment, maintenance or operation of the special use.

A geographic concentration of establishments of this type may be evidence, in certain circumstances, that the proposed use will substantially impair or diminish property values.”

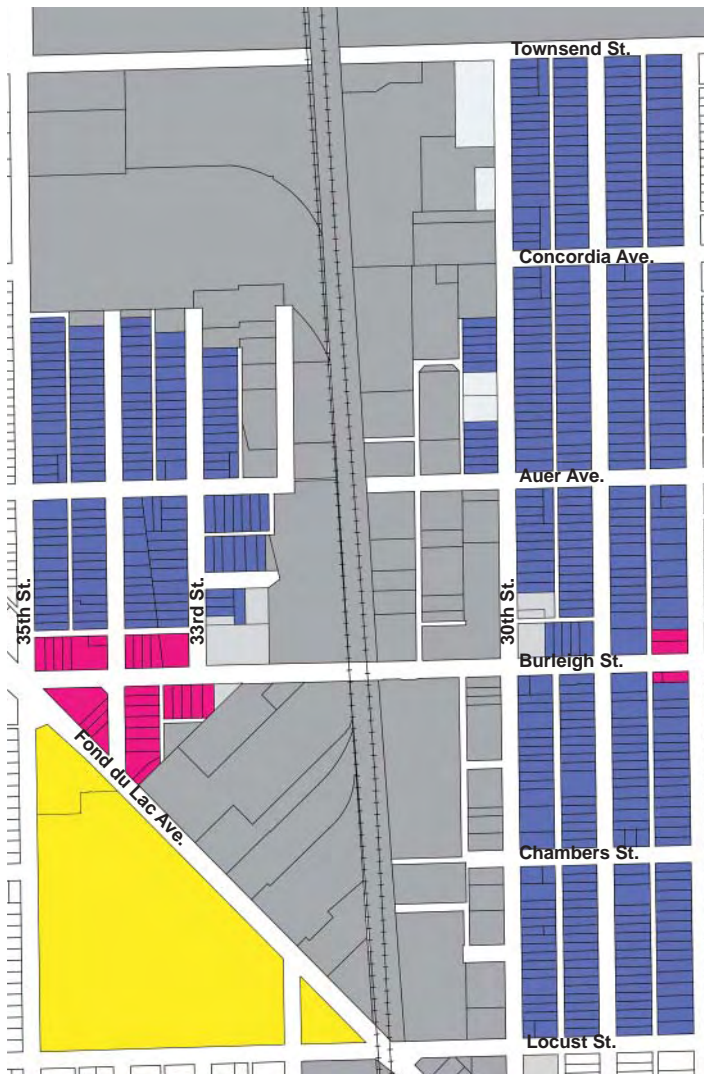
#### **Recommendations:**

Additional salvage uses in the corridor should be discouraged from the redevelopment area. Establishing this position on future salvage uses will assist the board of zoning appeals in their approval process. Considering in particular the “protection of property” clause whose finding is required for a special use to be granted, DCD should establish an appropriate distance that salvage uses should maintain from residential uses. For any proposed salvage operations, DCD should evaluate and advise whether the concentration of similar businesses on the corridor would adversely affect surrounding properties, or be in contradiction to comprehensive or area plans. In addition, DCD should identify a zone where salvage uses should be encouraged.

Note that the Citation site, just south of Aldrich Chemical, has recently been purchased by a business intending to launch a salvage use. DCD should review the status of the special use permit and, if not yet approved, it should determine whether there is sufficient rationale to prohibit a salvage use at this location.



## Existing Zoning: Proximity of Residential and Industrial



### Legend:

- RT3 - Residential / Two-Family
- IO2 - Industrial / Office
- IL2 - Industrial / Light
- IH - Industrial / Heavy
- CS - Commercial / Service
- LB2 - Commercial / Local Business

## C. Implement and Enforce Buffering and Screening Requirements

Industrial uses subject to the 2002 zoning code are required to have a ten-foot buffer if zoned IO2 and a 15-foot buffer if zoned IH. The buffer is required to consist of one minimum six-foot-tall evergreen tree per five lineal feet, spaced as two staggered rows. Alternative residential buffer standards with slightly reduced requirements may apply where nuisances are limited, as defined by the code.

However, very few businesses on the corridor have installed residential buffers. Regardless of when a business began operation, some degree of residential buffering should apply to a site in accordance with the requirements of the prior zoning code.

Also, fences are not as specifically addressed within the landscape provisions; any type of fence is permitted and may be located anywhere on a lot. Where fences are installed in conjunction with a residential buffer, a low-quality fence can detract from the visual effect of the landscaping.

Screening provisions do apply to all parking lots, and the requirements are more intense for heavier uses like storage yards or heavy motor vehicle parking lots. For all parking lots fronting the public way or a property line, the zoning code specifies requirements incorporating trees, shrubs or a low wall, and curbing, to prevent encroachment on public sidewalks.

### Recommendations:

Based on the prior zoning code, determine what requirements apply for businesses in operation prior to 2002. Coordinate with the Building Inspection Department for appropriate enforcement for both grandfathered and new businesses. Over time, installation of residential buffers and parking lot screening, combined with enforcement to meet use provisions in the zoning code, as outlined above, should ease some of the more substantial impacts to properties surrounding industrial uses.



Landscape buffer installed in accordance with Zoning Code at Talgo, across the street from residences.

The City should also consider upgrading fence requirements, such as prohibiting galvanized chain-link fencing along the public way and encouraging more substantial and high-quality fencing, such as masonry, wood or ornamental metal fences. Where an opaque fence is required, require masonry or wood, and prohibit vinyl-slatted fence along rights-of-way. A BID could help businesses implement these new requirements through Safety and Security grants or a facade/landscape matching grant program.

#### **D. Prepare Redevelopment Plans for Key Opportunity Sites**

Redevelopment Plans are one of the main tools that the Redevelopment Authority uses to protect the City's future vision for a particular site. The existing Redevelopment Plan for the Century City project area has effectively protected the City of Milwaukee against inappropriate land uses that conflict with the City's overall vision for the redevelopment site. Approved in 2005 after Tower Automotive left the site, this plan established site boundaries and development requirements, including formalizing the City's right of entry to access the site for environmental testing and specifying land use controls to protect against marginal uses that could affect the overall redevelopment potential.

Establishing a Redevelopment Plan for the redevelopment site north of Capitol Dr. is a potential opportunity to preserve it for a larger redevelopment and protect it against

marginal businesses that conflict with the City's vision. Similarly, a future Redevelopment Plan for adjacent land could require site provisions that guide a comprehensive redevelopment, such as facilitating site access, improving parcel sizes and dimensions, identifying appropriate business types, and enhancing buffering.

In theory, a Redevelopment Plan or series of plans would ideally address the entire corridor. However, given the size of the corridor and the number of properties involved, it would be more appropriate to establish plans that address key opportunity sites along the corridor to reflect priority phases. In particular, this tool should be considered for the Large Business Expansion/Retention Zone, Large Scale Industrial Redevelopment Zone, and possibly the Small Business Development Zone.

#### **Recommendations:**

Consider whether there is an opportunity to establish a new Redevelopment Plan to protect the catalytic redevelopment site land north of Capitol Dr.

Extend future development momentum of Century City to an industrial zone south of Townsend along 30th St. Establishing another Redevelopment Plan or, potentially, extending the Redevelopment Plan boundaries to this area could aid in the transition to less intense industrial uses, thereby easing land use conflicts in the adjacent neighborhood. Including this potential long-term redevelopment site in a Redevelopment Plan could be a future action if there is sufficient redevelopment momentum.

## 3. Transportation Recommendations

Note: the recommendations provided herein are addressed at a conceptual level. Any proposed solutions would require compilation and analysis of appropriate data and detailed study to address the feasibility and design of the potential opportunity.

### A. Priority Intersections and Streets

Of the intersections and street segments identified as constrained in the existing conditions analysis, priority for further study and improvements should be given to those adjacent to redevelopment opportunity sites. Century City, the redevelopment sites along the Capitol Drive Corridor, and the site at the southeast corner of Capitol Dr. and 35th St. are considered to have the highest priority. The other two opportunity sites, previously discussed in Chapter 1, are smaller in scale and do not have significant transportation issues. Although not identified as a high-priority redevelopment site, 30th St. between Townsend and Locust should be addressed due to the conflicts between transportation needs and land use. A detailed study of constrained streets and intersections within the corridor was outside the scope of this plan, but should be undertaken in the near future to identify additional needs and estimate the cost of the recommendations presented here.

#### Century City and Capitol Drive Corridor

The preferred concept plan, presented in Chapter 2, illustrates a number of transportation recommendations to enhance site access and improve traffic flow. The feasibility of any recommendations addressing roadway and intersection alignments illustrated in the conceptual plan will need to be determined in an in-depth study addressing factors such as anticipated traffic volume, turning movements and intersection geometries, and anticipated effects on nearby intersections or streets.

