NORTHWEST INDIANA REGIONAL DEVELOPMENT AUTHORITY

COMPREHENSIVE STRATEGIC PLAN

2016 UPDATE

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September 12, 2016

Acknowledgements

This Update to the Northwest Indiana Regional Development Authority's statutorily required Comprehensive Strategic Development Plan, IC 36-7.5-3-5, has been prepared under contract by Policy Analytics, LLC and American Structurepoint, Inc. The authors are thankful for the assistance of the officials at the Northern Indiana Commuter Transportation District, staff at the Northwest Indiana Regional Planning Commission, planning staff at municipalities throughout Lake and Porter counties, and the board and management of the RDA in the accomplishment of this task. We are grateful for the opportunity to contribute to the catalytic role of the RDA in leading transformational development in Northwest Indiana.

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PREFACE

In the 2005 legislative session, the Indiana General Assembly began an experiment. In order to best leverage the state tax revenue generated by Northwest Indiana casinos into transformative regional investment, the Indiana General Assembly created a regional development entity. It was named the Northwest Indiana Regional Development Authority – the "RDA" – and given an impressive set of responsibilities. The intent, according to the General Assembly's findings in IC 36-7.5-0.1-1(3), are,

> *(3) The powers and responsibilities provided to the development authority are appropriate and necessary to carry out the public purposes of encouraging economic development and further facilitating the provision of air, rail, and bus transportation services, projects, and facilities, shoreline development projects, and economic development projects in the eligible counties.*

The experiment was supported by both the Indiana executive branch and the legislature – bipartisan support from both House and Senate. The State also put its funding behind the experiment, appropriating $10 million per year for 10 years, along with the redistribution of state gaming funds from Lake County units, with an added $3.5 million annually from Porter County income tax payers.

The experiment appeared risky on many levels. There had not been warm relations between the Northwest corner of Indiana and the State government in Indianapolis for decades. The regional structure of the development entity, was a new form for the State and the commitment of funding seemed generous to many politicos from other parts of Indiana.

In its first 10 years, the RDA has, met the legislature's charge, making great headway on long hoped and planned for, but undone projects. The Gary-Chicago International Airport, hampered by a railway shortened runway, has been modernized with its runway extended. The Lake Michigan shoreline, Northwest Indiana's uniquely great asset has had miles of shoreline cleaned and made publically accessible. New businesses have been drawn to the region and the municipalities made more competitive in the attraction game. However, one legislative challenge has remained unmet. The creation of an efficient, reliable, modern, multi-pronged commuter rail system, a transportation asset that is wielded to great economic advantage by Chicago's Illinois suburbs, has remained beyond the reach of the RDA's resources.

During the 2015 Session of the Indiana General Assembly, the legislature addressed this transportation issue by directing the RDA to focus on extending and modernizing commuter rail within the region and tying the RDA's state funding to its investments in that asset. The State promised $6 million per year for 30 years, provided that the RDA update its statutorily required Comprehensive Strategic Development Plan, (IC 36-7.5-3-4), receive approval from the State Budget Committee and Agency, and make application for a grant of the funds to the Indiana Finance Authority. This document, is submitted to fulfill the above requirements.

From the RDA's Enabling Statute, IC 36-7.5-0.1-1

General assembly findings

"Sec. 1. The general assembly finds the following:

The eligible counties [in Northwest Indiana] face unique and distinct challenges and opportunities related to transportation and economic development that are different in scope and type than those faced by other units of local government in Indiana."

"The sky's the limit for Northwest Indiana."

- Governor Mitch Daniels at the signing of the RDA's enabling legislation

EXECUTIVE SUMMARY

In 2005 the Indiana General Assembly created the Northwest Indiana Regional Development Authority [the "RDA"), and directed it toward a mission of regional development through investments in air and rail transportation, shoreline development, and specific economic development projects. The RDA, maintaining that focus, made a series of investments in the intervening decade to catalyze economic growth in the region. These include:

The Gary-Chicago International Airport. The RDA invested $50 million to extend the airport's main runway in order to accommodate commercial air traffic. The City of Gary has since contracted for development around the airport, utilizing multi-modal strategies.

The Lake Michigan Shoreline. Through grants to local municipalities, the RDA invested $109.5 million in its first 10 years in environmental remediation, rehabilitation, and place-making at or along the Lake Michigan shoreline. In many cases these grants were matched with federal or other non-state funds to multiply the impact of these "quality of place" investments.

Specific Economic Development Projects. For the period from 2009 through 2015, the RDA gave out 9 grants for economic development to companies bringing jobs to Northwest Indiana. These grants incentivized 1,674 jobs for the region.

Other projects. The RDA has made a number of other investments in the region, including the purchase of commuter railcars and grants for the development of bus transit systems. The RDA has also provided infrastructure funding to the City of Valparaiso for its ChicaGo Dash commuter bus service, currently the only bus service in Northwest Indiana transporting workers to and from jobs in downtown Chicago.

The overall impact of the RDA's investments has been to strengthen the quality of place, and deepen the attractiveness of the Northwest Indiana region to its current population, and to the next generation of those who want to work in or around the City of Chicago.

REGIONAL DEVELOPMENT STRATEGY

In 2015, the RDA asked the Indiana General Assembly to extend the State's investment and the RDA's capacity to catalyze development in its region of the State. Preliminary analysis then showed that one major limitation to the region's ability to grow its population and capture its share of high-paying Chicago-based employment was the lack of effective and diverse transportation options to jobs in the City. The Legislature responded by appropriating $6 million per year, and instructing the RDA to refocus its Comprehensive Strategic Development Plan around building a commuter rail asset that would provide the "connectivity" to Chicago that – in turn – would attract new residents, create jobs, and build the regional economy.

Economic development strategies must include transportation components. In any model of a regional economy, transportation is a "cost". It adds to the cost of producing and delivering products. It is a cost to consumers as they attempt to buy products. It is a cost to employers who are searching for employees to staff their operations. And it is certainly a cost to workers who spend time and money getting to and from their places of employment. Reducing these costs enables an economy to run more smoothly and achieve higher rates of return, while workers reap higher wages.

In addition to these well-known and well understood outcomes, Northwest Indiana is uniquely situated – in suburban Chicago – to earn even higher returns from investments in transportation infrastructure. The Chicago economy pays a 37% premium in wages for the same job as is paid in Northwest Indiana. There is a built in demand factor for workers to be attracted to a commute into Chicago, and an immediate benefit to the Indiana economy for workers who make the trip. Secondly, Northwest Indiana workers commute into Chicago in much smaller percentages than do employees from the Illinois suburbs.

Finally, there are substantial benefits even for Northwest Indiana residents who never set foot on a train. Just as a single job in the region's steel mills supports several jobs outside the mill, rail acts as a jobs multiplier. Over the next 30 years, West Lake expansion alone supports an additional 2,500 annual ongoing non-rail jobs in Northwest Indiana, while West Lake plus double tracking the existing South Shore line creates 5,700 annual jobs in the region. These include many good-paying professional, education, and healthcare careers, as well as retail, hospitality and food service jobs.

THE RDA'S VISION FOR NORTHWEST INDIANA

"NWI will be the first choice in suburban Chicago for new and current residents, businesses and access to jobs. With diverse opportunities in all areas, NWI will be the leading area for economic growth in Indiana. We will be the best example in the nation for balancing growth with preservation, exciting and trendy urban and lake front communities with tranquil rural areas. NWI will be the example of what Hoosiers can be when given global opportunity"

- Bill Hanna, President and CEO, Northwest Indiana Regional Development Authority

ENHANCING REGIONAL CONNECTIVITY

The Chicago economy is the ninth largest in the world, and is the economic center of gravity for the entire midwest region of the United States. Northwest Indiana's proximity to Chicago provides unique opportunities, especially in comparison to other Indiana regions. Total employment in the Chicago MSA (2.5 million workers) is comparable to total employment in the state of Indiana (2.9 million workers).

In the early to mid 20th century, Northwest Indiana, (at that time primarily northern Lake County, Indiana) was seamlessly indistinguishable from the south side of Chicago. Its urban industrial cities housed the steel and manufacturing economy that provided the growth for the greater Chicago region, and the U.S.

Since the 1970's, global economics and improvements in technology have caused major reductions in the employment footprint of the heavy manufacturing industry that characterized the Northwest Indiana region. While manufacturing is still a dominant industry in Northwest Indiana, it employs less than half the workers it did in 1969.

The Chicago economy is well diversified into the technology, financial services, and professional services sectors. Furthermore, the labor force required to meet the demand of Chicago's population in healthcare, education, and retail/personal services is massive. Not only is the size of the Chicago jobs market a significant benefit to Northwest Indiana jobs seekers, but the jobs pay higher wages in almost every industry.

On average, a job in Cook County, Illinois pays 37% higher wages than a similar job in Northwest Indiana. Chicago jobs in professional or white-color sectors pay as much as 50% to 150% more than Northwest Indiana jobs. The manufacturing sector is the only industry that pays higher wages in Northwest Indiana than in Chicago.

The higher Chicago wages are reflected in the household incomes of those in the Illinois portion of the Chicago MSA. Most of the largest communities in Lake and Porter County, Indiana, as shown in Figure 2, are located within 20 to 40 miles of downtown Chicago. However, household incomes within this band lag similarly situated Illinois households by a significant margin.

Average Annual Wage Comparison (2015)

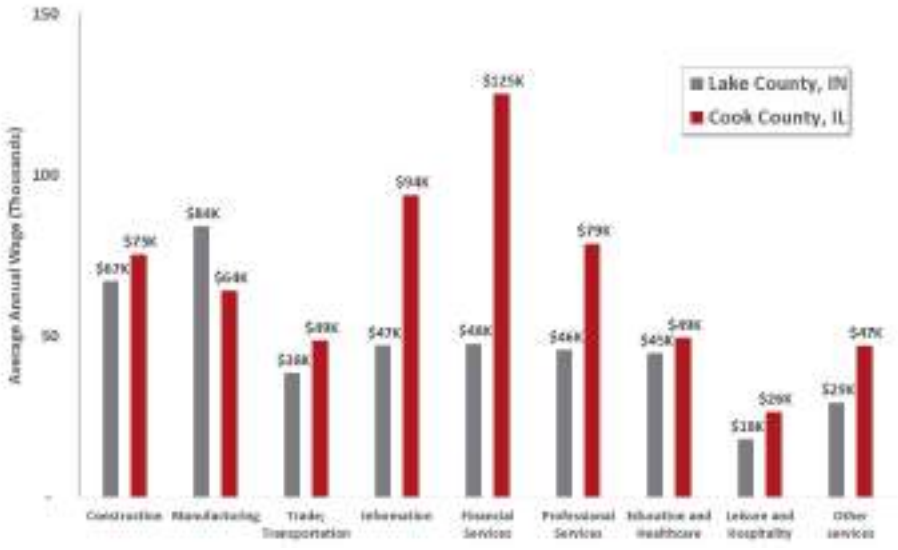


Figure 1

Average wages are higher in Cook County than in Lake County, Indiana for all industries except manufacturing. Jobs in Cook County pay 37% more than similar jobs in Lake County. The wage premium for professional, technical and other white collar jobs in Cook County is 50% to 150%

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages; 2015

Chicago Area Median Household Income

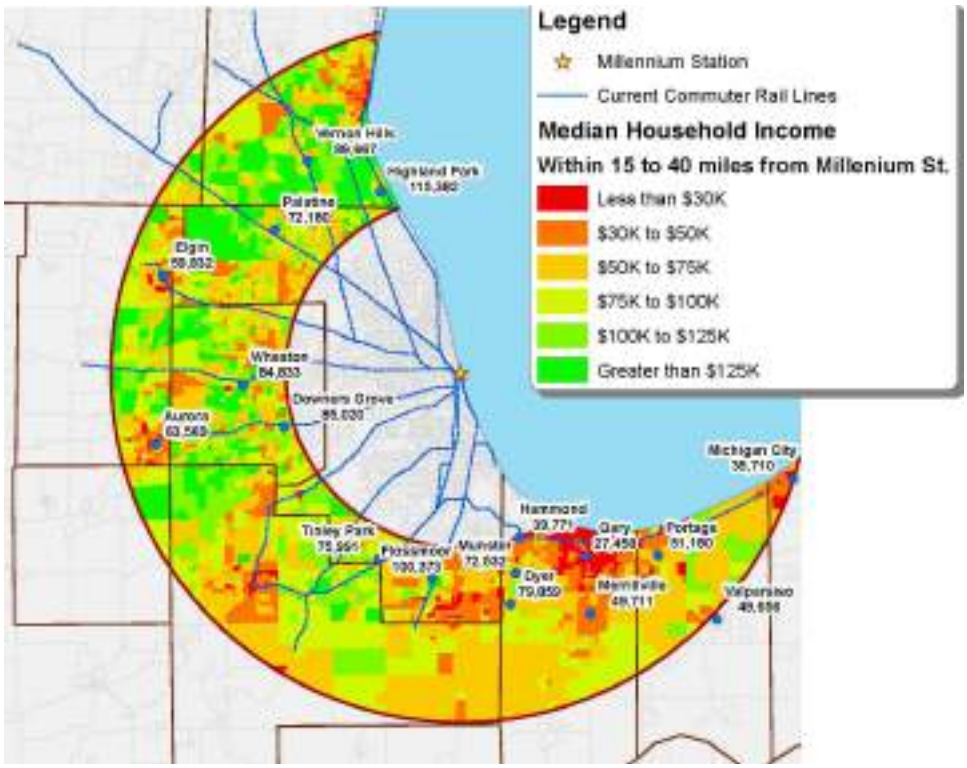


Figure 2

The median household income for many Illinois communities within 20 to 40 miles of downtown Chicago ranges from $60K to over $100K.

The median household income for Indiana communities within the same geographic range is substantially lower, toping out at approximately $80K.

Source: American Community Survey (U.S. Census); 2014 5-Year Estimates

The median household income for Illinois communities within 20 to 40 miles of downtown Chicago is varied, ranging from about $60K on the lower end to over $100K on the high end. Most suburban Chicago cities in Illinois have median household incomes within the $70K-$80K range.

In Indiana, however, only the communities with the highest household incomes reach $70-$80K, and those in Hammond and Gary drop to less than $40K. The socioeconomic data clearly shows an income divide between the Illinois and Indiana portions of the Chicago MSA, and that Chicago's Illinois suburbs have prospered in a way that the Indiana portion of the MSA has not.

The RDA's impetus for investment in commuter rail is to improve economic outcomes in Northwest Indiana by enhancing access to high wage jobs in Chicago. Indiana residents employed in Chicago will bring those wages home to Northwest Indiana and support the local economy through their household spending. Communities will then be able to leverage the activity surrounding transit stations into new centers of economic activity.

Enhanced transit access will also allow Northwest Indiana communities to compete more effectively for potential residents seeking to locate in the Chicago metro area. Current Census data shows median monthly housing costs for most of the Illinois suburban communities ranges between $1,400 and $1,800. For the Lake County communities of Munster, Dyer, Merrillville and Crown Point, the median monthly housing cost is approximately $1,100. This is a cost of living savings of 20% to 40% over Illinois suburban communities within a similar geographic distance to Chicago. The cost of living differences in Hammond, Gary and Portage are even greater.

The opportunity for 37% greater wages, combined with 20% to 40% savings in housing costs should make Northwest Indiana an attractive residential location for Chicago area job holders. However, the commuting data shows that Lake and Porter County residents commute at a much lower rate than their Illinois counterparts. As shown in Figure 3, approximately 35% of the workforce in the Illinois counties closest to Chicago commute to the City. DuPage County has the highest commuting rate, with 39% of its employed workforce.

However, the segment of the Northwest Indiana workforce that commutes to Chicago is much lower, at only 15% of the workforce. While the geographic distance to Chicago between the Illinois and Indiana communities is similar, the rate of commuting is not.

One of the barriers impeding the trade in labor within the Chicago region is the lack of effective and diverse commuter options for the residents of Northwest Indiana who work in Chicago. A recent study by the Texas Transportation Institute found that congestion on the roadways within the Chicago MSA is $7.2 billion annually. Northwest Indiana residents know that the major highway routes to Chicago are congested during peak periods, and that the road commute can be lengthy, unpredictable and stressful. Furthermore, parking in Chicago is expensive, as much as $40 to $50 a day, adding further cost to an auto commute.

A cursory comparison of commute options demonstrates that the Illinois suburban resident has several varied routes into the City compared to the commuter from Northwest Indiana. The Metra commuter rail system, developed over decades, reaches central Chicago from all directions. The Metra system is comprised of approximately 490 miles of commuter rail and carried 82 million passengers in 2015. In contrast, the Indiana side of the Chicago metro area has one existing commuter rail line that runs east and west to South Bend, with 33 miles of commuter rail within Lake and Porter Counties. The South Shore carried approximately 3 million passengers in 2015.

While the existing South Shore is a major asset to Northwest Indiana, and is heavily used, it is clear that the investment in commuting options in Indiana has not kept pace with the region. As a result, the Northwest Indiana region has not been able to capitalize on its proximity to Chicago to the extent of its Illinois neighbors.

The RDA's legislative mandate to enhance connectivity to Chicago by investing in commuter rail is intended to catalyze regional growth by enabling Northwest Indiana to play a larger role in the Chicago economy.

Percentage of Workforce Commuting to Chicago

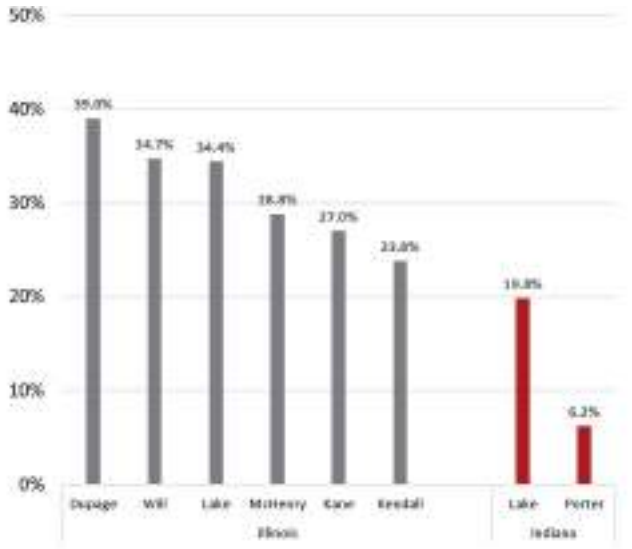


Figure 3

Northwest Indiana commuting rates lag the Illinois suburbs. Approximately 35% of the workforce commutes to Chicago from Illinois suburbs. Only 15% of workers residing in Lake and Porter County commute. The lack of commuter rail options in Northwest Indiana impedes the access of commuters to Chicago.

Source: U.S. Census "On the Map" Series; 2014

Chicago Area Commuter Rail/Transit Network

Figure 4

The Metra system on the Illinois side of the Chicago MSA is built out with 490 miles of commuter rail. Lake and Porter counties contain only 33 miles of commuter rail. This disparity limits accessibility to the Chicago job market.

COMMUTER RAIL PROJECTS

West Lake Corridor Extension

The West Lake Corridor Extension project is the culmination of many years of NICTD and regional leaders evaluating plans for the expansion of commuter rail service in Northwest Indiana. The West Lake Corridor, which will run north and south from the proposed Hammond Gateway station, will supplement the existing east-west South Shore line. Departing from Hammond, the West Lake Corridor has proposed stops in South Hammond, (173rd St.) Munster at Ridge Road, and Munster/Dyer at Main Street.

The WLC extension will require the realignment of the existing South Shore line at Hammond, and the establishment of a new "Hammond Gateway" station that would connect both the West Lake and South Shore routes. In addition to the rail stations, a proposed maintenance facility would be constructed in South Hammond.

The West Lake Corridor planning process is in its final engineering stage. While the preferred alignment has been largely planned, final decisions regarding exact alignments, station placements and cost estimates are subject to change until the engineering process is completed and NICTD submits a grant application for federal funding.

South Shore Double Tracking

The South Shore Double Tracking project is comprised of several rail network upgrades. These include installing parallel "double tracking" as far east as Michigan City, converting all major stops to high platform boarding stations, and realigning the 11th St. Michigan City station to allow better access and faster throughput for commuter rail.

The prime advantages of the double tracking project are twofold: faster transit times to Chicago, and greater system reliability. Double tracking improvements reduce transit times to Chicago by almost 25% in some cases. Trips between South Bend and Chicago go from 2:23 to 1:45 after the improvements have been made. After double tracking, trips from Portage can be completed in less than an hour, trips from Gary in less than 45 minutes, and trips from Hammond less than 30 minutes. These travel times place Lake and Porter County communities well within the typical commuting window of most Chicago workers.

The second major benefit of the double tracking improvements is increased overall reliability of the rail

West Lake Corridor Project Map

Figure 5

The West Lake Corridor route will run from the relocated Hammond Gateway station to Munster/Dyer Main Street, with stops in South Hammond, and in Munster at Ridge Road.

"Economists have long understood that thick markets—those with many sellers and many buyers— are particularly attractive because they make it easier to match demand to supply."

"The New Geography of Jobs" , Enrico Moretti

South Shore Double Tracking Project

Figure 6

Improvements in the South Shore Double Tracking scenario include the installation of parallel double tracks between the Illinois State Line and Michigan City, the conversion to high platform boarding at all stations, and the reconfiguration of the Michigan City station.

system. Currently a rail disruption causes delays that compound to every station on the route, and often affect the schedule of subsequent trains.

Rail commuters, especially voluntary commuters (those who often own cars) require consistent, reliable service. Otherwise, commuters must add buffer time to their commute, which adds to their commuting window, or they may just opt for auto travel; a mode where they seem to control the schedule. Double tracking redundancy allows a delay event to be bypassed, and makes it possible for peak period trains to stay on schedule even if there is a blockage elsewhere on the route. Double tracking also enables the use of express routes, which provide even faster access to Chicago.

South Shore Double Tracking Commute Times

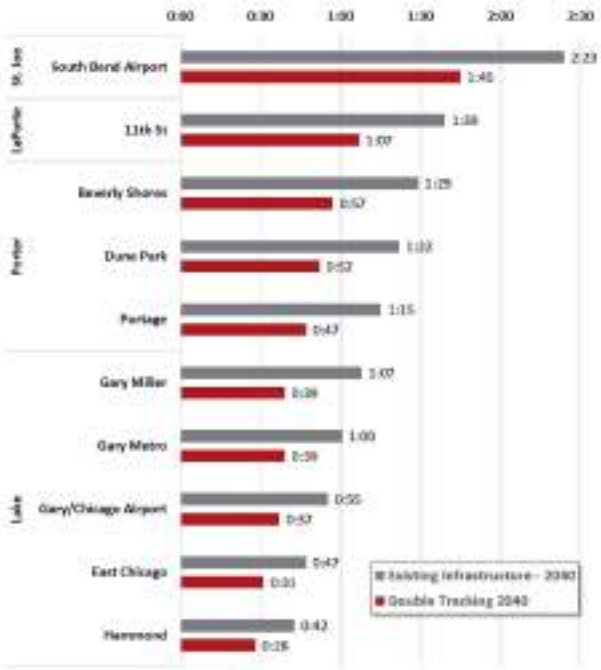


Figure 7

COMMUNITY DEVELOPMENT

The RDA has not limited the scope of its Strategic Plan to the direct investments in rail, only. In order for transit to be an effective economic development catalyst, the RDA is working to incentivize development around the stations on both the West Lake Corridor and on the enhanced, double-tracked South Shore line.

It should be noted that this is an ongoing, collaborative process involving not just the RDA but also county and municipal leadership as well as Northwest Indiana residents themselves. As part of the Phase I EIS, NICTD has held numerous meetings with civic leaders and the public to update them on plans and incorporate feedback and suggestions. The RDA itself has hosted multiple tours for federal, state and local officials of the proposed rail corridor and potential station sites. The transit oriented development process cannot be imposed, and there is no "one size fits all" model. There are best practices for TOD development that can be implemented across the system, but each TOD area will have a unique character determined by local residents and leadership.

Successful communities are able to leverage commuter rail access as a key component in their overall economic development strategy. Commuter rail provides better accessibility to employment in Chicago, and if harnessed wisely, will stimulate demand for housing, places of business, and eventually employment centers adjacent to commuter rail stations. Many of Northwest Indiana's cities and towns were built around historic transit lines. A large share of the area's communities and neighborhoods are currently striving to provide regional connections to Chicago while integrating denser, walkable community retail and service amenities at transportation hubs. The RDA's Strategic Plan is designed to build on these historic precedents and more broadly assist in new efforts to create stronger, more economically vibrant communities throughout the Northwest Indiana area.

The location of more densely developed, walkable communities is often labelled "TOD" for Transit Oriented Development. Cities and regions from coast to coast are pursuing transit-oriented development strategies as a way to achieve many goals, including increased economic competitiveness through improved quality of life, reduced

Transit Oriented Development Model

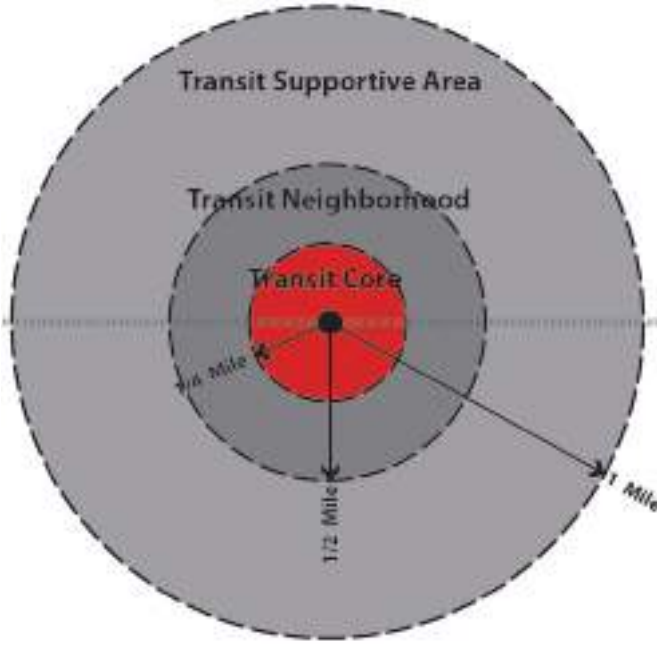


Figure 8

At the center of each TOD is the transit station. The development that extends outward from the transit station can be broken down into three primary categories; Transit core, Transit neighborhood and Transit supportive area.

congestion, lower transportation costs for households, improved air quality, reduced costs for providing city services, and growth management.

Further TOD, with its direct accessibility to transit services has been shown to bring real benefits to the municipalities that embrace it. TOD centered around a transit hub provides a planned area extending as much as one mile around the station.

Transit accessible communities exhibit higher property tax returns per unit area, and stimulate greater economic activity than traditional single family neighborhoods, in conjunction with urban proximity. TOD has advantages for younger persons and families as well. Millennials, (those born between 1983 and 2000), are driving less than older generations, while walking, biking and using transit at higher rates. A National Association of Realtors survey in 2014 found that millennials prefer walkable communities to driving. 48% of survey respondents opted for smaller yards within easy walking distance of the community's amenities, as opposed to homes with large yards where they would have to drive to access amenities.

Many of Chicago's Illinois suburbs have seen significant transit oriented development surrounding Metra access points, providing strong and enduring real estate development. A review of home prices near Metra further demonstrates the value of transit accessibility. A RE/MAX real estate study of northern Illinois found that Chicago suburbs with Metra train service saw home prices rebound in 2012 at greater rates than the suburbs as a whole. The study also found that the decline in home sales for suburbs with Metra service was smaller than in the suburbs as a whole.

Examples of Transit Oriented Development

Center Residential

Center Mixed Use

Flex Mixed Use

Figure 9

Different types of transit oriented development are illustrated in the images above. In total, 12 different TOD typologies were developed for station area plans.

STATION AREA PLANNING

The planned improvements along the South Shore corridor and the creation of the West Lake line will provide the catalyst for the communities of Gary, East Chicago, Portage, Hammond, Munster, and Dyer to take advantage of the TOD trends being seen on a national scale. The importance of creating vibrant, active urban environments around premium transit is vital to the success of the rail corridors and the prosperity of the impacted communities.

Station area plans were developed for eight stations on the West Lake Corridor and South Shore commuter rail lines. Though additional development will occur at other station areas, and within municipalities that benefit from rail but may not have stations located in their jurisdictions. For the purposes of the economic impact analysis, the short range and mid-range investments are assumed to be completed in the 20 year window between 2022 and 2041. To ensure the estimates are conservative, the long range investments (Phase III) contemplated in the station area plans are not included in the economic impact modeling.

The station area construction investment horizon is shown in Figure 10. By the year 2040, an estimated $2.3 billion in capital investment is projected across all eight station area locations. The investment growth curve is moderate through 2029, when mid-term construction activity at the Munster/Dyer, Gary Metro and Gary Miller stations is projected to come online. The capital investment includes a mix of site preparation, multi-family residential, and retail/office construction, and street, streetscape and greenway improvements necessary to facilitate access to the rail stations. This total is comprised of $1.9B of private investment and $400M of public funding including Federal, state and local monies.

The construction spending produces a net new economic impact to the region to the extent that it is financed by private dollars. The long-term economic impact of station area development comes from the business activity and employment supported by firms that locate near transit stations. Using standard estimates of employees per square foot, the commercial space at each station was converted into an estimate of employees at 20 years.

Estimated Station Area Investment; Short Term and Mid-Term Phases

2016 Dollars in Millions

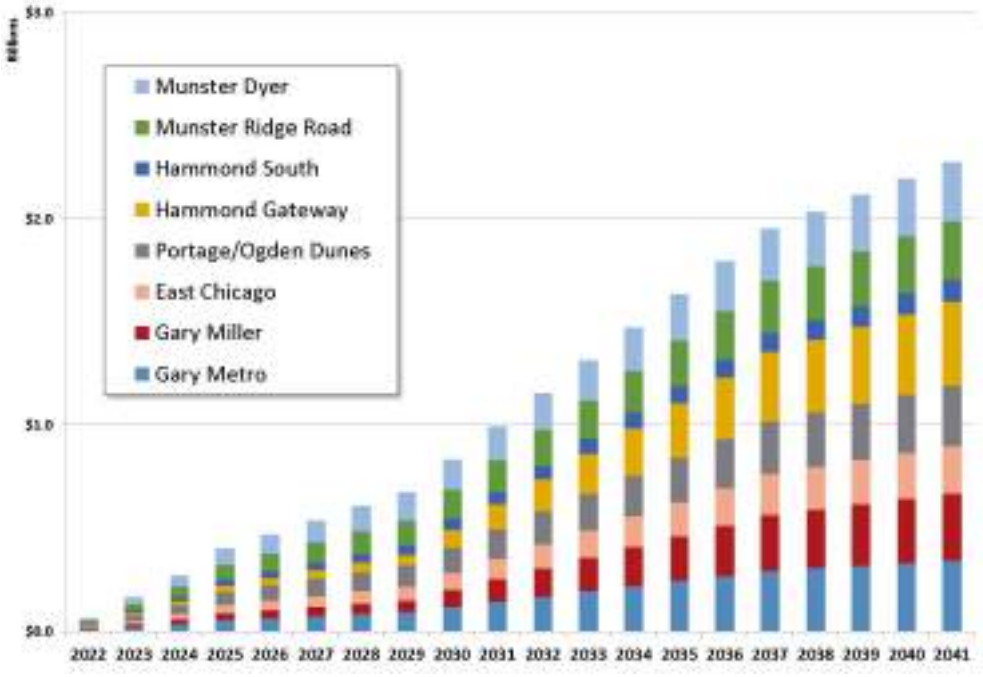


Figure 10

Station area plans were developed for eight stations along the West Lake Corridor and the existing South Shore to estimate the development capacity at each location. These plans include estimates of the scope and cost of commercial and residential construction, and public infrastructure costs.