The following recommendations are described in Chapter 2:

- Intersection Realignment at 31st/Capitol
- New Access Road
- Realignment of Existing Hopkins St. and Reestablishment of the Neighborhood Street Network
- North of Capitol: Realignment of Interior Street Network

Overall, these recommendations improve access and circulation to and through the corridor; however, the recommendations addressing the realignment of Hopkins St. as a neighborhood street and creation of a new limited access road serving Century City would require rerouting of through traffic to nearby arterials. Through traffic would be routed via 27th St. and, to a lesser extent, 35th St. At this preliminary stage of planning, Capitol, Townsend, 27th St. and 35th St. appear to have sufficient capacity to handle additional traffic that is currently using Hopkins St.

#### 30th Street, between Townsend and Locust

Although currently restricted by spatial constraints due to the limited right-of-way, the section of 30th St. between Townsend and Locust could be retrofitted over time to accommodate the differing land uses on opposite sides of the street. Should this area become a priority for redevelopment, access should be improved to facilitate traffic movements and reduce impact on residences.

With redevelopment, the street, and potentially also the right-of-way, should be considered for widening at key areas of the street. A wider right-of-way would better accommodate truck movements into the businesses. Widening the right-of-way would be expected to impact the sites on the west side of the street as they redevelop; blocks with no existing buildings constructed at the right-of-way line would be prioritized.

These improvements could be accomplished in phases; given that the blocks adjacent to the arterials (e.g., just south of Townsend and just north of Burleigh) typically appear to have more industrial activity than the interior blocks, these blocks could be given priority. Further study would be required to determine appropriate dimensions for the street and the right-of-way, travel and parking lane options, pedestrian accommodations, and a parkway buffer on the east side of the street.

Improved site access should include evaluation of curb cuts for potential consolidation, where multiple cuts exist, and for narrowing to reflect the facilitated truck turns into the sites.



Improved access should also be addressed at a more macro level. Intersection improvements should be considered, with evaluation for whether signals would be appropriate at 30th and Townsend, Burleigh, Locust and/or Central, depending on anticipated truck activity along the corridor.

Establishing preferred truck routes for the corridor would further reduce the impacts of truck traffic by facilitating routes in and out of the area. This recommendation applies to the entire corridor (see the following section for additional details).

However, if truck traffic issues persist even as truck access is improved and as industrial uses on 30th St. lessen in intensity, performance zoning options might be explored to reduce the impacts on the corridor. Factors to consider for regulation include limiting the number of trucks with a certain number of axles accessing a particular business on the corridor.

### **Intersections and Signalization**

As noted in the existing conditions analysis, several key intersections do not have sufficient signal timing to accommodate turning traffic during peak periods (see Street Network and Constrained Intersections diagram on page 40). Signalization should be evaluated to ensure traffic flow and turning movements along the arterials are effectively facilitated. Signal timing where trucks typically turn from north/south to east/west arterials but are experiencing constraints would be prioritized for evaluation. Special attention is particularly warranted where five- or six-leg intersections exist, such as at Fond du Lac, 35th St. and Burleigh.

Installing new signals could reinforce truck routes by guiding traffic onto preferred streets. A clear path for trucks to follow could be facilitated with new signals at intersections between arterials and key local streets to facilitate turning patterns.

To set the stage for detailed analysis and a future traffic engineering study, a detailed traffic assignment, evaluating truck movement to sites within the corridor, should be undertaken for key constrained intersections. These sessions should involve representatives of trucking companies, the City and WiscDOT in an active workshop

discussing existing design, traffic management, signal timing, functioning of the intersections at different times of day, and nearby encroachments.

### **B. Develop a Truck Access Program**

The purpose of the existing City truck map is to restrict truck traffic on particular streets; however, more detailed transportation guidance would benefit businesses located on minor streets as well as neighboring uses along their access routes. A truck access program can reduce the intensity of truck activity by clearly directing vehicles to businesses that experience access challenges. In particular, businesses located off major arterials, such as those along 30th St. south of Townsend, would benefit from a coordinated access program and identification of preferred truck routes. As development momentum begins, creation of a truck access program would be an opportunity to provide a comprehensive evaluation of vehicular movement in the corridor to reflect planned redevelopment.

A truck access program should be created in partnership with affected businesses, who can assist with data collection and provide input on what is currently working as well as what challenges are present. Based on existing and anticipated truck traffic, the truck access program would identify key access routes to be encouraged or avoided, resulting in recommended routes to guide the path from arterials to local streets. Directional signage and inclusion of preferred access routes in shipping papers would further guide trucks to the preferred access points designed to facilitate turning movements.

Although a focused truck program could be developed to facilitate access for existing businesses, a corridor-wide access program would further reduce the intensity of truck activity in residential neighborhoods and toward the south end of the corridor. In keeping with the designated Strategic Development Zones, improved access for major sites that are located north of Locust St. and planned for future large industrial uses should be given special attention in a corridor-wide truck access program, in order to ensure clear, straightforward site access to the preferred truck routes and effectively prime the sites for redevelopment.

### C. Implement Traffic Calming Measures

Improvements within the right-of way should address and improve the surrounding context and existing development within an area. Concepts such as Complete Streets and Context Sensitive Solutions are being adopted and implemented by municipalities; recent references such as the Institute for Transportation Engineers' "Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities" provide alternatives to conventional arterial planning that prioritize vehicular traffic. In addition to increasing access for non-vehicular modes of transportation, such as bicycles and pedestrians, as well as their traffic flow, traffic calming is an important benefit that can improve access within the corridor.

Generally, truck traffic along 27th and 35th Streets appears to be light enough to not create a nuisance for the residential areas along the south end of the corridors. However, if volumes were to increase and become a nuisance, particularly toward the residential zone at the south end of the corridor, the City might consider diverting truck traffic off 27th and 35th Streets. Traffic calming and conducive signalization would route truck traffic along east/west arterials.

Traffic calming measures should be considered where truck traffic must be routed on residential streets and where residences are located on arterial streets. On residential streets, cut-through traffic in the residential

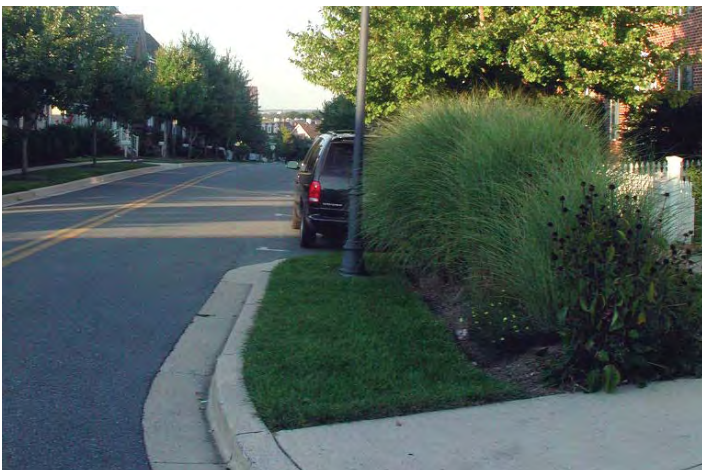
neighborhood should be discouraged via design improvements such as bump-outs at key intersections and enhanced parkways that also buffer residences from the visual effects of trucks in neighborhoods. Bump-outs and other vegetated pedestrian buffers can also provide stormwater detention, if properly designed.

There is a particular need for roadway buffers and enhanced crossings at areas adjacent to schools and parks, particularly along 27th St. starting at North Ave. and continuing south, and along 35th St. starting at Center St. and continuing south. Depending on the need for flexibility during rush periods, bump-outs at intersections and midblock crossings can be considered; benefits include discouraging speeding and passing traffic in underutilized parking lanes, assisting with pedestrian crossings, and ideally providing additional landscape buffering. Countdown pedestrian signals also facilitate pedestrian crossings. Bike lanes could also be considered where the pavement width permits.

### D. Preserve the Relevance of Rail Corridors

#### Maintain Physical Access to Rail

The current capacity and usage along the rail corridor, as well as general industrial trends, indicate that rail is not a strong driver of redevelopment potential. In particular, small businesses requiring small or sporadic deliveries, as is typical along the corridor, do not have sufficient demand for high-weight or high-volume freight movements. However, it



Curb extensions, or bump-outs, can facilitate pedestrian crossings as well as serve as an area for landscaping and stormwater detention.



Curb extension retrofits can be designed to accommodate existing storm drains.

is still important to preserve rail access where feasible, particularly to accommodate larger businesses with greater shipping demands. As illustrated in the preferred concept plan for Century City, the sites along the railroad demonstrate site-level rail access at a conceptual level.

Generally, rail access will be most straightforward where a previous spur had been in place. Sites that have dormant rail spurs, or that previously had a spur, can typically be brought back into service after an investigation of site drainage and tie condition and evaluation to ensure that the rail is sufficient for the weight of the anticipated traffic. Sites with no existing or prior spur are likely to be more expensive, given the required geometrics along the corridor for a new spur.

### **Infrastructure Improvements**

There does not appear to be a need for major infrastructure improvements along the corridor itself to make the study area more competitive. Generally, the existing rail is sufficient to accommodate current as well as increased demand along the corridor, and it is not anticipated that increases in rail use will overload existing capacity.