These plans show the potential for $2.3 billion in investment at station areas by the year 2041.

Source: American StructurePoint; Policy Analytics, LLC

Station Area Plan Development

Each station is unique and requires a careful understanding of the community and station area's past, present, and goals for the future. Realizing the current status of each community and how it came to be, is a vital part of the planning process that helps mold recommendations and create objectives for each TOD station and the immediate surrounding areas. The planning process involved reviewing existing plans, meeting with representatives from the RDA, and the local communities. Future development plans consisting of development concepts, characteristics, and corridor recommendations, were then created for each station area.

In order to respond to a number of unique conditions and development opportunities along both the proposed West Lake Corridor and the existing South Shore, a total of 12 planning place types were developed. The future place-types assigned to each area were determined by a combination of current development, community vision, and traditional transit oriented uses. The station area development examples shown in Figures 11-12 identify the application of the defined place types created as a part of this planning process.

Hammond Gateway Station Area Plan

Figure 11

Munster Dyer Station Area Plan

Figure 12

LEGEND

- Center Residential
- Center Mixed Use
- Center Recreation
- Flex Mixed Use
- Neighborhood Commercial
- Neighborhood Mixed Use
- Neighborhood Recreation
- Neighborhood Revitalization
- Office Flex
- Regional Campus
- Traditional Neighborhood Development
- NICTD Facility
- Existing Land Use
- Proposed Station Location
- CSX Railroad
- Proposed West Lake Extension
- South Shore Rail

ECONOMIC IMPACT ANALYSIS

The economic impact methodology is designed to capture the various components, or layers, of economic impact generated by the RDA commuter rail projects. Economic impacts are measured by comparing the economic outcomes of a set of policy variable changes to a control, or baseline forecast. The scenarios for this analysis are defined as follows:

- Current Infrastructure at 2040: Assumes no changes to NICTD's commuter rail infrastructure. Projected on the NIRPC 2040 socioeconomic forecast.
- West Lake Corridor Scenario: Assumes the completion of the West Lake Corridor commuter rail line from the Hammond Gateway station to the Munster/Dyer Main Street station.
- West Lake Corridor + Double Tracking: Incorporates the West Lake Corridor Scenario and includes parallel double tracking on the existing South Shore to Michigan City, and other network improvements.

The high level inputs for each modeling scenario include the project costs for each component of the rail project as provided by NICTD. These inputs were converted into economic policy variable assumptions and were used to model the impact on the regional economy.

Commuter Income

One of the unique benefits of commuter rail investment in Northwest Indiana is that it enhances accessibility to a major world marketplace. Northwest Indiana residents who work in Chicago are essentially labor "exports," in that they trade professional services to buyers out of the region in exchange for income that returns to the region. While these earnings are generally not taxed in Indiana, a significant portion of Northwest Indiana residents' commuter earnings will be spent within the region, further strengthening the local economy.

To estimate the economic outcomes conservatively, only the portion of commuter income that is above and beyond the wages a worker would earn in a similar job in Northwest Indiana is used as an input into the economic model. In total, the additional commuters in the West Lake Corridor scenario return a total of $183M in commuter income to the region. The wage premium over Northwest Indiana jobs for these workers is $49M. In the WLC+Double Tracking scenario, new riders generate an estimated $264M in commuter income, which is a $78.5M wage premium over Northwest Indiana jobs.

Figure 13

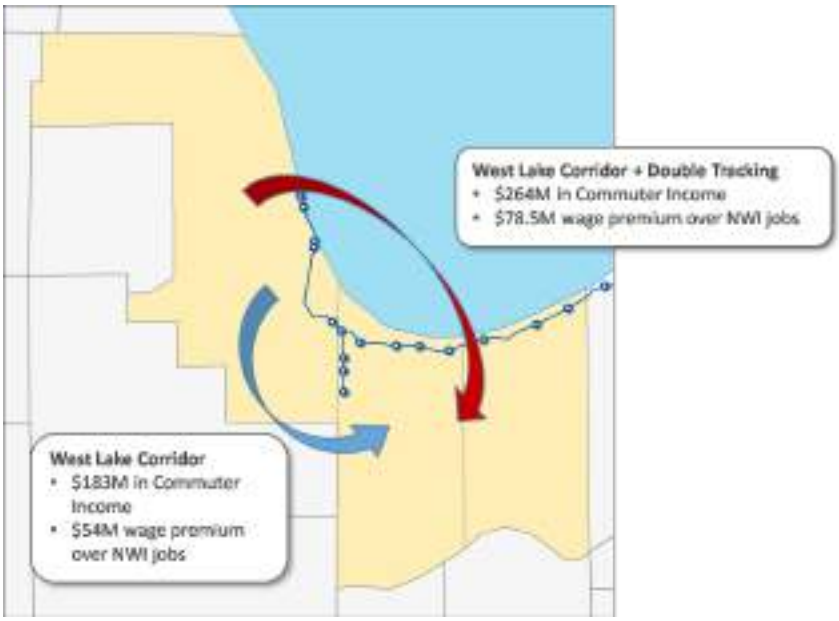
Northwest Indiana commuters who work in Chicago earn higher wages than they would in similar jobs in Northwest Indiana.

New West Lake Corridor riders will earn an estimated $183M in commuter earnings annually, much of which will be brought back and spent in Northwest Indiana.

New commuter rail riders in the WLC + Double Tracking Scenario earn an estimated $264M in commuter income annually. To be conservative, the economic impact modeling is based on only the wage premium Chicago jobs pay over Northwest Indiana jobs.

Source: Regional Economic Models, Inc.

Commuter Earnings from New Transit Riders



Personal Income

The West Lake Corridor scenario results in an average increase in personal income for Lake and Porter Counties of $28M per year, totaling $843M by the year 2046 (current dollars). The WLC+Double Tracking scenario results in an average annual increase in personal increase of $50M, resulting in a total increase of $1.5B by 2046. This value represents the total personal income gain to Northwest Indiana residents, including commuter income earned by individuals working in Chicago.

Personal Income Change from Baseline

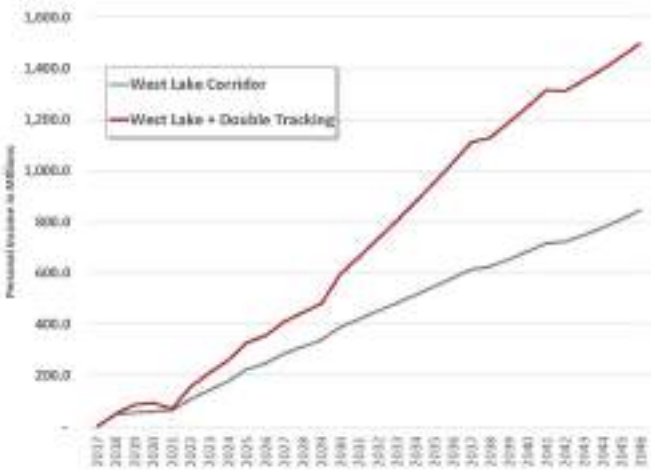


Figure 14

Population

Improved commuter rail accessibility encourages migration to Northwest Indiana as Chicago commuters experience similar transportation times as other suburban areas, but may enjoy significant cost of living benefits. The West Lake Corridor scenario attracts approximately 8,000 residents to Northwest Indiana by 2046. The WLC + Double Tracking scenario, with associated station area developments in Gary, East Chicago and Portage is projected to increase population by more than 11,000. This is a 1.4% increase over the baseline.

Population Change from Baseline

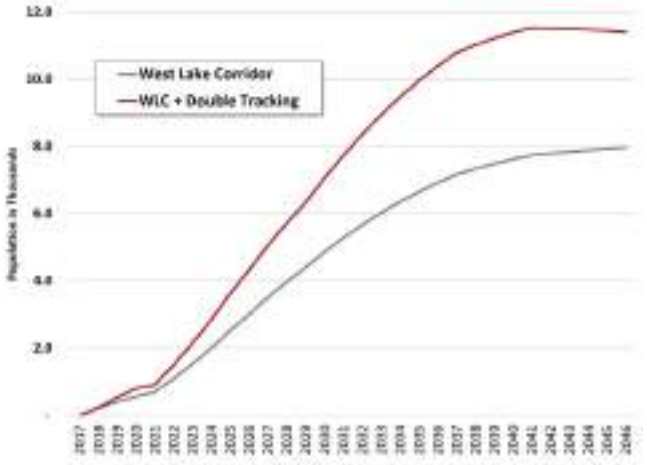


Figure 15

Employment

The economic activity catalyzed by enhanced accessibility to Chicago and station area development will be a significant driver of employment in the region. By 2046, Northwest Indiana commuter rail investments support an additional 2,500 annual ongoing jobs in the West Lake Corridor scenario, and 5,700 annual jobs in the WLC + Double Tracking scenario.

Employment Change by Industry

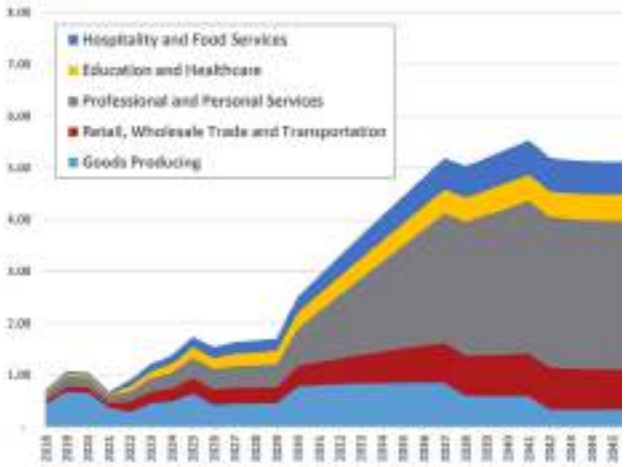


Figure 16

FISCAL IMPACTS

The State of Indiana's two major revenues are the State income tax and the State sales tax. The State income tax, based on personal income of Indiana residents, raises approximately $5.2 billion per year for the state. The State income tax applies only to income earned in Indiana. Northwest Indiana residents who commute to Chicago pay Illinois income taxes on the portion of income earned in Illinois, but do not pay Indiana income taxes on that portion. Therefore, this fiscal impact analysis excludes any tax levied on income earned outside of Indiana by commuters.

The State sales tax is a 7% tax on the final sales price for any taxable transaction. The sales tax applies to all taxable sales in Indiana. There is also a corresponding "Use Tax" which is levied against purchases of "sales taxable items" purchased out of Indiana. The sales tax generates approximately $7.3 billion annually in revenue for the State of Indiana. A small portion of that funding (0.123%) is allocated to the Commuter Rail Service Fund, of which NICTD is the beneficiary.

In the West Lake Corridor scenario over the 20-year period from 2019 through 2038, commuter rail related economic activity produces a total of $171M in state sales tax and $101M in state income tax. For the West Lake plus Double-Tracking scenario, from 2019 through 2038, the total for State sales and income taxes is $502 million.

In addition, Lake and Porter County both impose local option income taxes. Over the 20-year period the economic activity generated by the added commuter rail assets and the associated private sector investments is expected to produce $61.5 million in revenue in total for the counties, at current rates.

West Lake Corridor Fiscal Impact

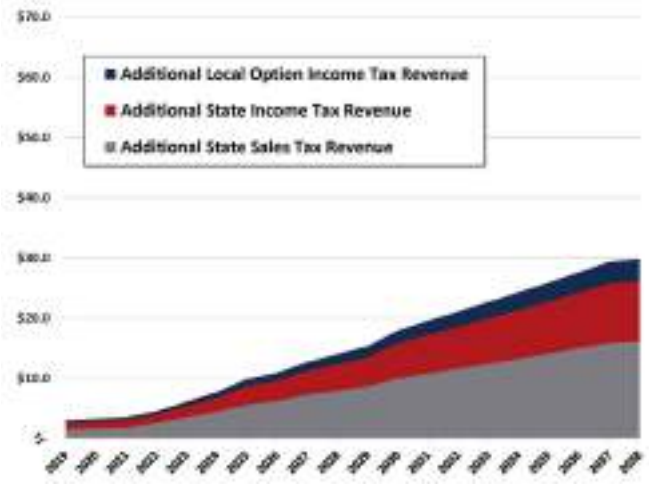


Figure 17

WLC + Double Tracking Fiscal Impact

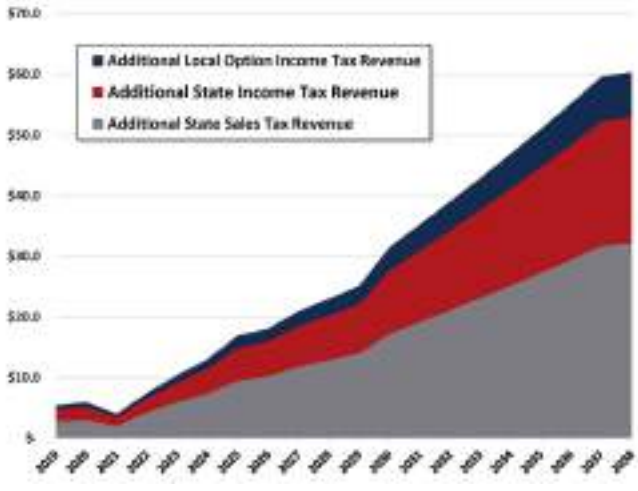


Figure 18

The economic activity resulting from commuter rail investment provides fiscal benefits to both state and local governments. The West Lake Corridor scenario produces a total of $272M in state revenues in the 20-year period between 2019 and 2038. The WLC+ Double Tracking Scenario produces a total of $502M within that time frame.

Property Tax Revenue Benefit

The successful execution of transit oriented development strategies around rail stations will also produce fiscal impacts in the form of property tax revenue for local taxing units. In Indiana, property taxes are limited to a percentage of a property's market value: 1% of market value for owner-occupied (homestead) residential property, 2% for non-homestead residential, and 3% for non-residential property. The station area planning process shows the potential for extensive commercial and multi-family residential development adjacent to rail stations on both the proposed West Lake Corridor and the existing South Shore. State law allows municipalities to capture a portion of the increase in assessed value from new investment and reinvest it into the community (tax increment financing). The level of investment projected around commuter rail stations will produce significant property tax revenues as development comes online. Over 20 years, station area development is projected to generate $207M for the West Lake Corridor station areas, and $227M for stations along the South Shore.

The redevelopment of station areas should also promote increases in value of existing sites and structures, and in areas not directly involved in transit oriented development. This ancillary impact has not been quantified for this analysis and is above and beyond the impacts stated herein.

Property Tax Impacts

Local Government Unit / Station Area Municipality	20 Year Total Prop. Tax (Millions)
West Lake Corridor	
HAMMOND GATEWAY	$64.8
HAMMOND SOUTH	27.0
MUNSTER RIDGE ROAD	61.7
MUNSTER/DYER	53.8
Subtotal	**$207.3**
South Shore Double Track	
GARY METRO	$70.2
GARY MILLER	65.2
PORTAGE/OGDEN DUNES	35.6
EAST CHICAGO	56.6
Subtotal	**$227.7**
Total	**$435.0**

Figure 19

FINANCIAL PLAN AND RETURN ON INVESTMENT

The Indiana General Assembly in the 2015 State Budget legislation, appropriated $6 million per year for the biennium, (State Fiscal Years, 2015-16 and 2016-17), for construction or debt service on commuter rail projects in Northwest Indiana. To qualify to receive the funds, and to receive future appropriations, the RDA must show the State a return on investment that is at least equal to 2 times the state's appropriation in the twentieth year after the first grant is made.

RDA and NICTD Planning Processes

Procedural Step	Start	Finish
Draft EIS to FTA & Request to enter Project Development	-	Aug-16
Complete Public Review and Hearing on Draft EIS	Oct-16	Nov-16
Preliminary Engineering	Sep-16	Jul-17
Request to Enter FTA New Starts Process	Aug-17	Feb-18
Full Funding Grant Agreement from FTA	Nov-19	Nov-19
Construction on West Lake begins	Apr-20	Apr-22
West Lake operations begin	Apr-22	-

Figure 20

The construction of the West Lake Corridor project is to be paid for by both the federal government through the FTA's New Starts program and State and Local funding. The federal funds will be issued as part of a "Full Funding Grant Agreement" which will provide 50% of the construction cost of the project as demonstrated in Figure 21. The balance of the estimated $615.5 million project cost will be covered by the RDA, with grants from the State of Indiana and pledges of local CEDIT revenues. The RDA is expected to issue bonds with a 30-year term, through the Indiana Finance Authority and will utilize the State and local pledges along with its own source funds to pay debt service on the bonds.

West Lake Corridor Project Sources and Uses

Sources	Total Amt [Mill's $'s]	PV [Amt in Mill's of 2017 $'s]
FTA New Starts Grant	$ 307.8	$ 307.8
RDA "Own Source Funding"	305.9	153.9
Lake County units' CEDIT	112.0	61.6
State of Indiana	180.0	92.3
Total Sources	**905.7**	**615.5**
Uses		
Guideway, Track Elements	140.6	140.6
Stations, Stops, Terminals	52.0	52.0
Support Facilities	52.0	52.0
Sitework, Special Conditions	84.0	84.0
Rail Systems	48.2	48.2
Real Estate, ROW	29.5	29.5
Rail Cars	34.5	34.5
Professional Services	133.9	133.9
Contingency	40.8	40.8
Subtotal	**615.5**	**615.5**
Debt Service on Bonds	290.2	-
Total Uses	**$ 905.7**	**$ 615.5**

Figure 21

The RDA is expected to issue long-term bonds to pay for the construction of the project.

The construction of the West Lake Corridor project is to be paid for by both the federal government through the FTA's New Starts program and State and Local funding. The federal funds will be issued as part of a "Full Funding Grant Agreement" which will provide 50% of the construction cost of the project as demonstrated in Figure 21. The balance of the estimated $615.5 million project cost will be covered by the RDA, with grants from the State of Indiana and pledges of local CEDIT revenues. The RDA is expected to issue bonds with a 30-year term, through the Indiana Finance Authority and will utilize the State and local pledges along with its own source funds to pay debt service on the bonds.

It is likely that the RDA will need to issue bonds sometime in late 2017 or 2018 as NICTD receives approval on its federal grant. It follows that the time period for the RDA to show an ROI for the State, is at the end of the 20 years, or in 2038. Since the projected annual State appropriation is $6 million per year, the statutorily defined ROI calculation is the State of Indiana's projected sales and income tax revenues to be collected in 2038, ($26.2 million) divided by the grant amount of $6 million. Figure 22 demonstrates that the State's ROI result from its investment into the West Lake project to be 4.4 times the funds expended.

The RDA Comprehensive Strategic Plan also contemplates the completion (to the Michigan City stations) of the double-tracking project along the current South Shore line. This portion of the commuter rail plan is not currently funded; however, the economic and fiscal impact of double-tracking has been evaluated as part of this report. The cost of double-tracking, assuming that 50% is paid by the Federal Transit Administration through its Core Capacity program, will be the annual debt service on approximately $105 million, or an estimated $6.7 million annually. Figure 23 shows this dual scenario of the fiscal impact of accomplishing both West Lake and double-tracking and the expected ROI for both. In this case, although the source of the double-tracking funds is unknown, the calculation is the State sales and income tax revenue received in CY 2038, ($52.9 million), divided by the total public cost of $12.7 million, resulting in an ROI of 4.2 times the amount invested.

West Lake Corridor Return on Investment

Figure 22

HEA 1001-2015 requires the RDA to demonstrate a 2x investment by Year 20 of the state grant. The fiscal impact analysis for both the West Lake Corridor scenario and the WLC+Double Tracking scenario both show a public return on investment of over

WLC + Double Tracking Return on Investment

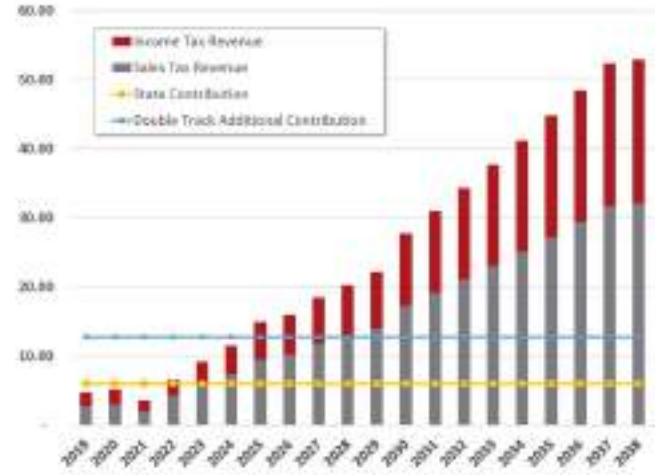


Figure 23

While the funding sources for the double-tracking construction have not been identified, when the Double Tracking is added to the West Lake Corridor, the project still produces greater than 4x ROI.

VALUE CAPTURE AND IMPLEMENTATION

Transportation investments incentivize surrounding commercial, retail, and residential real estate development. In particular, commuter rail, because of its permanence, its long-term fixed guideway nature, is effective in attracting private sector development. Proponents of TOD have coined a term for utilizing the economic and fiscal benefits resulting from this transit incentivized growth – "value capture". It refers to the mechanisms used to appropriate the transit induced revenues to further support financing transit or economic investments.

The Indiana General Assembly instructed the RDA to model the outcomes of its Comprehensive Strategic Plan to determine whether the return on the State's investment would meet the statutory test. As a result, the State specifically required a measurement of the "value" that would be created and therefore possible to capture should the RDA be allowed to go forward and pursue its strategy of "connectivity." Those results, demonstrated above, indicate that there will be substantial positive economic and fiscal outcomes from the transit and TOD investments planned by the RDA. This section identifies the methodologies used across the nation to capture the fiscal outcomes and utilize, in part, those revenues for supporting the transit infrastructure.

Real Estate Based Mechanisms

The most straightforward methods for capturing the fiscal results of transit are focused on its impact on property values. The following value capture methods rely on the increase in real estate demand or assessed value near transit.

TIF – Tax increment financing, the capture of new investment within a defined district, is practiced across the US as a method to further spur transit development. Chicago has recently enacted a TIF district along a significant portion of its METRA electric line.

Impact Fees - These fees, applied to parcels within a defined geography around a station constitute a revenue stream useful to support the transit district itself, or the development entity – like an RDA – which is engaging in providing the seed capital to enable the initial stages of development.

Air Rights - In some jurisdictions where denser development is contemplated, the transit entity or the development organization is enabled to sell or lease the "air rights" over property the entity owns. This allows private developers to utilize proximity to stations to enhance the value of the private sector investments on these parcels and at the same time provide a revenue stream to support further transit development.

Sales Tax Mechanisms

Because transit incentivizes and enhances economic activity along its corridors and within its regions, many states or localities enable some portion of the sales tax revenue spun-off by this economic growth to be redirected toward transit or to further economic development. In 2013, the Commonwealth of Virginia increased its sales tax and dedicated a portion to transit. By 2018, the amount of sales tax revenue going to transit, resulting from this rate increase, is expected to be $56 million per year. Austin, Texas uses a local sales tax to support its Capital Metro transit system. In the district's 2016 budget, sales tax revenue was expected to provide $217.1 million, or 60.8% of its annual revenues.

Indiana's sales tax has always been considered a "State only" source of fiscal support. While many states have local option sales taxes, Indiana has allocated to local units the income tax for local option usage and "fenced off" the sales tax as the State's main source of revenue. While this fiscal strategy is a rational response to the pressures to "piece meal away" the State's revenue base, some recognition of the significant benefit for the State, ($310 million over 20 years), resulting from the transportation related investments proposed in the RDA's Comprehensive Strategic Plan could be warranted. One possible avenue would be to dedicate a portion of the sales tax revenue from these transit investments – perhaps capped at a fixed amount – for a period of the debt service required to construct the rail lines. This is in keeping with prior legislation which provided a very small percentage of the sales tax rate be dedicated for transit around the State. In this instance, a defined rate or dollar amount might be dedicated for the 30-year period of the bonds.

Income Tax Mechanisms

In Indiana, the income tax, while primarily a State revenue source, has been designed to be shared between the State and local units through county based adoption mechanisms. The State has recently made local option income tax structures more flexible, in an attempt to encourage those units to assume responsibility for their own fiscal needs. Currently, 15 local governmental units in Lake County have pledged significant amounts of local option income tax revenues to the West Lake Corridor transit development – though the total amount is not final as some of the units are still making decisions.

Because under Indiana law, income tax is more easily tied to a particular place – a sub state geography – it is more adaptable for capturing for transit for long term support and economic development. One method of recognizing the fiscal benefits of the RDA's "Connectivity Strategy" to the State, as well as local units, would be to dedicate a matching amount of State income tax revenue, to pledged local income tax revenue in order to complete the financing of the South Shore Line's Double Tracking project.

FINDINGS AND CONCLUSION

1. Cook County jobs pay 37% more than similar jobs in Northwest Indiana. Despite a 20% to 40% reduced cost of living, Northwest Indiana workers commute at less than half the rate of workers from the Illinois suburbs.

2. According to the FTA's preferred commuter rail ridership model, the addition of the West Lake Corridor extension to the NICTD commuter rail network will induce substantially more riders onto the rail line. Further, double tracking the current South Shore line will improve reliability and reduce commuting times with the result of bringing even more ridership to the NICTD system.

3. Increased commuter rail ridership in the West Lake Corridor scenario produces $183M in commuter income. The West Lake Corridor + Double Tracking scenario produces $264M in commuter income annually for Lake and Porter Counties. These funds are spent within the Northwest Indiana economy, generating jobs and further economic activity.

4. The RDA's commuter rail investments will produce $1.5B in personal income by 2046, and result in a population increase of 11,000 residents to Northwest Indiana. This activity will support 5,700 annual jobs within the region. These impacts are above the baseline socioeconomic forecasts.

5. The West Lake Corridor scenario produces a total of $272M in State sales and income tax revenue, and $243M in local revenue (property tax and income tax) in the 20 year period between 2019 and 2038. The West Lake Corridor + Double Tracking scenario produces $502M in State revenues and $504M in local revenues during that time frame.

6. HEA 1001-2015 required the RDA to document a return on investment from its updated Comprehensive Strategic Plan. The return on investment in the twentieth year for the West Lake Corridor scenario is 4.4 times the State investment. For the West Lake + Double Tracking scenario, while the sources of funding are not yet determined, the return on investment to the public funding sources is 4.2 times the public investment.

01. INTRODUCTION

"Identity: the distinguishing character or personality of an individual."[1] The character of a place is an important component of what makes it attractive for those who live there. State, regions, counties and cities have characteristics that both distinguish them from other places and induce pride in their inhabitants. Northwest Indiana is a region with a distinctive identity – marking it as different from much of the rest of Indiana, yet sharing some of the same characteristics.

Indiana is a state often thought of as rural and agricultural in nature, yet it is the most heavily manufacturing state in the nation, based on the percentage of workers employed in that sector. Northwest Indiana is a region with a long history in manufacturing, as highly focused on that sector as any region in Indiana. However, Northwest Indiana is decidedly not rural as it inhabits the Chicago Metropolitan Statistical Area, ("MSA"), the 9th largest regional economy on the planet.[2]

Figure 1.1

Summary of completed RDA projects and investments.

In 2005 the Indiana General Assembly created the Northwest Indiana Regional Development Authority [the "RDA"), and directed it toward a mission of regional development through investments in air and rail transportation, shoreline development, and specific economic development projects. The RDA has maintained that focus and has made a series of investments in the intervening decade to grow the region. These include:

1. The Gary-Chicago International Airport. The RDA invested $50 million in a project to extend the airport's runway. The City of Gary has since contracted for development around the airport, utilizing multi-modal strategies.

2. The Lake Michigan Shoreline. Through grants to local municipalities, the RDA invested $109.5 million in its first 10 years in environmental remediation, rehabilitation, and place-making at or along the Lake Michigan shoreline. In many cases these grants were matched with federal or other non-state funds to multiply the impact of these "quality of place" investments.

3. Specific Economic Development Projects. For the period from 2009 through 2015, the RDA gave out 9 grants for economic development to companies bringing jobs to NW IN. These grants incentivized 1,674 jobs for the region.

4. Other projects. The RDA has made a number of other investments in the region, including the purchase of commuter railcars and grants for the development of bus transit systems. The RDA also provided infrastructure funding to the City of Valparaiso for its ChicaGo Dash commuter bus service, currently the only bus service in Northwest Indiana transporting workers to and from jobs in downtown Chicago.

The overall impact of the RDA's investments has been to strengthen the quality of place, and deepen the attractiveness of the Northwest Indiana region to its current population, but more importantly to the next generation of those who might want to work in or around the City of Chicago.

Regional Development Strategy

In 2015, the RDA asked the Indiana General Assembly to extend the State's investment and the RDA's capacity to catalyze development in its region of the State. Preliminary analysis showed that one major limitation on the region's ability to grow its population and capture its share of high-paying Chicago based employment was the lack of effective and diverse transportation to jobs in the City. The Legislature responded by appropriating $6 million per year, and instructing the RDA to refocus its Comprehensive Strategic Development Plan around building a commuter rail asset that would provide the "connectivity" to Chicago that – in turn – would attract new residents, create jobs, and build the regional economy.

There are a number of reasons why economic development strategies need to include transportation. In any macro model of a regional economy, transportation is a "cost". It adds to the cost of producing and delivering products. It is a cost to consumers as they attempt to buy products. It is a cost to employers who are searching for employees to staff their operations. And it is certainly a cost to workers who spend time and money getting to and from their places of employments. Reducing these costs enables an economy to run more smoothly and achieve higher rates of return, while workers reap higher wages.