### **Opportunity for Other Uses**

Although there may be some excess rail right-of-way along the corridor, it is not sufficiently contiguous to warrant consideration for redevelopment as a trail or linear park. Furthermore, the active service track would need to maintain adequate lateral clearances, and it would be difficult to set aside a portion of the right-of-way adjacent to the active railroad due to safety concerns. Uses that could coexist with an active rail line, such as fiber optic lines or other utility infrastructure, would better complement the spatial limitations along the rail right-of-way.

There are several irregular and underutilized parcels along the corridor that were previously used for spurs. These historic spur parcels and existing spurs may hold opportunity in the event that future rail access is desired for neighboring parcels and may be considered for land banking.

Should rail use decline further, there may be opportunity for a limited access truckway at key areas of the corridor. In particular, the properties between the rail right-of-way and 30th St., south of Townsend Dr., would benefit from

smoother truck access given the land use conflicts and right-of-way constraints along 30th St. An in-depth study would be required to determine preliminary feasibility and potential access. A design that could accommodate a roadway allowing for future return to railroad use would be ideal, should a truckway concept be pursued.

### **E. Facilitate Relations between Railroads and Businesses**

There do not appear to be significant policy challenges affecting rail use along the corridor. Although the Canadian Pacific and Wisconsin and Southern share interests in the railroad, the internal coordination that takes place between the two entities appears to be straightforward for rail customers along the corridor. Regardless of the existing capacity for businesses desiring access, the level of service required by the customer and locations of material providers and distribution points will drive whether the service would be cost effective and logistically competitive.

A regional initiative should facilitate relations between the railroads and businesses to coordinate service requirements and issues amongst businesses along the corridor, thereby considering service to the corridor as service to a consolidated customer base. Potentially, the Port of Milwaukee could play a role in enhancing these connections, given the Port's existing relationships with businesses and transportation providers.



Dormant rail spurs are still visible in several locations along 30th St.



## 4. Stormwater Recommendations

The proposed stormwater recommendations reflect the finding from the 30th St. Stormwater Report that a single regional stormwater solution would not be able to address the runoff from the entire study area due to fragmented landownership, relatively flat topography and a built-out context. Rather, a system composed of multiple site- and district- level solutions, such as stormwater treatment areas that accept water beyond the parcel itself, complemented by small-scale BMPs, will be better suited to the study area. Opportunities within the right-of-way will round out the stormwater strategy. The suitability of particular stormwater management techniques will vary based on the characteristics of each site, including high groundwater levels.

Stormwater management plans, particularly in urban areas, must address the economic realities that land is expensive to redevelop. Although increasing the amount of green space within the study area will enhance the stormwater management strategies for the corridor, the need for open space must be balanced with the redevelopment potential for the site. Any new open space amenities should integrate stormwater BMPs; these stormwater parks should serve as sites for detaining stormwater runoff while providing attractive greenway amenities.

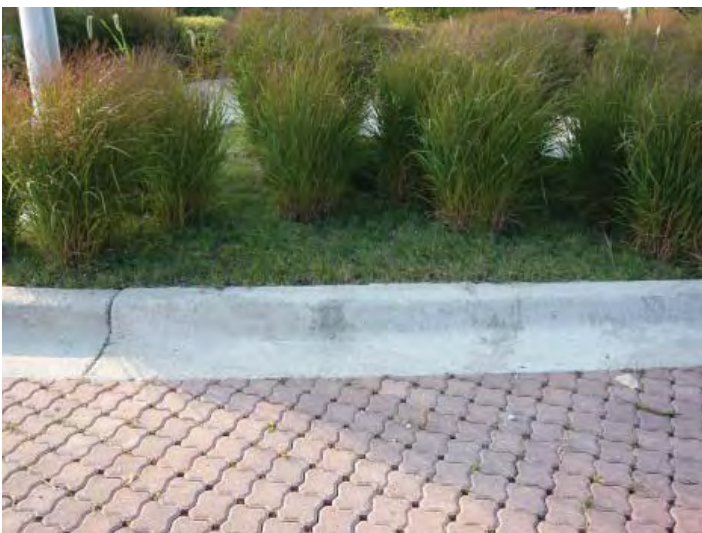
Development of stormwater parks may provide a practical approach to provide district-scale stormwater solutions while maximizing developable land elsewhere on the

corridor. Furthermore, stormwater technologies should achieve both maximum stormwater abatement and relatively low-cost infrastructure improvement; proposed stormwater sewers that convey flow through infrastructure to detention areas should have short distances to minimize the costs of construction.

Small-scale stormwater management solutions are proposed to be integrated as feasible into street, site and building design. Stormwater BMPs appropriate within the right-of-way include: stormwater planters; planted areas at curb extensions, medians and parkways; and pervious pavings for parking lanes and sidewalks. Stormwater strategies such as permeable pavers, porous pavement, vegetated swales and raingardens are appropriate even for compact sites and are well suited for incorporation into parking lots. Stormwater BMPs integrated into buildings may include green roofs and stormwater cisterns that collect water to be used for irrigation.

### A. Integrate Stormwater BMPs in Redevelopment of Opportunity Sites

Generally, the concept plans follow the recommendations from the recent stormwater study for the corridor, “Developing a Regional Approach to Storm Water Management in the 30th Street Industrial Corridor.” The one exception is due to a proposed right-of-way and parcel reconfiguration to the Phase II Century City area, as described below.



Permeable pavers and native landscaping provide effective BMPs in parking lots.



Paved areas can be designed with soft edges or curb notches to facilitate stormwater flow to landscaped areas.

## Proposed Stormwater Infrastructure Enhancements



### Legend:

- Potential Stormwater Opportunities
- Opportunities for BMPs within Street and ROW Improvements
- Study Area Boundary

Currently, the opportunity sites identified as redevelopment priorities are almost entirely impervious, with the exception of the vacant land at the Esser Paint site. Given the limited perviousness, any integration of stormwater best management practices will have a notable improvement on stormwater management in the study area, particularly over time as small-scale BMPs are incorporated into the redevelopment sites.

For the proposed Century City concept plan, approximately nine acres of the site is dedicated to open space that would incorporate stormwater management areas. This is an appropriate starting point for the purposes of this study; however, detailed stormwater modeling would be required in order to establish recommendations for each site. The plan provides opportunities for a variety of stormwater management techniques while adding to neighborhood aesthetics; it introduces a green buffer as an open space amenity that can collect stormwater from the residential area and business park.

The green buffer would also assist in controlling the infrastructure costs associated with the stormwater detention. Furthermore, the reduction of pervious surfaces resulting from the decreased pavement width would promote infiltration and improve the quality of the stormwater runoff through reduced pollutant loadings running off the pavement.

Within the Phase II Century City area, the concept plans illustrate redevelopment adjacent to the existing MMSD drop shaft and structures, to maximize the larger development parcel resulting from the shift in the 31st Street alignment. The green median would serve as a prominent central stormwater management feature to address storm runoff detention and water quality and an open space amenity.

This recommendation differs from the recent stormwater study; however, the proposed intersection and right-of-way reconfigurations result in larger parcel sizes that would be appropriate for redevelopment, unlike the existing irregularly shaped parcels. The only restriction for the MMSD property is that access must be maintained for



heavy vehicles to access the drop shaft. The concept plans accommodate the MMSD structures and access, and address stormwater management needs through the creation of the green space at Hope Ave.

Although not associated with a catalytic site, a stormwater park at the parcel east of the railroad on the north side of North Ave. is recommended as an amenity and an opportunity to accept stormwater runoff from surrounding properties, particularly the industrial parcel to the north and residences to the east.

## **B. Implement Key 30th Street Stormwater Report Recommendations**

Other proposed stormwater management initiatives, which were identified in the report “Developing a Regional Approach to Storm Water Management in the 30th Street Industrial Corridor” for private and public properties in the northern portion of the site (north of Townsend), include the following:

- **Ruby Yard Water Quality Basin**, approximately 4.3 acres of City-owned land and private land owned by DRS Technologies. Existing storm sewer would be diverted into a 0.85-acre open water forebay and pond to treat onsite and off-site runoff, and recommendations include neighborhood open space amenities.
- **DRS Technology site**, approximately 17.8 acres covered primarily by asphalt parking lot and building; the site will be combined with the Ruby Yard project. Recommended improvements include green roof, permeable pavers and bioswales to treat onsite runoff.
- **Eaton Corporation site**, approximately 5 acres covered primarily by asphalt parking lots, building and limited landscaping. Recommended improvements include a green roof, permeable pavers and bioinfiltration to treat onsite runoff.
- **Vapor Blast Manufacturing Company site**, approximately 5.9 acres covered by gravel parking area, three existing buildings, and open space composed of turf grass and trees. Recommendations include bioinfiltration and permeable pavers in the parking lot area and natural landscaping to treat onsite runoff.

Additionally, the prior stormwater report proposes potential street and right-of-way improvements to facilitate stormwater management in the northern portion of the site (north of Townsend), including the following:

- Permeable surfaces in the gutter line and/or entire parking lane, and curb extension rain gardens for the following sites:
  - N. 28th St from W. Atkinson Ave to W. Glendale Ave.
  - W. Glendale Ave from N. 27th St to N. 32nd St.
  - N. 29th St from W. Melvina St to W. Capitol Dr.
  - N. 34th St from W. Capitol Dr to W. Hopkins St.
  - W. Hopkins St from N. 34th St to N. 35th St.
- Stormwater planters within the right-of-way for W. Capitol Dr. from N. 27th St. to N. 35th St.
- Permeable paving for the alley between W. Hope Ave., W. Roosevelt Dr., N. 29th St. and N. 30th St.







**Appendices**

# Appendix A: Summary of Stakeholder Participation

## Plan Advisory Group Members

American Design, Inc.  
Big Step  
Capitol Stampings  
City of Milwaukee  
Civit e, LLC  
Community Development Advocates  
The Corridor  
Glenn Rieder  
Hmong American Friendship Association  
LIUNA Great Lakes Region Organizing Committee  
Master Lock  
Milwaukee Area Technical College  
MAXIMUS  
Mayor's Office  
Milwaukee County District Attorney's Office  
Milwaukee Department of Neighborhood Services  
Milwaukee Police Department  
Milwaukee Public Schools  
Next Door Foundation  
Neighborhood Development Improvement Corporation  
North Avenue CDC  
Northwest Side CDC  
Park Lawn Assembly of God  
Safe & Sound Community Partners  
Sherman Park Neighborhood Association  
St. Mark AME Church  
United Migrant Opportunity Services  
Uniting Garden Homes  
UW Cooperative Extension  
University of Wisconsin-Milwaukee  
Washington Park Partners  
WHEDA  
YWCA



## Interviews with Key Business and Institution Representatives

Businesses and institutions that were interviewed as part of the stakeholder participation process are listed below. While some interviewees are also represented among the PAG or Contract Management Team, the purpose of the interviews was to generate more focused input regarding Century City and specific business concerns.

Association of Equipment Manufacturers  
B83 Testing & Engineering  
Capitol Stamping  
Foley & Lardner  
Gahn Meat  
General Capital Group  
Glenn Rieder  
Grubb & Ellis  
Milwaukee 7  
Milwaukee County Economic Development (Former Director)  
Milwaukee Water Council  
Northwest Side CDC  
Redevelopment Authority of the City of Milwaukee  
University of Wisconsin-Milwaukee

The following are a few excerpts from the comments received during interviews:

- The Century City Business Park may not be big enough for large, vertically-integrated manufacturers of heavy goods.
- City or state subsidies encouraging businesses to relocate to the corridor would be a good idea. While my company would not get an immediate benefit since it's already in the corridor, it would help revitalize the area and improve the corridor's image.
- Access to credit is not a problem right now. The main problems are a poor business climate and lack of skilled employees.
- Traffic on Hopkins is a major issue. Cars come around the bend at 50 mph or more, and there are a lot of accidents. Closing Hopkins to through traffic would be a great idea.
- The retail space in Century City should be occupied by business support services and a mid- or high-end restaurant.
- Make use of the power, rail and other infrastructure capacity at Century City. Not many sites can offer that level of capacity.
- Building codes should be simplified and consolidated.
- Milwaukee won't have much of a future in manufacturing unless it offers better training in the trades. Other communities offer better training programs.
- The food industry is mostly recession-proof.
- The food industry is not recession-proof. Restaurants are especially impacted, and it reverberates through the supply chain. In addition to going out less, people will also order cheaper items, and buy cheaper groceries (e.g., a cheaper cut of meat).
- Perception of the corridor hurts our ability to recruit employees.

# Appendix B: Market Analysis Methodology and Target Industries Matrix

The purpose of this appendix is to outline the methodologies used in the industrial market study for the 30<sup>th</sup> Street Corridor Economic Master Plan (“the Plan”) and provide the full target industries matrix summarizing the results of the industrial market analysis. The market study was conducted to identify economic sectors that the City of Milwaukee and regional economic development agencies such as the Milwaukee 7 should target for marketing purposes to attract them to the 30<sup>th</sup> Street Corridor (“the corridor”).

The Century City Business Park is the centerpiece of the City’s efforts in the 30<sup>th</sup> Street Corridor: it is the largest redevelopment site and has the greatest potential to catalyze further revitalization within the corridor. In order to ensure its success, it is critical to understand trends in industrial real estate as well as in the industries that prospective tenants are engaged in. The industrial market analysis sought to identify the industries that have the most potential for future job growth and real estate demand in the Milwaukee region. To do so, it used a comprehensive methodology that examined industry competitiveness, historical leases and permits, workforce skills, and projections of output and employment growth. The industrial market analysis also examined several business parks in the Milwaukee region and drew on *SB Friedman’s* experience on similar projects to identify the characteristics of successful modern business parks and their implications for Century City.

## Industrial Market Analysis Overview

The purpose of the industrial market analysis is to identify competitive industries in Milwaukee that are likely over the long term to generate growth, demand real estate, and provide jobs, as well as identify the infrastructure and workforce needs of these industries. To achieve this goal, a methodology was created to identify target industries based on the following four criteria:

- 1. Competitiveness:** Industries should have a competitive advantage by locating in the Milwaukee region. Competitive advantage within a region is the result of a number of factors, including the presence of a critical mass of firms within the region, a well-developed network of suppliers to the industry, research linkages to universities, the presence of professional industry organizations, and connections to government agencies. The Information Technology industry in Silicon Valley and movie industry in Hollywood are examples of locations where firms have clustered to take advantage of such competitive factors. For this analysis, competitiveness was assessed by adapting an existing industrial cluster analysis study for Wisconsin,<sup>1</sup> and conducting a number of interviews with industry representatives and economic development professionals.
- 2. High Transaction Volume:** Industries should exhibit high demand for real estate as measured by the number of properties being leased/purchased or permits being issued for industrial use in Milwaukee County. This is important, because some industries are able to expand production without demanding more real estate (i.e. through process efficiencies, reduced staffing, and/or reduced space per employee). Since the aim of the analysis is to identify industries that could potentially occupy tenants, it is crucial to verify that businesses are actively seeking to move or expand their physical footprint. Leasing data from CoStar and permit activity from the City’s MPROP database were used to analyze industrial real estate activity.

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<sup>1</sup> The MPI Group. 2005. The Wisconsin Manufacturing Study: An Analysis of Manufacturing Statewide and in Wisconsin’s Seven Economic Regions. Prepared for the Wisconsin Manufacturing Extension Partnership. <<http://wmep.mpi-group.net/Full2005Study/The%20Wisconsin%20Manufacturing%20Study.pdf>>. Accessed July 12, 2010.

3. **Workforce Match:** The industries should have an adequate supply of employees with the necessary workforce skills required by the industries. This was measured by the proportion of employees in occupational categories important to that industry. The greater the ratio of workers employed in relevant occupations, the easier it is for businesses to get workers with good skills, and the less they need to worry about staffing shortages as they experience growth. Data from the Bureau of Labor Statistics was used to create benchmarks for the workforce of each industry in this step.
  
4. **Positive Growth Trends:** The industries should have strong growth prospects as measured by the projected increase in manufacturing output (the total value of goods and services produced), and employment in the near future. This growth should be both in absolute terms as well as relative to other industries in the region. All else being equal, an industry that outperforms other industries in a given region is likely to demand more real estate. To assess these criteria, forecasts for employment and output were purchased from Moody's Economy.Com and analyzed.

Industrial Sector Analysis Components



The sections that follow detail the procedures used to analyze each factor. Where several alternative procedures were available, the reasoning behind the choice of procedure is also discussed.



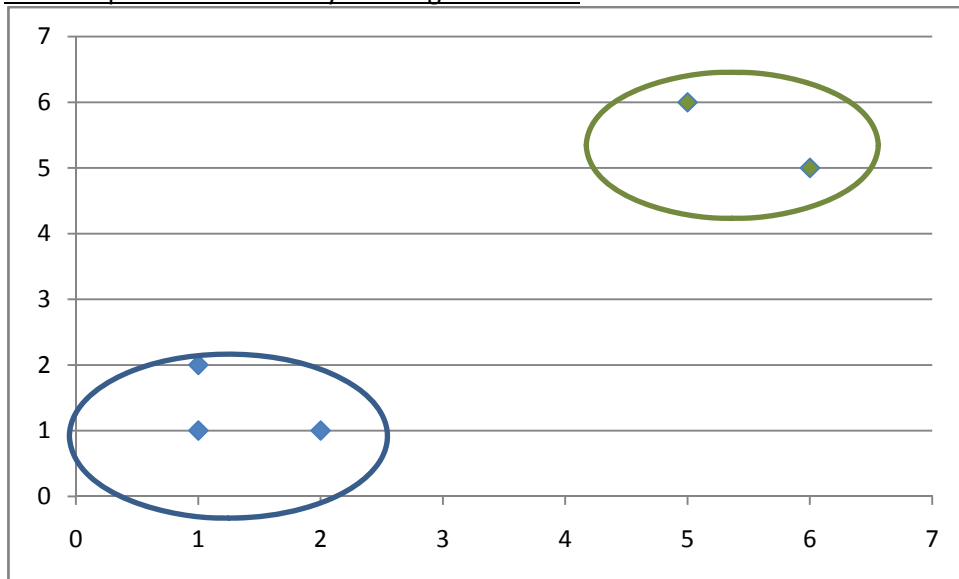
## Competitive Industries Analysis

Most regional economic analyses rely on shift-share techniques to identify industries that have a competitive advantage. Generally speaking, shift-share analysis decomposes growth in employment or output in an industry into its components: overall national growth in employment/output (national share), industry-specific growth (industry mix), and local growth in a particular industry (regional shift), with regional shift being the foundation of competitive advantage. However, shift-share techniques do not explain *why* regional shifts occur, nor do they explain the relationships between industries and firms (e.g. buy-sell relationships, sharing of skills and technologies, or workforce similarities). Another technique, input-output analysis, does capture buy-sell relationships between firms, but loses the ability to decompose changes in employment/output into national, industry and regional components.