In addition to these well-known and well understood outcomes, Northwest Indiana is uniquely situated – in suburban Chicago – to earn even higher returns from investments in transportation infrastructure. The Chicago economy is paying a 37% premium in wages for the same job as is paid in Northwest Indiana. There is a built in demand factor for workers to be attracted to a commute into Chicago, and an immediate return to the Indiana economy for workers who make the trip. Secondly, Northwest Indiana workers commute into Chicago in much smaller percentages than do employees from the Illinois suburbs. So the question is, "How to make that trip more efficient, easier, less costly, for the would-be Indiana worker?" This report examines that question in the context of the mission of the RDA to catalyze stronger, more diverse economic development and a higher quality of life with its region; and projects the impact if the problem can be solved.

THE RDA'S VISION FOR NORTHWEST INDIANA

"NWI will be the first choice in suburban Chicago for new and current residents, business and access to jobs. With diverse opportunities in all areas, NWI will be the leading area for economic growth in Indiana. We will be the best example in the nation for balancing growth with preservation, exciting and trendy urban and lake front communities with tranquil rural areas. NWI will be the example of what Hoosiers can be when given global opportunity"

- Bill Hanna, President and CEO, Northwest Indiana Regional Development Authority

02. INVESTING IN CONNECTIVITY

Northwest Indiana lies within commuting distance of the ninth largest economy in the world. The region's proximity to Chicago holds great potential and is an asset not available to other Indiana communities. Yet, due to the jurisdictional barrier of the state line, and because of historic dissimilarities between Northwest Indiana's cultural and economic fabric compared to the rest of Indiana and urban Chicago – this reality has been largely ignored or misunderstood. The misunderstanding extends from policy makers in Chicago to Indianapolis – from the decade after World War II through to the present day. One result of this political and economic schizophrenia is the undervaluing of the benefits of closer economic ties between Chicago and its Indiana suburbs. This has resulted in a socioeconomic fault line developing at the Indiana-Illinois state line, preventing Northwest Indiana from participating in the regional growth of the Chicago metro area at the same level as its Illinois peers, and imposing inefficiencies that inhibit the regional economy from operating at its full potential.

THE CASE FOR CONNECTIVITY

In its earliest development, Northwest Indiana, (at that time primarily north Lake County, Indiana) was seamlessly indistinguishable from the south side of Chicago. Its urban industrial cities, largely relying on immigrant labor, prospered with the steel and manufacturing economy that provided the growth for the greater Chicago region. The heavy manufacturing that characterized Chicago, Northwest Indiana and the rest of the upper Midwestern and Northeastern US economies has diminished – not in importance, but certainly in employment. Technological change and global competitive pressures have reduced the numbers of workers it takes to produce a ton of steel or to assemble an automobile. As a result, the character of the Chicago economy, consistent with much of the rest of the US has changed and diversified into more service-centric industry sectors. As shown in Figure 2.2, the Chicago MSA's manufacturing workforce has been reduced by over 50% between 1969 and 2015. In contrast, employment in the finance, technical, and healthcare/education sectors has increased immensely.

The history of Northwest Indiana's economic development shows much less diversification. Though the region has experienced a loss of heavy industrial workers, the Indiana portion of the Chicago economy has retained much of its earlier manufacturing-heavy character. Part of the reason

Chicago Metropolitan Statistical Area

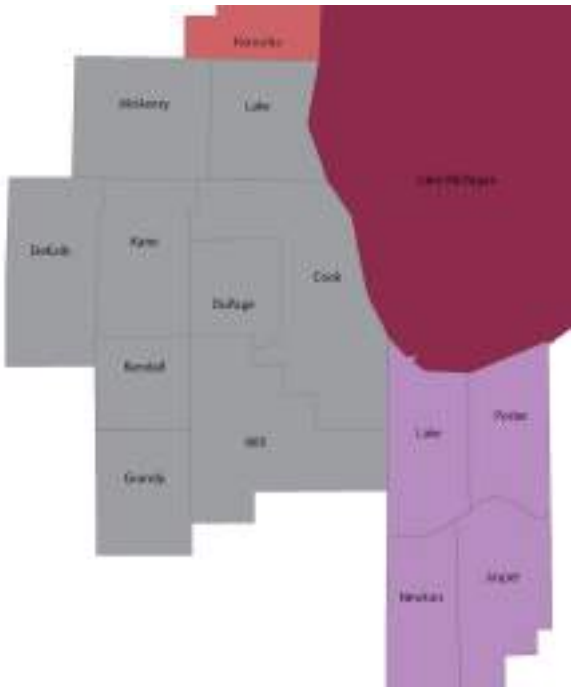


Figure 2.1

The Chicago-Naperville-Elgin Metropolitan Statistical Area (MSA) contains Cook County, IL, and surrounding counties, plus Kenosha County in Wisconsin and Lake, Porter, Newton and Jasper Counties in Indiana.

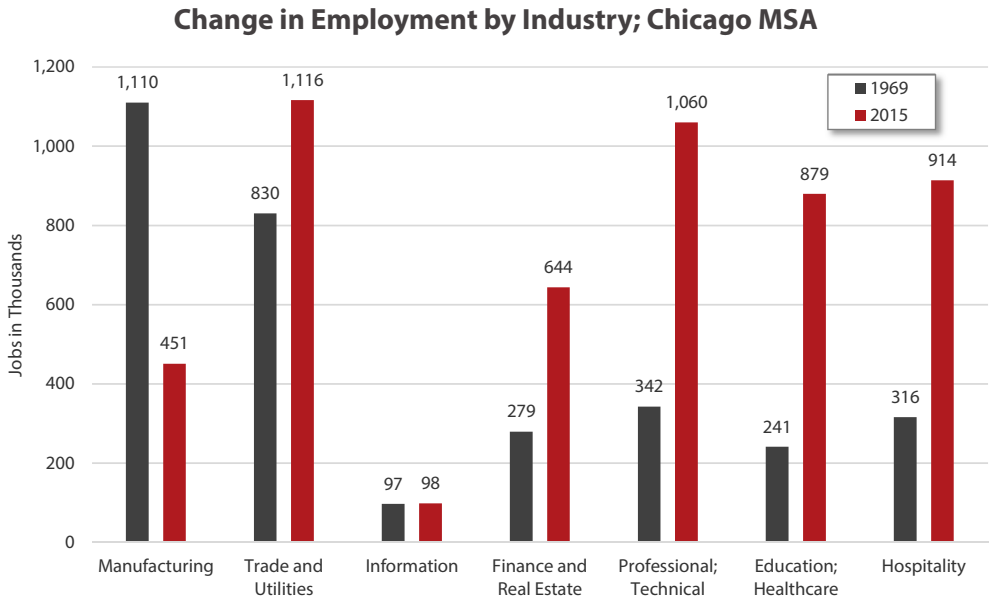


Figure 2.2

The Chicago MSA, once a manufacturing stronghold, has diversified into other more service oriented industries over the past several decades. Since 1969, the manufacturing employment base has been reduced by half, due to global economic trends and technological enhancements. At the same time, employment in the Finance, Technical and Education/Healthcare sectors have all increased by more than 100%.

Source: Woods & Poole Economics, Inc.

for the lack of expansion into the more modern service sector is certainly the lack of effective interaction or trade between Northwest Indiana and the Chicago core. This is evidenced in the difference in wage rates between Cook County, Illinois and Lake County, Indiana. The average annual wage paid in Chicago is 37% higher than that for the same job located in Northwest Indiana. The only sector that pays higher wages in Northwest Indiana than in Chicago is manufacturing. For technical and professional services, a fast growing jobs sector in the national economy, the wage premium in Cook County is between 50% to 150%.

Cities and their economies matter, not just because of their size – Cook, County Illinois has almost as many jobs as does the entire State of Indiana, (2.5 million vs. 2.9 million) – but also because of ease of interaction allowed by the close proximity of firms to each other. This economic "denseness" is termed "agglomeration" and it is broadly understood to provide benefits to both the businesses and their employees who are closely clustered and engaged.

It is for this reason as much as any other that reductions in the barriers to economic interactions between Northwest Indiana and the balance of the Chicago region will produce benefits both for the region as a whole and for the

> **"Agglomeration economies are the benefits that come when firms and people locate near one another together in cities and industrial clusters. These benefits all ultimately come from transport costs savings: the only real difference between a nearby firm and one across the continent is that it is easier to connect with a neighbor. Of course, transportation costs must be interpreted broadly, and they include the difficulties in exchanging goods, people, and ideas. The connection between agglomeration economies and transport costs would seem to suggest that agglomerations should become less important, as transportation and communication costs have fallen. Yet, a central paradox of our time is that in cities, industrial agglomerations remain remarkably vital, despite ever easier movement of goods and knowledge across space. "[3]**
>
> *Agglomeration Economics", Glaeser*

Comparison of Average Annual Wage: Cook Co. IL vs. Lake Co. IN (2015)

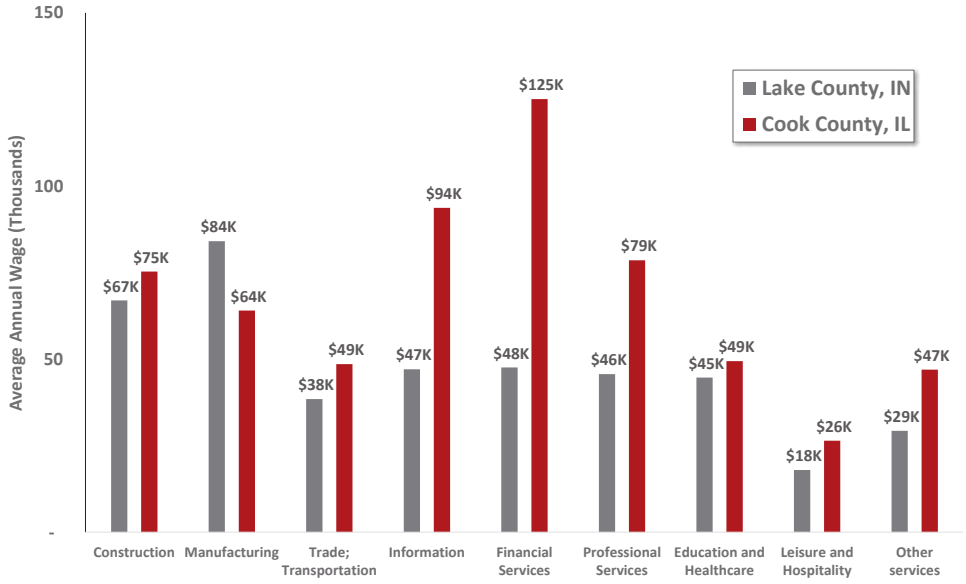


Figure 2.3

Average wages are higher in Cook County than in Lake County, Indiana for all industries except manufacturing. Jobs in Cook County pay 37% more than similar jobs in Lake County. The wage premium for professional, technical and other white collar jobs in Cook County is 50% to 150%

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages; 2015

governments that reap the fiscal benefits from the faster economic growth.

The higher Chicago wages are reflected in the household incomes of those living in the Illinois portion of the Chicago MSA. Most of the largest communities in Lake and Porter County, Indiana, as shown in Figure 2,.4 are located within 20 to 40 miles of downtown Chicago. However, Indiana incomes within this band lag similarly situated Illinois households by a significant margin.

The median household income for Illinois communities within 20 to 40 miles of downtown Chicago shows significant variation, ranging from about $60K on the lower end to over $100K on the high end. Most suburban Chicago cities in Illinois have median household incomes within the $70K-$80K range.

In Indiana, however, only the communities with the highest household incomes reach $70-$80K, and those in Hammond and Gary drop to less than $40K. The socioeconomic data clearly shows an income divide between the Illinois and Indiana portions of the Chicago MSA, and that Chicago's Illinois suburbs have prospered in a way that the Indiana portion of the MSA has not.

"Transit has a minimal impact on total VMT but a large impact on congestion levels...The type of VMT diverted to transit is critical in determining transit's effects on congestion."[4]

"Subways, Strikes, and Slowdowns" The Impacts of Public Transit on Traffic Congestion", Anderson

The RDA's impetus for investment in commuter rail is to improve economic outcomes in Northwest Indiana by enhancing access to high wage jobs in Chicago. Indiana residents employed in Chicago will bring those wages home to Northwest Indiana and support the local economy through their household spending. Communities will then be able to leverage the activity surrounding transit stations into new centers of economic growth.

Enhanced transit access will also allow Northwest Indiana communities to compete more effectively for potential residents seeking to locate in the Chicago metro area.

Chicago Area Median Household Income

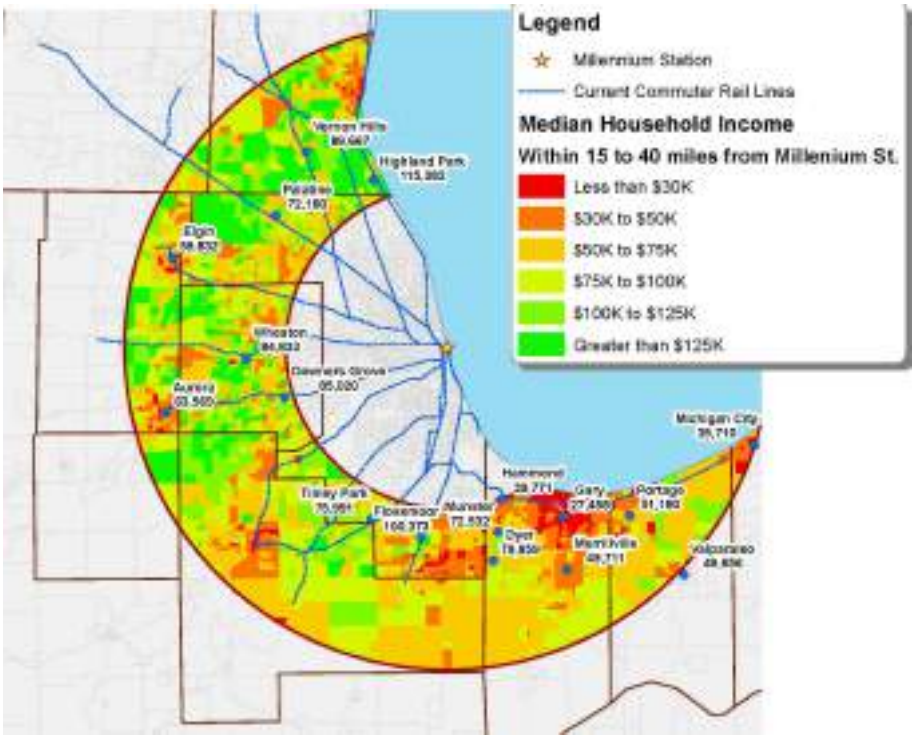


Figure 2.4

The median household income for many Illinois communities within 20 to 40 miles of downtown Chicago ranges from $60K to over $100K.

The median household income for Indiana communities within the same geographic range is substantially lower, toping out at approximately $80K.

Source: American Community Survey (U.S. Census); 2014 5-Year Estimates

Chicago Area Median Monthly Housing Cost

Figure 2.5

Residents of Chicago's Illinois suburbs incur significantly higher housing costs than those in the Indiana suburbs. Monthly housing costs for most Illinois suburbs range between $1,400 and $1,800. In many Lake County communities, residents pay approximately $1,100 monthly for housing costs. In some Northwest Indiana communities, such as Hammond and Gary, this value is lower.