### Industry Cluster Analysis: The Wisconsin Manufacturing Study

Industrial cluster analysis, a more recent technique, combines the explanatory power of input-output analysis with shift-share techniques' ability to isolate regional shifts. Cluster analysis groups (or clusters) individual firms together based on a set of variables. In the example below, firms are clustered based on two variables (one on the X axis and one on the Y axis).

An Example of Cluster Analysis Using 2 Variables



Cluster analysis can be extended to group industries based on any number of variables, including those that go into shift-share and input-output techniques. In 2005, the MPI Group published a state-wide manufacturing study using cluster analysis for the Wisconsin Manufacturing Extension Partnership (“the MPI study”). Its aim was to identify, for each region within the state, “driver industries” or the industries that possessed the greatest competitive advantage. These driver industries were grouped using 12 separate variables that measure competitiveness, export orientation and regional centrality, as indicated below. Industries were defined based on the 4-digit industry specification from the North American Industrial Classification System (NAICS), which categorizes industries according to the type of goods they produce. Hereafter, a number following an industry name in parentheses indicates the 4-digit NAICS code for the industry.<sup>2</sup>

<sup>2</sup> A 3-digit number indicates an industry subsector, or grouping of similar industries.

Variables for MPI Study Industrial Cluster Analysis

<b>Measures of Competitiveness</b>	Productivity	Total Worker Productivity
		Change in Worker Productivity
	Share of National Industry Output	Current Regional Share of National Industry Output
		Change in the Industry's Share of National Output
	Relative Average Earnings	Industry's Current Relative Earnings
		Change in Industry's Relative Earnings
Industry's Current Regional Relative Earnings		
<b>Measures of Export Orientation and Regional Centrality</b>	Output Specialization	Current Output Location Quotient
		Change in Output Location Quotient
	Employment Specialization	Current Employment Location Quotient
	Centrality	Industry's Current Share of Total Regional Output
		Change in Industry's Share of Total Regional Output

These measures include all those addressed by shift-share techniques, as well as worker productivity. Industries that are similar to each other across these 12 variables are grouped together.

While cluster analysis creates groupings of industries, it is a mathematical rather than a statistical technique, so it does not explain why particular industries are grouped together. The MPI study corrects for this shortcoming by using a statistical technique, linear discriminant analysis (LDA), to explain the groupings by identifying correlations between the 12 variables on which the groupings are based.<sup>3</sup> For example, a discriminant function might find correlations between having a large share of national industry output, an increasing share of output, a large output location quotient, increasing output location quotient, and a large labor location quotient. Correlations between those variables would “suggest that the function identifies (or groups together) industries that are important to the region’s economic base (e.g., driver industries)” (p. 358).

The driver industries identified by the discriminant analysis were further refined based on economic data and input from the Wisconsin Manufacturing Extension Partnership. Next, the MPI study set out to identify the industry clusters associated each driver industry. An industry cluster is defined as a “geographic concentration of competitive firms or establishments in the same industry that have close buy-sell relationships with other industries in the region, use common technologies, or share a specialized labor pool that provides firms with a competitive advantage over the same industry in other places” (Hill &

<sup>3</sup> The combination of cluster analysis and linear discriminant analysis to study industrial clusters was a method devised by Hill and Brennan (Hill, EW and JF Brennan. 2000. “A Methodology for Identifying the Drivers of Industrial Clusters: The Foundation of Regional Competitive Advantage.” *Economic Development Quarterly* 14.1:65-96). It was subsequently adopted by The MPI Group for the study.

Brennan 2000). Firms with close buy/sell relationships were identified using regional input/output tables, with special focus on the backward linkages (supply-chain) to the driver industries. Industries that comprised five percent or more of driver industry spending were considered significant “suppliers”. The study distinguished between two different types of suppliers: those present in the region (“regional suppliers”), and those that are based elsewhere and import supplies to the region (“national suppliers”). Finance, government, utility, real estate and business service industries were removed from the supplier category.

In the end, the MPI study identified 23 driver industries, 34 regional suppliers and 34 national suppliers in southeast Wisconsin (with some industries considered both drivers and suppliers)<sup>4</sup>.

## **Analysis of Industry Competitiveness in Milwaukee**

For the purposes of identifying target industries appropriate for the 30<sup>th</sup> Street Corridor, wholesale trade (NAICS 42) and truck transportation (484) were excluded due to their large land requirements and low job density. Interviews with City staff, nonprofits and regional economic development experts helped identify two other industries with potential competitive advantages: food manufacturing (311) and control instruments manufacturing (3345). Water-related industries constituted another priority sector identified by city and regional economic development staff, due to the large water capacity overhang and efforts to consolidate a water technology cluster in Milwaukee. Significant water-using industries were identified based on interview feedback and a review of literature.<sup>5</sup> Most of the water technology firms fell within the control instruments industry, and those that did not were spread among many different industrial categorizations, so the decision was made not pursue them as a distinct target sector.

## **Analysis of Real Estate Transactions**

The competitive industry analysis described above yielded a list of economically competitive industries based on the MPI study and regional economic development goals. One might assume that the most competitive industries would demand the greatest amount of real estate, but that may not necessarily be the case: innovations may allow greater production with fewer employees and a smaller real estate footprint, while space per employee is on a long-term downward trend for many types of real estate product. Since a key purpose of this study was to identify industries that are likely to demand more real estate in the future, verifying that demand “on the ground” is critical.

A database of real estate transactions was built by combining the City of Milwaukee’s MPROP database with The CoStar Group’s Tenant database. As its name suggests, CoStar Tenant® tracks lease transactions by tenant, providing information such as the square footage of the space leased, lease start date, property type (industrial, commercial, residential, etc.), and tenant industry by NAICS code. However, The CoStar Group is a relative newcomer to Milwaukee, and its data are only reliable and relatively comprehensive from 2007 onward. MPROP, on the other hand, provides a record of building construction from 1990 to 2006, so it was used to provide a more extensive history of real estate transactions focusing on new industrial building construction. MPROP also includes square footage information and the occupant’s industrial classification. However, since it is based on building permits, it does not include leasing activity in existing structures. Consequently, earlier lease transactions on existing multi-tenant buildings are underrepresented. However, the majority of transactions at modern business parks in the Milwaukee Region such as the proposed Century City Business Park are usually land sales and new building construction by a single industrial user. Because a primary focus of this study

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<sup>4</sup> The results of the MPI study’s industrial cluster analysis for southeast Wisconsin are contained in pages 219-274 of the report.

<sup>5</sup> For more, see Blackhurst, M., C. Hendrickson and J.S. Vidal (2010. “Direct and Indirect Water Withdrawals for U.S. Industrial Sectors. *Environmental Science & Technology* 44 (March 15): 2162) ; and Ellis, M., S. Dillich and N. Margolis (2003. “Industrial Water Use and Its Energy Implications”. U.S. Department of Energy).



is to identify potential users for Century City, the under-representation of some of the earlier lease transactions is unlikely to have a large impact on the results.

The CoStar Tenant® interface allows users to narrow down transactions data based on several criteria. The criteria were used to organize and download two sets of data: one with all leasing activity that occurred in industrial and flex space, and another encompassing all leasing activity involving a manufacturing tenant. Substantial overlap between these two downloads was anticipated (and subsequently found and controlled for), but it ensured that the data were as comprehensive as possible. The Costar Group had not assigned NAICS codes to all tenants, so simply downloading all records involving manufacturing tenants would have missed some industrial transactions. The overlap also provided a way to check for misclassification errors in both the industry and building type fields.

For the MPROP data, the analysis focused on properties with values in the YR\_BUILT field between 1990 and 2006 and LAND\_USE values between 1500 and 5199. The LAND\_USE variable corresponds to the Standard Industrial Classification (SIC) system, and the range between 1500 and 5199 includes all construction, manufacturing, infrastructure and wholesale businesses. SIC codes were translated into NAICS codes to ensure comparability with the MPI study's industry categories, as well as the BLS data described later on in the next subsection.