Source: American Community Survey (U.S. Census); 2014 5-Year Estimates

Current Census data shows median monthly housing costs for most of the Illinois suburban communities ranges between $1,400 and $1,800. For the Lake County communities of Munster, Dyer, Merrillville and Crown Point, the median monthly housing cost is approximately $1,100. This is a cost of living savings of 20% to 40% over Illinois suburban communities within a similar geographic distance to Chicago. The cost of living differences in Hammond, Gary and Portage are even greater.

The opportunity for 37% greater wages, combined with 20% to 40% savings in housing costs should make Northwest Indiana an attractive residential location for Chicago area job holders. However, the commuting data shows that Lake and Porter County residents commute at a much lower rate than their Illinois counterparts. As shown in Figure 2.6, approximately 35% of the workforce in the Illinois counties closest to Chicago commute to the City. DuPage County has the highest commuting rate, with 39% of its employed workforce.

However, the segment of the Northwest Indiana workforce that commutes to Chicago is much lower, at only 15% of the workforce. While the geographic distance to Chicago between the Illinois and Indiana communities is similar, the rate of commuting is not.

One of the longstanding barriers impeding the trade in labor within the Chicago region, is the lack of effective and

> **"Another dimension is roadway congestion – commuters who choose transit tend to commute on highly congested routes. As long as there is substantial heterogeneity in traffic delays, commuters choosing transit will come from routes that have higher than average congestion. This implies that their marginal effect on congestion will be higher than the average commuter's marginal effect on congestion, and the model demonstrates that the difference is potentially very large."[5]**
>
> *Subways, Strikes, and Slowdowns" The Impacts of Public Transit on Traffic Congestion", Anderson*

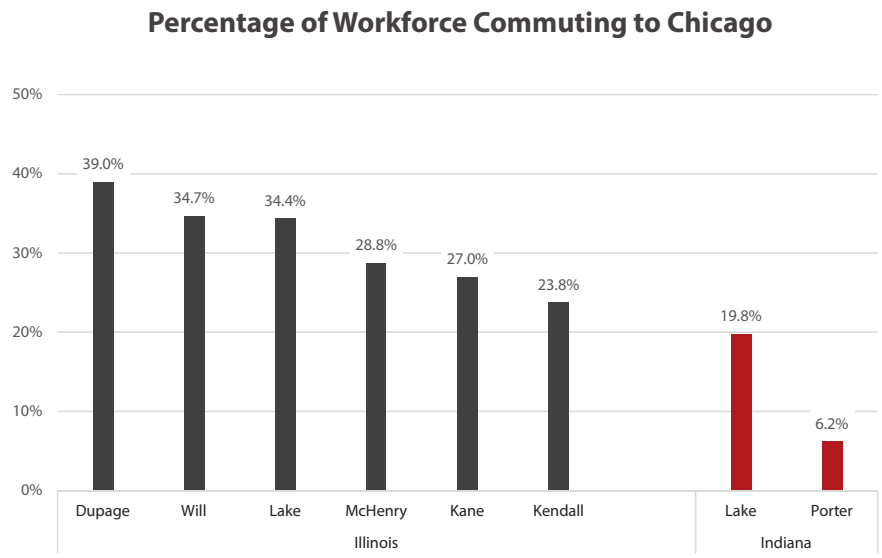


Figure 2.6

Northwest Indiana commuting rates lag the Illinois suburbs. Approximately 35% of the workforce commutes to Chicago from Illinois suburbs. Only 15% of workers residing in Lake and Porter County commute. The lack of commuter rail options in Northwest Indiana impedes the access of commuters to Chicago.

Source: U.S. Census; On the Map Series

diverse commuter options for the residents of Northwest Indiana who work in Chicago. In the most recent year for which data is available, congestion on the roadways within the Chicago MSA for both residents and travelers totaled $7.2 billion. Northwest Indiana residents know that the major highway routes to Chicago are congested during peak periods, and that the road commute can be lengthy, unpredictable and stressful. Furthermore, parking in Chicago is expensive, as much as $40 to $50 a day, adding further cost to an auto commute. A cursory comparison of commute options demonstrates that the Illinois suburban resident has several varied routes into the City compared to the commuter from Northwest Indiana.

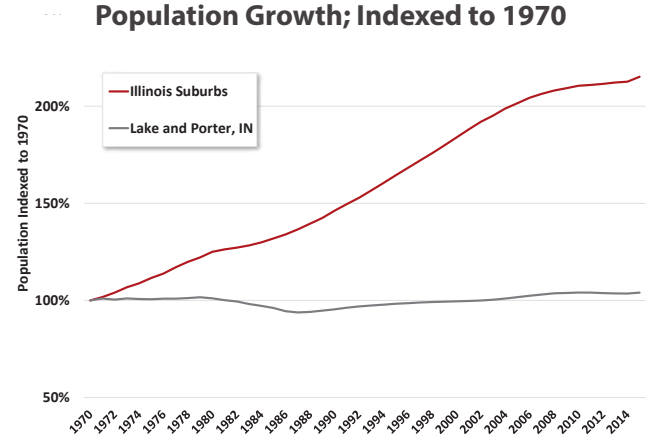


Figure 2.7

Illinois suburbs defined as Lake (IL), McHenry, Kane, DuPage and Will Counties.

Source: Woods & Poole Economics, Inc.

The result of these barriers to interaction within what is essentially one economic and demographic unit is that Northwest Indiana has developed quite differently over the past generation or more. This developmental disparity is evident in a number of statistical comparisons between the two sub-areas within the bi-state region. Measuring the differences in demographic outcomes along two axes over the last one and a half to two generations, is instructive. In the Illinois suburban counties, the population has grown by 226%, while in Indiana's Lake and Porter the change has been a +4%. Secondly on the measurement of personal income, the Illinois suburbs grew by more than twice the rate of Indiana counties.

Transportation assets are both expensive and long-term. It is costly to build a new interstate highway, or a new commuter rail line. On the other hand, these structures last for decades, in the case of highways or generations for rail lines. Since that is the case, the planning that takes place for these structures must not look primarily to the current

"In fact, according to a study by the Urban Land Institute, some of the largest segments of the U.S. population, including Millennials and Latinos, express a higher than average preference for living in cities."[6]

"Expanding Opportunities in America's Urban Areas", Center for American Progress

populace but to the succeeding generation. It is instructive then to view the attitude of the "incoming generation" of millennials in terms of their preferences regarding work, life, and transportation issues. Numerous survey results testify to the fact that the Millennial cohort is much more comfortable with urban dwelling environments, and desires a transportation blend that is diverse and includes walking, bicycling, and transit – with smaller amounts of automobile than their parents did.

These preferences are expressed in surveys and in data comparisons. "Three-quarters of American 17-year-olds were licensed to drive in 1978. By 2008, it was just 49%. Seventy percent of millennials report regularly utilizing multiple alternatives to the car, including public transportation."[7] Additionally, transit fits the Millennial generation and those following in another way. Younger workers who commute want the ability to multi-task as they are traveling to their workplace. Transit provides them the option of reading emails, working on a laptop, or talking on their cell phone – activities that are either not possible or dangerous when driving an auto.

Northwest Indiana is a suburb of Chicago. Figure 2.4 demonstrates the geographic distances between Northwest Indiana communities and Illinois suburban municipalities to the Chicago urban core is the same – it is the commuting time and the commuting options that are different. The RDA's economic development strategy is focused on removing that differential and opening the transportation opportunities to future generations of Northwest Indiana residents.

Chicago Area Commuter Rail/Transit Network

Figure 2.8

The Metra system is comprised of approximately 490 miles of commuter rail and carried 82 million passengers in 2015. The South Shore line runs east and west to South Bend, with 33 miles of commuter rail within Lake and Porter Counties. The South Shore carried approximately 3 million passengers in 2015.

"For example, the U.S. has seen a significant expansion of light rail and other urban rail systems in recent years, and the demand for their growth remains strong. One recent development: in supposedly car-centric and free-market Phoenix, which funded its first light rail system through a sales tax increase in 2000, voters in August approved raising that sales tax further to fund even more growth of light rail, bus transit, and bike lanes, the latter a millennials' priority.[8]

"Why we Must Cater Infrastructure to the Millennial Generation", Kingston

WEST LAKE CORRIDOR PROJECT

The West Lake Corridor Extension project is the culmination of many years of NICTD and regional leaders evaluating plans for the expansion of commuter rail service in Northwest Indiana. The West Lake Corridor, which will run north and south from the proposed Hammond Gateway station, will supplement the existing South Shore line which runs east and west. Departing from Hammond, the WLC route has proposed stops in South Hammond (173rd St.), Munster at Ridge Road, and Munster/Dyer at Main Street.

The WLC extension will require the realignment of the existing South Shore line at Hammond, and the establishment of a new "Hammond Gateway" station that would serve both the West Lake and South Shore routes. In addition to the rail stations, a proposed maintenance facility would be constructed in South Hammond.

The West Lake Corridor planning process is in its final engineering stage. While the preferred alignment has been preliminarily planned for, final decisions regarding exact alignments, station placements and cost estimates are subject to change until the engineering process is completed and NICTD submits a grant application for federal funding.

West Lake Corridor Project Map

Figure 2.9

The West Lake Corridor is a new proposed commuter rail line running from the relocated Hammond Gateway Station to Dyer, Indiana. The line will have additional stops in South Hammond, and in Munster at Ridge Road. In addition, a rail maintenance facility is being planned in South Hammond.

A. PROJECT COSTS

The total cost for the West Lake Corridor project, including contingencies is projected to be $615.5M. The largest component of the cost, $140.6M is for the guideway and track elements required for the railroad. Stations and support facilities comprise the next $104M of the cost. In total, hard construction costs amount to $411.3M of the total cost, with soft costs such as real estate, professional services and the contingency reserve comprising the remainder.

B. PROJECT FINANCING

The West Lake Corridor project will be financed by a mix of Federal, State, Local, and RDA funds. NICTD will apply for a grant from the federal New Starts program, which if secured, will provide Federal matching funds for 50% of the construction cost. The potential availability of federal funds for this project significantly increases the viability of this project from a State and Local prospective.

In 2015, the Indiana General Assembly established a long-term funding source for the WLC project. House Enrolled Act 1001-2015 committed $6M in state revenues per year for 30 years to the project, for a total of $180M.

On the local side, the RDA and regional leaders are working to secure the commitment of local income tax dollars from local communities that will benefit from the project. While these negotiations are ongoing, the WLC financing model assumes the commitment of at least $3M annually.

Finally, the RDA is responsible for providing the remaining funds required for the project. Including interest costs, this amount is projected at approximately $15M annually for the life of the project bonds. The RDA receives $14M annually in wagering tax revenues, and $3.5M in CEDIT revenues from Porter County to fund development in Northwest Indiana. The majority of these revenues will be committed to the West Lake Corridor project.

West Lake Corridor Funding Sources

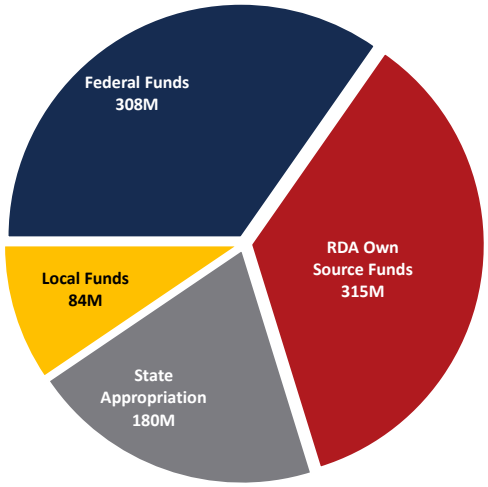


Figure 2.11

NICTD is in the process of securing federal funding to finance 50% of the construction cost, however Federal funds cannot be used for debt service. The RDA and NICTD are currently seeking the commitment of CEDIT funds from local communities to the project.

West Lake Corridor Projected Construction Cost

Element	Cost (Millions)	Cumulative Project Cost
Guideway, Track Elements	$140.6	
Stations, Stops, Terminals	52.0	
Support Facilities	52.0	
Sitework, Special Conditions	84.0	
Rail Systems	48.2	
Real Estate, ROW	29.5	
Rail Cars	34.5	
Professional Services	133.9	
Contingency	40.8	
Total Project Costs	**$615.5**	

Figure 2.10

The West Lake Corridor project will cost an estimated $615.5M. More than half of that cost is allocated to construction of the new railway, stations, and the installation of rail systems. Additional significant costs include the rehabilitation of rail cars, the purchase of real estate and professional services.

Source: NICTD

South Shore Double Tracking Project

Figure 2.11

Improvements in the South Shore Double Tracking scenario include the installation of parallel double tracks between the Illinois State Line and Michigan City, the conversion to high platform boarding at all stations, and the reconfiguration of the Michigan City station.

SOUTH SHORE DOUBLE TRACKING PROJECT

The South Shore Double Tracking project is comprised of several rail network upgrades that are planned to be simultaneously implemented. These include installing parallel "double-tracking" as far east as Michigan City, converting all major stops to high platform boarding stations, and realigning the 11th St. Michigan City station to allow better access and faster throughput for commuter rail.

A. DOUBLE TRACKING BENEFITS

The prime advantages of the double tracking project are twofold: faster transit times to Chicago, and greater system reliability. Double-tracking improvements reduce transit times to Chicago by almost 25% in some cases. Trips between South Bend and Chicago go from 2:23 to 1:45 after the improvements have been made. After double tracking, trips from Portage can be completed in less than an hour, trips from Gary in less than 45 minutes, and trips from Hammond less than 30 minutes. These travel times place Lake and Porter County communities well within the typical commuting window of most Chicago workers. Hammond and East Chicago will actually be within a closer commuting distance than many Illinois suburban areas.

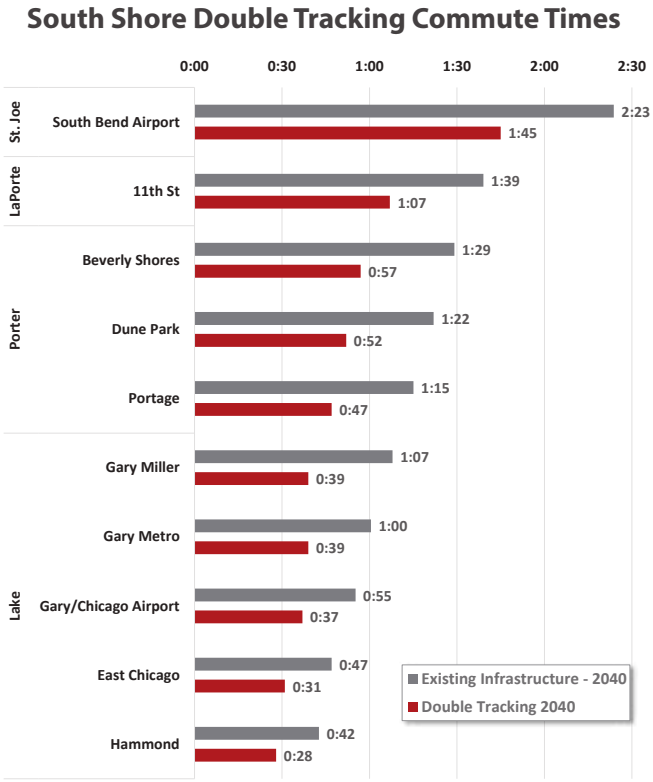


Figure 2.12

The South Shore double tracking improvements provide significant travel time savings, reducing the duration of a trip from Gary Miller by 18 minutes, and a trip from Michigan City by nearly 30 minutes.

Source: NICTD

The second major benefit of the double tracking improvements is increased overall reliability of the rail system. Currently a rail disruption causes delays that compound to every station on the route, and often affect the schedule of subsequent trains. Rail commuters, especially voluntary commuters (those who often own cars) require consistent, reliable service. Otherwise, commuters must add buffer time to their commute, which extends their commuting time, or they may just opt for auto travel; a mode where they control the schedule. Redundant double tracks allow a delay event to be bypassed, and make it possible for peak period trains to stay on schedule even if there is a blockage elsewhere on the route.

B. DOUBLE TRACKING COSTS

The installation of double tracking and other related improvements is projected to cost an estimated $210M. Like the WLC project, this project is expected to qualify for federal funding. NICTD is preparing a grant application for Federal Core Capacity funds that will match state and local investment up to 50% of the project cost.

The RDA, NICTD, and regional leaders are working to develop a strategy to secure the local funding match needed to leverage the Federal funds available.

"Most of the energy and attention in our policymaking is concerned with short-run issues, such as how to stimulate the economy over the next six months or how to deal with this week's employment numbers. While short-term issues can be pressing, their important pales relative to that of long-term ones, because the latter are the ones that really affect our standard of living in profound and permanent ways. The magic of compound growth means that even tiny differences in growth rates can have enormous consequences for our future jobs and incomes. Thus, policies that can increase growth even marginally are vastly more important than any short-term fix to the economy. Our ethos of immediate reward and our almost structural inability to take responsibility for long-term problems is leading us to underinvest in our future. If left unchecked, this tendency could have truly disastrous consequences. The effects will be felt most strongly by our children and by the least fortunate in our society."[9]

"The New Geography of Jobs", Moretti

South Shore Double Tracking Preliminary Project Costs

Element	Cost (Millions)	Cumulative Project Cost
Guideway and Track Elements	$115.0	
Bridges	11.0	
Stations and Stops	38.0	
Engineering, Contingency	46.0	
Total Project Costs	**$210.0**	

Figure 2.13

The South Shore improvement projects are projected to cost a total of $210M, the majority of which will be spent on guideway and track elements, bridges and rail stations. This is a preliminary internal estimate.

Source: NICTD

03. CATALYZING LOCAL DEVELOPMENT

Transit investments like the West Lake Corridor and Double Tracking on the South Shore are just the first step in the RDA's Comprehensive Strategic Plan for regional economic development. Access to transit, improved access to faster commutes, has been shown to draw in more riders and more investment to the neighborhoods closest to the transit stations, eventually to the entire region that transit serves. Many of Northwest Indiana's cities and towns were built around historic transit lines. For these communities the investment in West Lake and Double Tracking will serve to bolster their plans for integrating denser, more walkable community retail and service amenities with their transportation hubs. The RDA, however, as part of its Comprehensive Strategic Plan will be catalyzing public and private sector investments to enable these communities to pursue a more systematic and more rapid approach to transit-oriented development. This Comprehensive Strategic Plan is designed – in part – to provide a framework for understanding the structure of these transit-oriented investments and a set of examples of success stories from around the country.

WHAT IS "TRANSIT ORIENTED DEVELOPMENT"?

Transit Oriented Development (TOD), by definition, is the integration of transportation with surrounding land uses. This is accomplished through urban design, zoning, community development, and supportive infrastructure investments. There is no defined model for TOD in terms of the mix of land uses, density, or building types but there are patterns and successful examples to learn from.

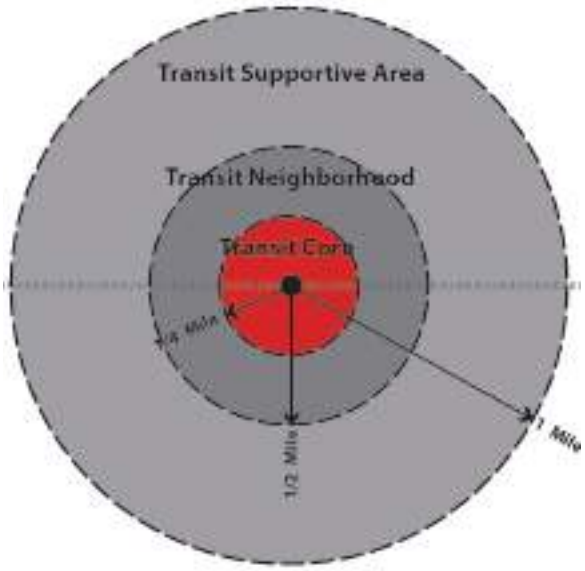
In the simplest of terms, transit oriented developments consist of compact, moderately to highly dense, mixed-use areas within one-half mile of a transit stop or station. TODs are also characterized by streetscapes and an urban form oriented towards pedestrians to facilitate walkability both in and around the station area. While some communities may choose to build big, TOD approaches do not require substantial new development. TODs often include investments such as sidewalk and bike commuter improvements, parks, affordable housing preservation, and commercial revitalization.

At the center of each TOD is the transit station. This document identifies a transit station as being a station serving a premium type or types of transit (commuter rail, light rail or bus rapid transit) or a station that functions as a local bus hub. The transit stations are the focal point of connectivity and are the catalyst for adjacent, mixed-use development. The development that extends outward from the transit station can be broken down into three primary categories:

- Transit core
- Transit neighborhood
- Transit supportive area

What is a Transit Station?

For purposes of this document, a transit station is defined as a station serving a premium type or types of transit (commuter rail, light rail or bus rapid transit) or a station that functions as a local bus hub. The transit stations are the focal point of connectivity and are the catalyst for adjacent, mixed use development.



Station Area:
One half mile or approximately 500 acres around the transit station composed of transit core and transit neighborhood.

Transit Core:
First quarter mile or approximately 125 acres around transit station.

Transit Neighborhood:
Second quarter mile or approximately 375 acres surrounding transit core.

Transit supportive Area:
One mile around transit station.

Figure 3.1

At the center of each TOD is the transit station. The development that extends outward from the transit station can be broken down into three primary categories; Transit core, Transit neighborhood and Transit supportive area.

The transit core is the area within a one-quarter mile radius of the transit station, or a five to ten minute walk time. These areas are typically the most intense in terms of development pattern and density. Intensities and densities gradually decrease out to the one-half mile radius to form the transit neighborhood. The transit supportive area provides a transition back to the community's traditional development pattern. Development within a one mile radius still serves and supports the transit station, but is traditionally much less intensive. The transit core, transit neighborhood and transit supportive areas are shown in Figure 3.1. For the purpose of this planning document, the TOD station area is composed of the transit core and the transit neighborhood.

Quality TOD design sets the foundation for healthy, walkable communities that provide residents with a range of housing, transportation, and amenity choices. The goal of TOD is to stimulate activity. The transit core, plentiful with resources, draws increasing activity. Linked to other transportation stations along the corridor, these transit cores strengthen the regional economy. In Northwest Indiana, development of transit cores and neighborhoods can help tie communities together by improving health, vibrancy and connectivity.

THE CASE FOR TRANSIT ORIENTED DEVELOPMENT

Recognizing increased consumer demand for higher density and mixed-use development, municipalities have taken to TOD investment across the country. This rising demand is attributable to changing demographics and increasing transportation costs. Millennials, born between 1983 and 2000, are driving less than older generations and instead, are walking, biking and using transit at higher rates.[10]

Millennials now represent more than a quarter of the nation's population.[11] Cities, seeking to attract young workers, are leveraging mixed-use, concentrated development designs. An APTA study titled "Millennials and Mobility" found that 44% of millennials' location choices are motivated by opportunities for exercise.[12] Greater residential density allows for increased walkability, which in turn, increases opportunities for exercise within individual's transit commutes. 46% of these respondents cite convenience as a large factor in where they live. Furthermore, provision of dense, well-connected communities allows people to live and travel more sustainably, an ever-increasing priority, while at the same time saving money. Multi-modal transportation options support such lifestyles.[13]

In our post-recession economy, many households are being forced to cover living costs with fewer earnings. Annual transportation costs, averaging $13,607, account for 22% of Lake County household budgets.[14] Investment in quality public transportation and transit-oriented neighborhoods leads to reduced household transportation costs. A 2016 study by the American Public Transportation Association[15] estimates annual savings at $9,474 for individuals who commute by public transportation instead of car.

In addition to the physical costs that beset automobile owners, countless invaluable labor hours are wasted while people sit in traffic. In 2015, Americans were stuck in traffic for eight billion hours.[16] According to the U.S. Census Bureau, Americans also spent an average of 24.3 minutes on a one-way commute. That's more than 100 hours a year spent traveling to work. Investing in communities centered on transit options will take cars off the road and shorten commute times for many.

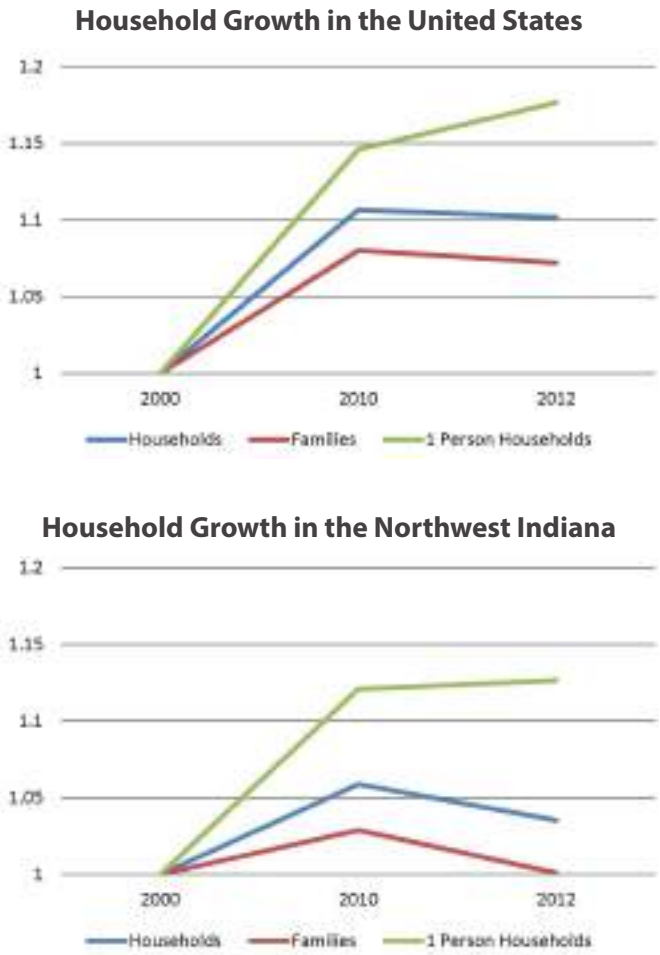
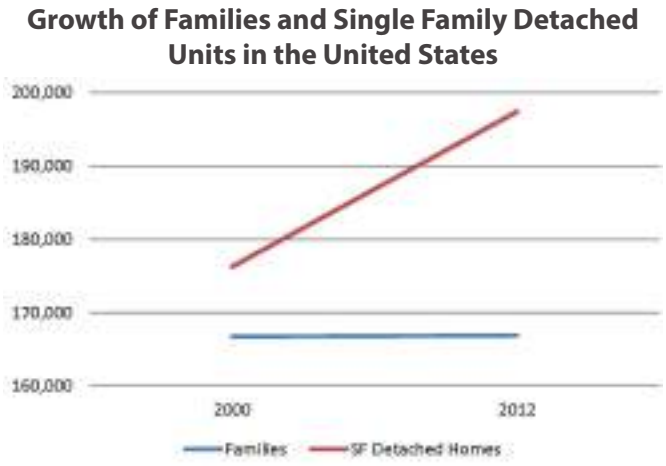


Figure 3.2 and 3.3

Household growth in the United States (top) and Northwest Indiana (bottom), 2000-2012.



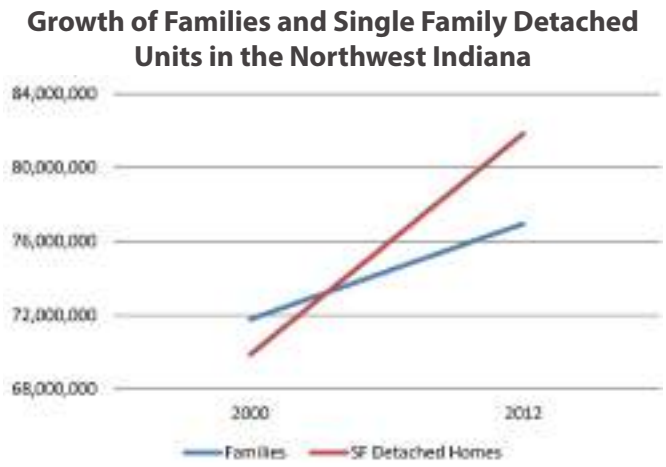


Figure 3.4 and 3.5

Growth of families and single family detached housing units in the United States (top) and Northwest Indiana (bottom).

Since the Great Recession, more American households are choosing to rent and fewer are choosing to own. According to the Commerce Department, U.S. homeownership in the United States peaked right before the recession hit in the mid-2000s and has dropped to its lowest level since 1989.[17] Just between 2014 and 2015, the number of owner households dropped by 400,000, while the number of renters increased by 2 million.

While families have outnumbered single person households in the United States, the rate of family formation has slowed, as Millennials have left the homes of Baby Boomer parents to live on their own. Between 2000 and 2012, the total number of households within the United States increased by about 10.7 million or 10%.[18] Single person households increased by 4.8 million or 18%, while net families increased by 5.2 million or 7%. And in Northwest Indiana, defined as Lake and Porter Counties, the change in net new families has grown only marginally since 2000.

Home values are strong when there is connectivity to transit. A RE/MAX real estate study of northern Illinois found that Chicago suburbs with Metra train service saw home prices rebound in 2012 at greater rates than the suburbs as a whole. The study also found that the decline in home sales for suburbs with Metra service was smaller than in the suburbs as a whole.

Increased access to jobs and amenities has communities across Chicago seeking linkage options. As Northwest Indiana communities explore regional rail connectivity, Metra's Union Pacific North Line in Racine, Wisconsin is being closely watched. A feasibility study was launched by Racine city government in 2015 to explore Metra connectivity, in large part due to the potential development projects ($30 - $40 million) expected near the station.[19] This new residential, commercial, and business activity benefits regional commuters while creating local jobs.

Compact development in the transit core matches increased demand for walkability. A National Association of Realtors survey in 2015 found that millennials prefer walkable communities to driving.[20] 48% of survey respondents opted for smaller yards within easy walking distance of the community's amenities, as opposed to homes with large yards where they would have to drive access amenities.

KIRKLAND, WASHINGTON

CASE STUDY

The South Kirkland Park & Ride located in Kirkland, Washington sits at the northwest corner of two major highways that accommodate traffic across the Seattle region. The site, which had previously been solely a bus station and commuter parking, has been modified to include more than 240 units of multifamily housing, 58 of which are affordable units. The TOD received funding from a variety of sources, including $6.25 million from a Federal Transit Administration Urban Partnership Grant. The location is well located to access jobs in both neighboring Bellevue and Seattle and offers affordable, efficient, and frequent bus service as well. A bus ride into downtown Seattle is just under 30 minutes and costs $2.50 one way.*

** http://maps.sewrpc.org/KRMonline/pdf/tod_portfolio_kenosha.pdf*

Builders, responsive to demand have increased development of multifamily homes. Citing a change in family make up (i.e. smaller household units), as well as the expected continued growth of Millennial households, the Freddie Mac multifamily outlook has noted that more multifamily inventory has been added to the American real estate market since 1980.[21] Even with all of this new supply, current vacancy rates remain favorable in many markets. Freddie Mac forecasts these starts to continue to rise through 2016, and to stay strong as the millennial generation continues forming non-family households.