CoStar Tenant® and MPROP transaction data were combined to form a single database, with a field added to identify the original source of the data. Transactions involving more than 10,000 square feet of gross leasable area (GLA) were examined to verify or fill in missing NAICS codes, transaction square footage, company names and locations. Duplicate transactions were identified and removed. The 25 largest transactions (involving more than 25,000sf of GLA) were submitted to the Department of Community Development for additional verification, and other recent large transactions were also discussed with them to ensure that none were missing from the database. Industries that were identified as regionally significant in the MPI study but had no real estate transaction activity were eliminated from consideration at this point.

The final transaction list was summarized by NAICS sector to identify the specific economic sectors that exhibited the largest number of real estate transactions since 1990.

## Workforce Analysis

Although the cluster analysis methodology used by the MPI study reflects workforce considerations, it was desirable for the present analysis to more explicitly consider the availability of an appropriate workforce for each industry and localize the geographic scope of analysis to Milwaukee County rather than the entire southeast Wisconsin region. To do so, data from the Bureau of Labor Statistics (BLS) was used to determine the extent to which a given industry's workforce is concentrated in Milwaukee. The BLS provides total employment in the U.S. and in Milwaukee County for each occupational code. It also provides information on the labor force composition of each industry by occupational code. Data for each industry was downloaded from the BLS website and an employment location quotient (LQ) for each occupational category listed by BLS was computed.

The employment location quotient ("LQ") measures the proportion of a region's workforce employed in a given occupation relative to the nation as a whole. The occupational categorization system used by BLS classifies employees based on the type of work they perform; each business typically employs people from several different occupations. For example, a business in the food manufacturing subsector might employ food science technicians, bakers, sales and marketing staff, food service managers, maintenance workers and shipping clerks. An LQ greater than one indicates that the region has a greater concentration of employment in that occupation compared to the rest of the country. For example, if the LQ for bakers in Milwaukee were 1.3, it would mean that Milwaukee's concentration of bakers (relative to other occupations) is 30% higher than the rest of the nation. In this way, the LQ for occupations reveals a region's workforce specialization.

The percentage of an industry's employment for each occupation with LQ greater than one was added together for each industry. Therefore, the higher the percentage, the more specialized the Milwaukee labor force is for that particular industry (80% for a specific industry would mean that 80% of all occupation categories required for that sector have an LQ greater than one and Milwaukee has a specialization advantage for the vast majority of occupations in that industry). As the target industry matrix shows, the final target industries benefit from a Milwaukee workforce that is relatively specialized for their occupational needs. Industries without significant specialization were removed from the list of candidate sectors. The ranges in the table reflect the fact that the four-digit industries in each subsector do not all have the same rate of workforce specialization.

## Future Growth Potential

None of the previous three target industry factors have been future-oriented: the cluster analysis methodology for competitiveness was based on measures of productivity, export orientation and regional centrality; the MPROP and CoStar real estate transactions represent real estate activity from 1990 to 2010, and the workforce analysis using BLS data looks at labor force concentration in specific industries in the present. The past and present can provide a good indication of future tendencies, but they can also overlook changes in underlying trends. Since Century City is not yet being marketed, and future expansionary phases are still further out, it is important to consider the outlook for the target industries for which the business park is intended.

For that purpose, forecasts of future output and employment were purchased from an outside vendor. Moody's Economy.Com provides data on historical and projected future output and employment by industry and geographic area.

Data was purchased from Moody's Economy.Com for the 26 candidate industries that were considered competitive, had shown high transaction volume, and represented a good workforce match according to the previously discussed criteria. Output and employment data for each industry from 1990 through 2020 were acquired. Employment data was acquired for Milwaukee County, while output data was acquired for both Milwaukee County and the nation as a whole. Projected employment and output in 2020 were compared to 2010 employment and output to derive compound annual growth rates for each industry. Location quotients were calculated for each industry using the 2010 and 2020 output figures for Milwaukee County and the nation as a whole; 2010 LQ was then subtracted from the 2020 LQ to arrive at the change in LQ between 2010 and 2020. A positive change signifies that the share of the industry in the County relative to the nation is projected to grow or in other words the industry is expected to be further concentrated within the County and conversely a negative change signifies a decrease in concentration of that industry within the County.

These factors provide measures of the projected industry performance in the region and are further discussed in the following section.

## Target Industries Matrix and Selection of Target Industry Finalists

The target industry matrix combining information about competitiveness, real estate activity, workforce match, and growth trends comprises the final page of this appendix section. Industries are organized in rows by 3-digit NAICs industry subsector and sorted by the number of real estate transactions. The target criteria are located in the columns. The industry matrix provides full information on a total of 18 final target industries. This final list is a selection from the 26 candidate industries discussed above. This reduction to a final list was based on the following criteria related to workforce match, projected change in output LQ and employment growth:

- Must have more than 50% of occupations with LQ greater than 1
- Projected decrease in output LQ cannot be worse than -0.3%, unless the industry is a regional economic development initiative target
- Future annual change in employment cannot be worse than -2%

In general, the output and employment growth rates of the final 18 target industries for Milwaukee are projected to exceed the growth rate for those same industries nationally and the overall growth rate in Milwaukee. Exclusion from the matrix does not necessarily mean that an industry is not important to the Milwaukee region, but rather that it is unlikely to drive growth in employment and real estate demand in the immediate future.

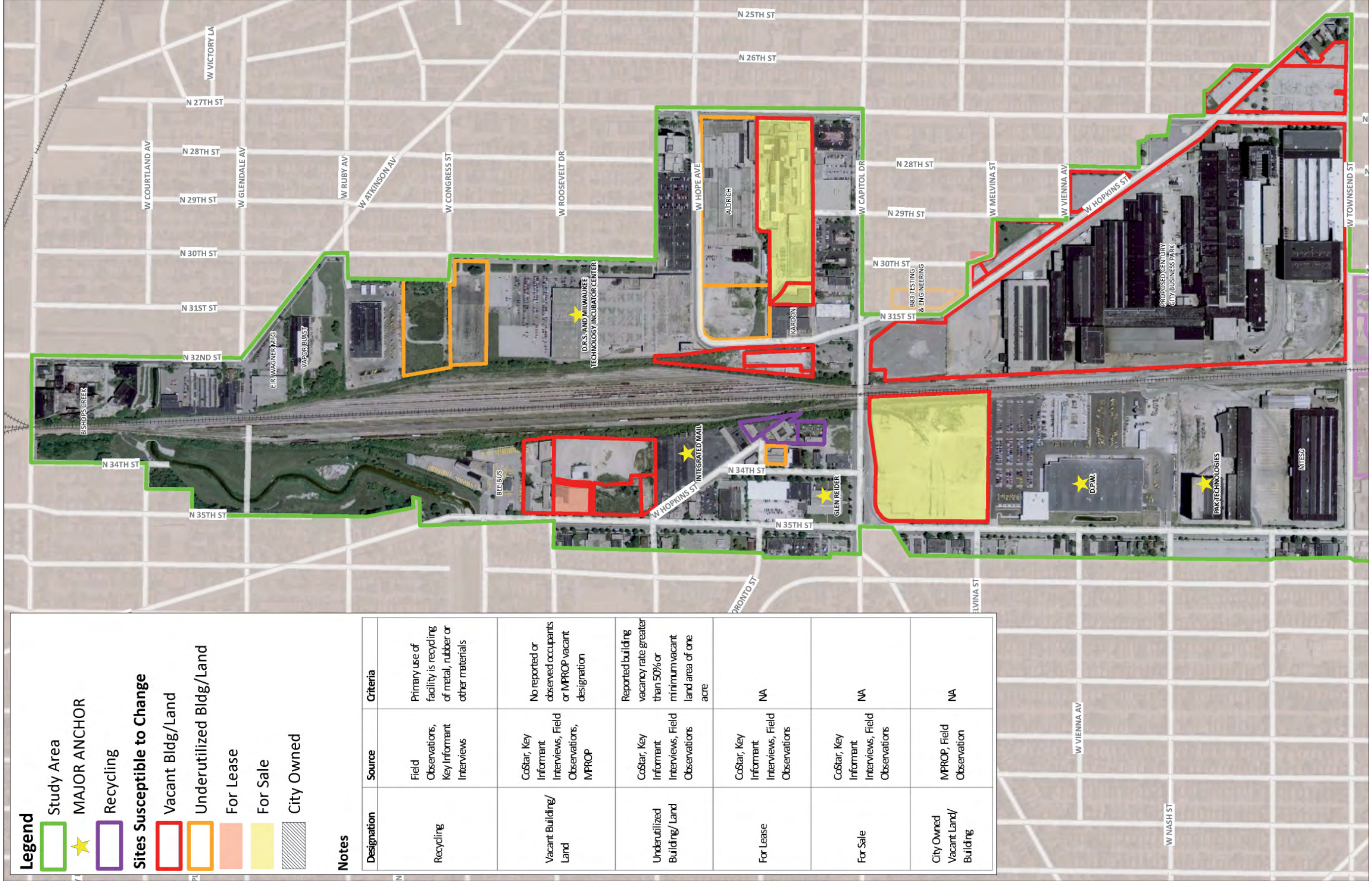


Summary of Candidate Sectors and Criteria

											CAGR 2010-2020			
NAICS_3	NAICS3_Description	NAICS Code	Sector Name	% of Manufacturing Transactions since 1990	# of Manufacturing Transactions Since 1990	Driver Industry	Regional Supplier to Drivers	National Supplier to Drivers	M7 Focus	Heavy Water Uses	Workforce Match (% of Occupations with LQ>1)	Future Output Growth	Future Employment Growth	Change in Output LQ
332	Fabricated Metal Product Manufacturing	3327	Machine Shops, Turned Product, and Screw, Nut, & Bolt Manufacturing	6.29%	9.00	X	X			X	85.92	4.61%	1.6%	0.2%
332	Fabricated Metal Product Manufacturing	3323	Architectural and Structural Metals Manufacturing	3.50%	5.00			X			74.43	3.86%	0.3%	0.5%
332	Fabricated Metal Product Manufacturing	3321	Forging and Stamping	2.10%	3.00	X	X			X	79.29	2.16%	-1.0%	0.1%
332	Fabricated Metal Product Manufacturing	3328	Coating, Engraving, Heat Treating, and Allied Activities	2.10%	3.00		X			X	80.95	2.16%	-0.5%	0.1%
332	Fabricated Metal Product Manufacturing	3329	Other Fabricated Metal Product Manufacturing	1.40%	2.00	X	X			X	76.54	3.61%	-0.2%	0.3%
333	Machinery Manufacturing	3339	Other General Purpose Machinery Manufacturing	4.20%	6.00	X		X			81.76	2.84%	-0.9%	-0.2%
333	Machinery Manufacturing	3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	2.80%	4.00	X	X				82.00	4.63%	1.4%	0.1%
333	Machinery Manufacturing	3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	2.10%	3.00			X			83.28	1.73%	-1.6%	0.2%
334	Computer and Electronic Product Manufacturing	3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	4.20%	6.00		X		X		69.10	7.59%	5.4%	1.9%
334	Computer and Electronic Product Manufacturing	3342	Communications Equipment Manufacturing	2.10%	3.00			X			69.50	3.08%	2.0%	1.8%
334	Computer and Electronic Product Manufacturing	3344	Semiconductor and Other Electronic Component Manufacturing	2.10%	3.00		X			X	69.82	2.41%	2.2%	1.3%
311	Food Manufacturing	3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	2.10%	3.00				X	X	57.69	-0.47%	-1.1%	-1.1%
311	Food Manufacturing	3119	Other Food Manufacturing	2.10%	3.00				X	X	56.45	0.43%	0.7%	-0.8%
311	Food Manufacturing	3118	Bakeries and Tortilla Manufacturing	0.70%	1.00				X	X	62.53	-1.31%	-0.6%	-0.9%
335	Electrical Equipment, Appliance, and Component Manufacturing	3353	Electrical Equipment Manufacturing	3.50%	5.00	X	X				84.23	10.12%	3.8%	2.9%
335	Electrical Equipment, Appliance, and Component Manufacturing	3351	Electric Lighting Equipment Manufacturing	1.40%	2.00	X		X			79.25	6.64%	1.1%	2.0%
335	Electrical Equipment, Appliance, and Component Manufacturing	3359	Other Electrical Equipment and Component Manufacturing	0.70%	1.00	X	X				75.42	7.60%	2.7%	2.7%
339	Miscellaneous Manufacturing	3391	Medical Equipment and Supplies Manufacturing	3.50%	5.00						76.87	4.39%	1.1%	1.1%



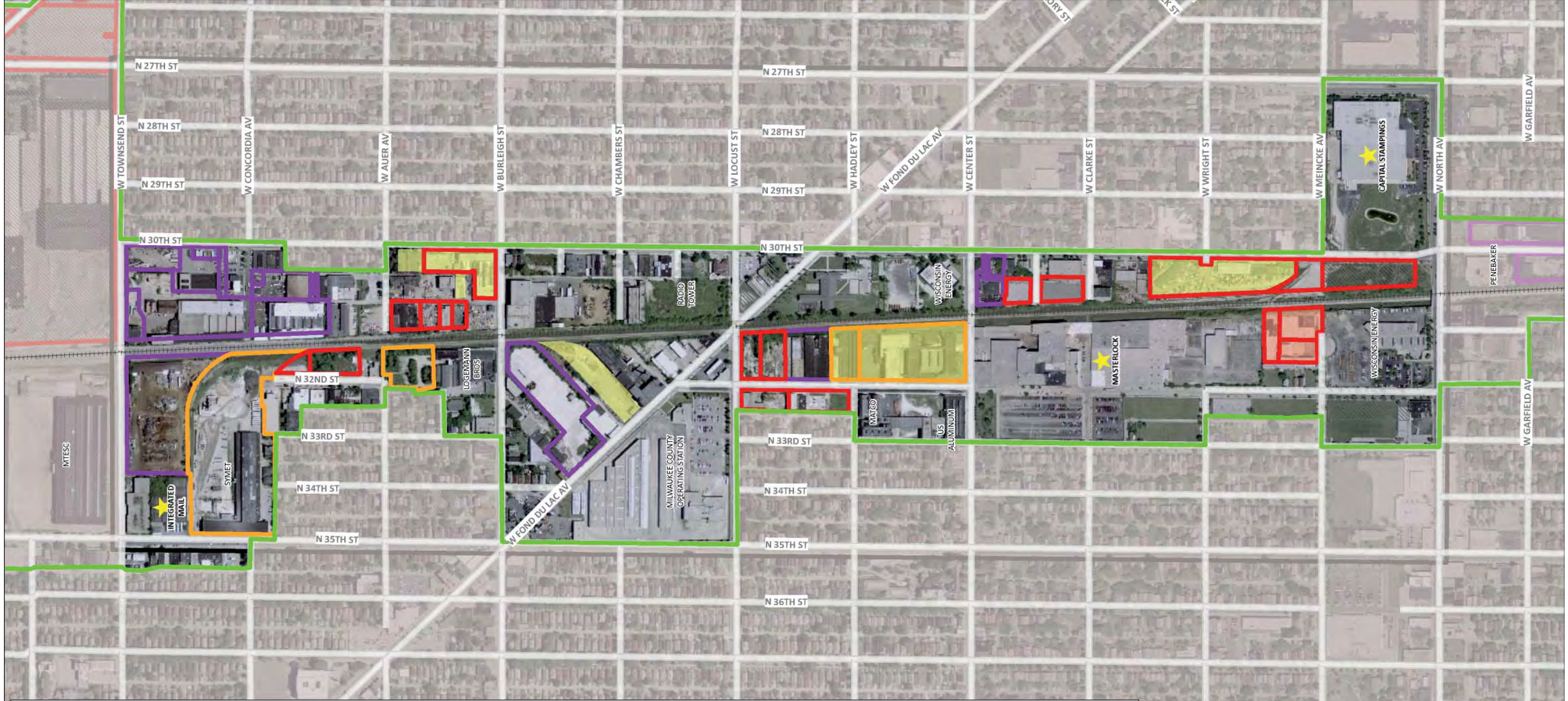
Existing Conditions—North Section



Designation	Source	Criteria
Recycling	Field Observations, Key Informant Interviews	Primary use of facility is recycling of metal, rubber or other materials
Vacant Building/Land	CoStar, Key Informant Interviews, Field Observations, MPROP	No reported or observed occupants or MPROP vacant designation
Underutilized Building/Land	CoStar, Key Informant Interviews, Field Observations	Reported building vacancy rate greater than 50% or minimum vacant land area of one acre
For Lease	CoStar, Key Informant Interviews, Field Observations	NA
For Sale	CoStar, Key Informant Interviews, Field Observations	NA
City Owned Vacant Land/ Building	MPROP, Field Observation	NA



Existing Conditions—Middle Section



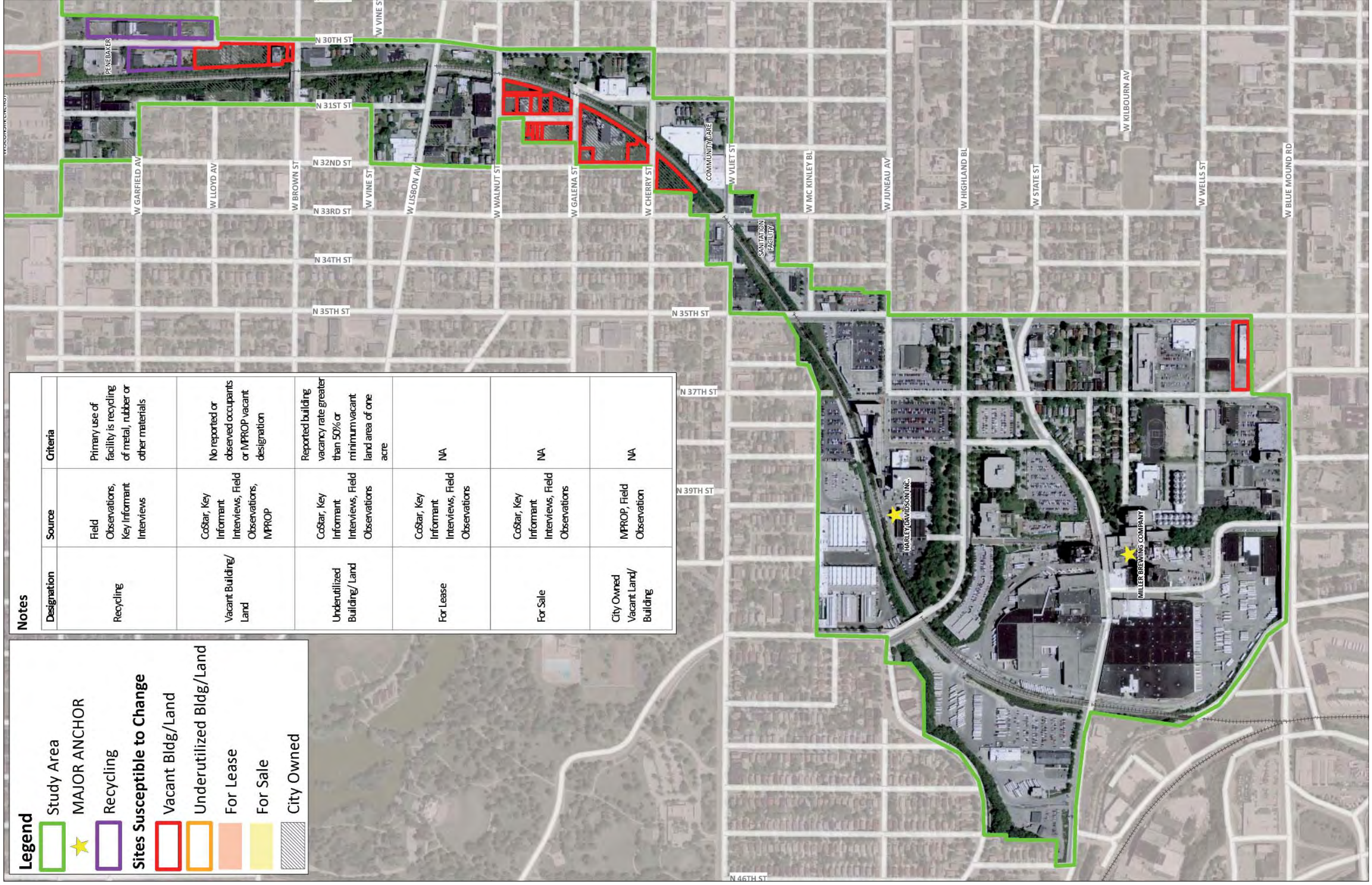
Legend	
	Study Area
	MAJOR ANCHOR
	Recycling
Sites Susceptible to Change	
	Vacant Bldg/Land
	Underutilized Bldg/Land
	For Lease
	For Sale
	City Owned

Notes		
Designation	Source	Criteria
Recycling	Field Observations, Key Informant Interviews	Primary use of facility is recycling of metal, rubber or other materials
Vacant Building/Land	CoStar, Key Informant Interviews, Field Observations, MPROP	No reported or observed occupants or MPROP vacant designation
Underutilized Building/Land	CoStar, Key Informant Interviews, Field Observations	Reported building vacancy rate greater than 50% or minimum vacant land area of one acre
For Lease	CoStar, Key Informant Interviews, Field Observations	NA
For Sale	CoStar, Key Informant Interviews, Field Observations	NA
City Owned Vacant Land/Building	MPROP, Field Observation	NA



Existing Conditions—South and Far Southwest Section



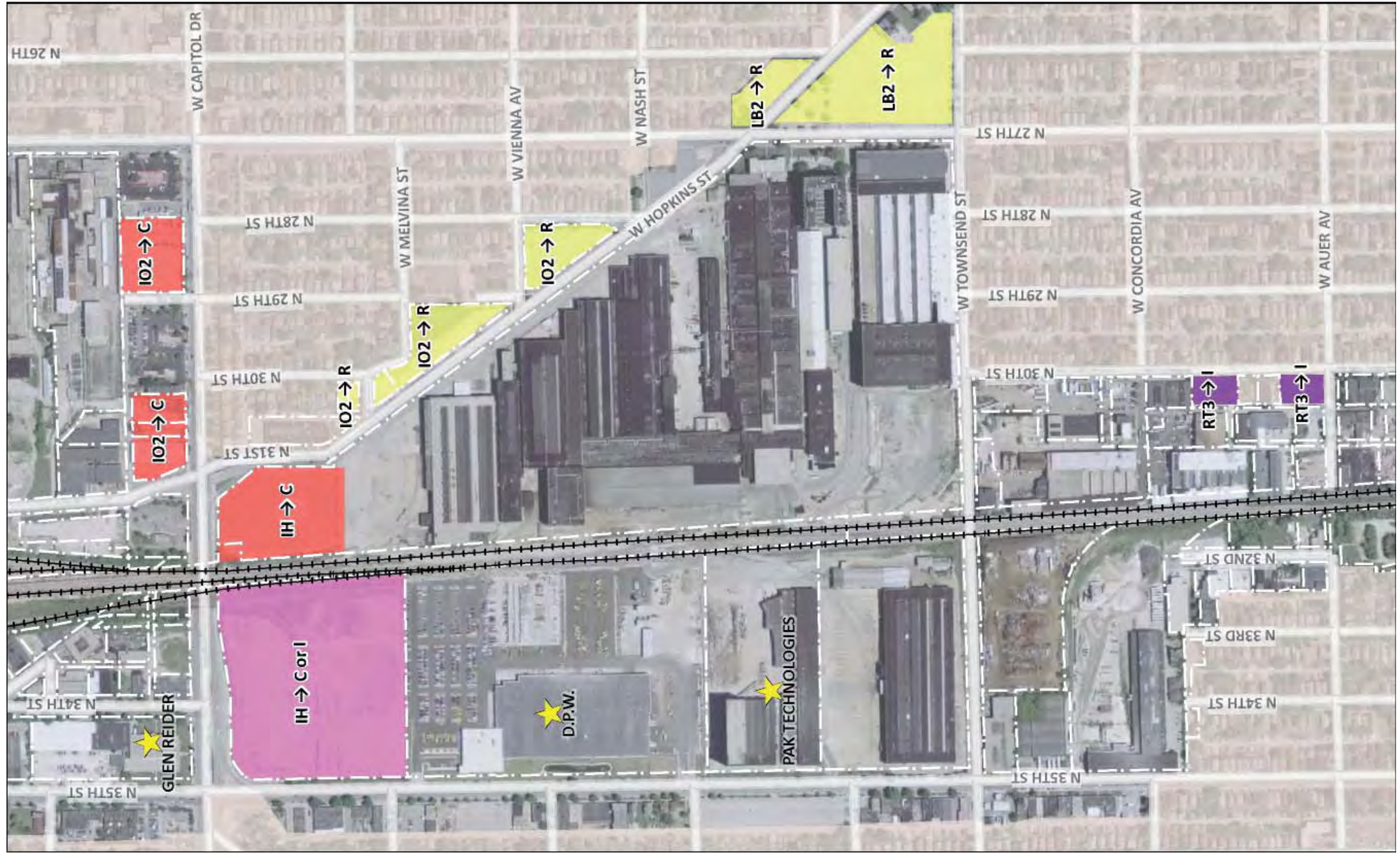
**Legend**

- Study Area
- ★ MAJOR ANCHOR
- Recycling
- Sites Susceptible to Change**
- Vacant Bldg/Land
- Underutilized Bldg/Land
- For Lease
- For Sale
- City Owned

Notes	Designation	Source	Criteria
	Recycling	Field Observations, Key Informant Interviews	Primary use of facility is recycling of metal, rubber or other materials
	Vacant Building/Land	CoStar, Key Informant Interviews, Field Observations, MPROP	No reported or observed occupants or MPROP vacant designation
	Underutilized Building/Land	CoStar, Key Informant Interviews, Field Observations	Reported building vacancy rate greater than 50% or minimum vacant land area of one acre
	For Lease	CoStar, Key Informant Interviews, Field Observations	NA
	For Sale	CoStar, Key Informant Interviews, Field Observations	NA
	City Owned Vacant Land/Building	MPROP, Field Observation	NA



Recommended Rezoning—North Section





Recommended Rezoning—Middle Section



★ MAJOR ANCHOR

Recommended Rezoning

- Commercial (C)
- Commercial or Industrial (C or I)
- Industrial (I)
- Parks (P)
- Residential (R)
- Commercial Mixed Use (CM)

Current Zoning → Recommended Future Zoning



Recommended Rezoning—South Section



★ MAJOR ANCHOR

Recommended Rezoning

- Commercial (C)
- Commercial or Industrial (C or I)
- Industrial (I)
- Parks (P)
- Residential (R)
- Commercial Mixed Use (CM)

Current Zoning → Recommended Future Zoning