This demand aligns with increased property values for properties connected to transit. A 2008 study, "Capturing the Value of Transit" found that the increase in property values near transit ranged from a few percentage points to an increase of more than 150%.[22] For single-family homes, the increased increment was as high as 32% and for condominiums it was as high as 18%. Across use, the gains are significant as offices experienced gains of 120% and retail as high as 167%.

Households, such as those of the millennials surveyed above, gain "location efficiency" savings that are a result of compact, mixed-use TOD design.[23] Location efficient neighborhoods reduce vehicle miles traveled and transportation costs. In fact, commuters close to transit are five times more likely to use transit than those individuals in less dense areas.[24]

The increasing popularity of dense neighborhoods is not attributable to the younger generation alone. America's aging population is also drawn to these amenity rich developments. As the baby boomer generation enters their retirement years, more than 71% of these households want to be within walking distance of public transportation.[25] Elderly residents value the increased accessibility and independence derived from clustered services and expanded transportation opportunities. Continued downsizing amongst this population will have growing implications on the communities that they choose.

Together, these trends have profound implications on the real estate market in Northwest Indiana and the United States. New households are smaller, single person, and there are fewer families. Until recently, housing production has largely been that of single-family homes. This has created demand for multifamily housing that is expected to continue and that underpins an increased movement in the market towards TOD.

Urban, mixed-use economic activity outpaces that of lower density outlying areas. For example, a centrally located three-story mixed-use building has been found to generate as much as one hundred times more property tax revenue than a single family home on similarly-sized lot.[26] This is reflected in established higher commercial rents found near transit stations. In San Jose, California for example, between 1984 and 2000, commercial property rents in TOD zones were 13% higher than properties more than 0.75 miles away from light rail stations.[27]

The presence of retail in the transit core also increases the number of "eyes on the street." This urban environment benefit, described by writer and advocate Jane Jacobs in New York City, supplements retail and shopper activity at the ground floor with greater safety and less crime.[28]

Municipalities are creating vibrant "third places" through their TOD planning. Third places, as defined by sociologist Ray Oldenburg, are "important for civil society, democracy, civic engagement, and established feelings of a sense of place."[29] Public parks, coffee shops, and town squares provide space for cultural events, civic services, and recreation. Third Places complement primary "first place" housing sites, and "second place" work sites, and serve as physical and social links across communities.

Currently communities within Northwest Indiana are looking to create those vibrant "third places" by utilizing two primary strategies-- Liveable Centers, and Transit Oriented Development. Livable centers at a basic level are walkable, mixed use areas within an urban core. The proposed liveable center areas are intended to support and bolster the surrounding community fabric, while allowing for mixed development infill including retail, office, civic, institutional and residential uses. One of the core principles of the liveable center is to promote regional connectivity, including being supportive of public transportation. As a major defining element of the NIRPC's *2040 Comprehensive Regional Plan*, Livable Centers have been defined in each of the 41 established communities in Northwest Indiana. These Livable Centers vary widely in scale, use, mix and purpose within each community today, but all represent areas of regional significance. The Livable Centers concept will concentrate future growth within a defined perimeter around this central location that has been defined within each community. These existing activity centers already are served by utility infrastructure and the roadway network. While in some cases, significant reinvestment will be needed to upgrade existing utility and roadway capacity in

DENVER, COLORADO
CASE STUDY

Significant investment has taken place across the Denver region for more than a decade. Examples of successful TOD extend from the city's redesigned Union Station, downtown, to its airport, thirty miles east. Light rail stations, like 10th and Osage, demonstrate the value of strategic TOD planning. Increased density and housing availability, linkage to the station, and increased retail are reenergizing this section of Denver's Central Rail Corridor.[26] Just a stop away, 275 new apartments stand adjacent Alameda Station.* 61st and Peña Station is a recent example of the city's emphasis on long-term TOD planning. Located along the East Rail Line close to Denver International Airport, the 382 acre development is being transformed from open farm land, to a dense mix of multifamily housing, commercial and retail.**

* *http://www.denverhousing.org/aboutus/Documents/West%20Corridor%20TOD.pdf*

** *http://www.rtd-denver.com/documents/rtd-tod-status-report-2013.pdf*

the future, to do so is a more efficient use of limited public resources than to extend new capacity to the perimeter of the community.

Northwest Indiana is also building upon the Liveable Centers Initiative to define strategies that include the region's key regional transportation assets. The 2040 Regional Transit Vision, outlined in the NIRPC 2040 Comprehensive Regional Plan Transportation Chapter, identifies a regional transit framework for a system of transit-supported centers, including TOD around existing South Shore Stations, along the West Lake Corridor and at regional bus and multimodal hubs. Some planning for TOD already has been accomplished. Transit Oriented Development around existing South Shore Stations is a key recommendation of the Marquette Plan. Municipalities including Portage, Munster and Valparaiso have TOD plans, and NICTD is studying the realignment of the South Shore through Michigan City.

If the growth potential in Northwest Indiana is to be realized, the economic argument for TOD investment must be considered. Joe Minicozzi, economist and principal of Urban3, LLC, has found that the benefits of downtown mixed-use retail and multi-family development far exceed that of big box retail.[30] In Minicozzi's research across multiple cities in the U.S., economic output and associated tax revenue in downtown areas matching walkable, dense TOD profiles consistently outpaced single use retail development.

The case is clearly demonstrated in Woodstock, Georgia, named in 2015 as one of Money Magazine's "best places to live."[31] Located thirty minutes south of Atlanta, Woodstock's mixed-use downtown yields 40 jobs per acre and generates annual tax revenues of $223,000. A big-box retailer down the street yields only ten jobs per acre and $5,700 in annual tax revenues. The downtown is alive, with walkable streets and numerous retail and restaurant options. It also houses 103 residents per acre.[32]

The housing, transportation, and commercial benefits explored above all provide for alternatives to driving. The number of vehicle miles traveled (VMT) is reduced in densely populated areas as public transit ridership, carpooling, walking, and biking all offer different options than driving. Lower greenhouse gas (GHG) emissions are attributable to declines in automobile dependence. In Chicago, GHG emissions within half-mile of transit stations are 43% lower than the regional average.[33]

TOD creates value greater than the sum of its parts, because of the connections created. Across transit, housing, retail, commercial, and public space, residents and workers contribute to the sense of community through their daily activities. Planning for and through TOD enables municipalities to maximize local value, while connecting to the larger, regional economy.

In Lake County, Indiana, housing and transportation costs are nearly equal to each other and total 45% percent of household incomes.[34] While housing may be considered affordable, as averages are less than 30% of household incomes, transportation costs can burden families' budgets. Access to public transportation, as provided by TODs, can significantly decrease these transportation costs.

From the perspective of governments, the high-density housing development and population growth near transit stations can generate higher revenue for the cities. Increased transportation options lead to more environmentally friendly communities. Residents living in these areas are more likely to choose transit, walking, and biking, rather than driving to access daily needs, which help relieve traffic congestion, reduces greenhouse gas emissions and improves public health. In addition, higher average incomes, gained through enhanced job accessibility and savings from reduced transportation costs create household surpluses, which can be spent in the local economy.

Developers are able to gain stronger returns on investment when building housing near transit. High-density development can lower the number of parking spaces due to increased transportation options thus contributing to lower development costs.

CHARACTERISTICS OF TRANSIT ORIENTED DEVELOPMENT

As defined above, TOD is an approach to development that focuses land uses around a transit station or within a transit corridor. While the mix of land uses, building types, and densities can vary depending on location and community character, common characteristics and design criteria can be found in nearly all successful TOD examples.

A. A mix of land uses

TODs can act as community anchors and destination centers where transportation, residential, office, and retail converge. While the introduction of public transportation is not enough alone to stimulate economic activity, well-coordinated mixed-use strategies provide communities with transportation hub assets, giving them the opportunity to maximize economic and social activity.

1. **Residential**
   Condominiums and rental apartments in TOD areas are optimally located within one-half mile of public transportation stops. TOD developments are higher density than some developments in non-TOD areas - transition areas are planned to allow appropriate uses to transition to the level of intensity and density in the adjacent areas. Residential developments are multifamily, often built together either at ground level (e.g. townhouses) and/or with vertical rising (e.g. multi-unit rental apartments and condominium buildings). Proximity to not only the transit station but to local amenities are key factors for residents who live in TOD, as time and transportation savings compensate for higher rents and property costs.

   Strong TOD communities prioritize inclusion of mixed-income units in residential development. Affordable housing strategies ensure that all people, across income, race, age, and disability, have access to the transportation, jobs, and amenities found in TODs. While mixed-income development may be perceived to negatively impact property values, the opposite is actually true. Between 2006 and 2011, the average prices of properties within ½ miles of Metra and CTA stations outperformed the regional average by more than 29%.[35]

2. **Commercial**
   Commercial uses vary depending on the needs and goals of the community. TODs include a mix of amenities such as office space, retail, and restaurants. Employers looking to attract talented workforces and increase customer traffic are likely to locate in a TOD for transportation conveniences as well as the increased amenities found in such sites.

   The offices and high-density residential buildings located in TOD areas work in tandem, supporting opportunities for employees to live close to where they work. Workers living in other areas often will have lower transportation costs if their place of employment is in a TOD, as trips to fulfill errands can be bundled with work commutes. TOD clusters help meet consumers demands for variety and access.[36]

3. **Transportation Nodes**
   Regional rail connections act as activity nodes linking transportation modes (taxi and commuter parking) with daily life activities (shopping, employment, recreation, etc.) Residents, workers, and visitors can also be linked in these nodes by bicycle paths, bicycle parking, and pedestrian paths.

4. **Public Space**
   Incorporating public space into rail center development increases livability, promotes health, and contributes to TOD viability. Developers considering the allocation of public space should consider overall TOD design, theme, and purpose when considering installation of park space, promenades, recreation facilities, and community meeting spaces.

   Well-designed parks, plazas, station areas, libraries, government service centers, and community centers provide densely populated areas with the opportunities to enjoy recreational activities and social interaction. These public spaces can draw people from other neighborhoods. A green open space creates a comfortable and convenient atmosphere for transit commuters, improving travel experiences and stimulating increased usage. Such spaces

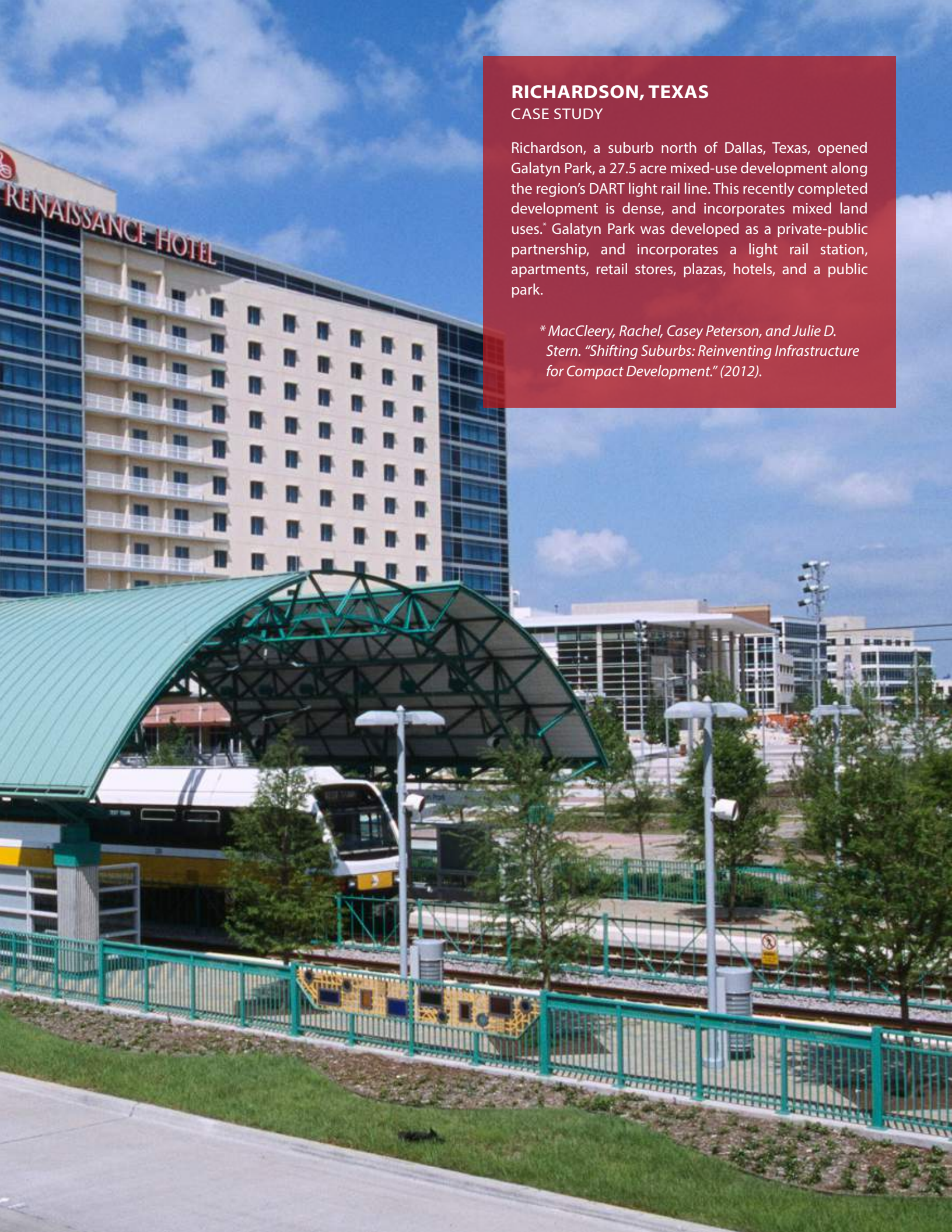
can be community meeting places, offering a desirable location for information exchange, physical activities, and cultural celebration. They also can greatly improve quality of life for those living in multi-family housing in the TOD area, giving families that lack private outdoor space a space for recreation and interaction with their neighbors.

B. Moderate to high density

High-density land uses near mass transit stations result from increased housing demand and employment and retail opportunities. Increased density and shorter distances between the site's destinations promote interaction and stimulate economic and social activity. Greater residential density allows for a greater diversity of building types, supporting mixed-income and diverse communities. Developers are keeping up with recent trends in the housing market, including amenities like pet washing facilities and communal spaces and removing amenities no longer as highly desired, such as bathtubs and common-area gyms. In some recent cases, developers offer transit passes instead of parking spaces to accommodate dense and walkable neighborhoods.

1. **Housing demand:**
   People are willing to live in higher density housing, such as apartments, condos, and townhouses, to enjoy the benefits of TOD. Growing numbers of individuals are looking to live and work near public transit. Traffic congestion, convenience, changing lifestyles and increased transportation costs are motivators for residents looking to live and work near transit stops. Communities choosing to invest in promoting TODs can proactively reduce commuter travel times and greenhouse gas emissions. It is estimated that by 2030, the housing demand in TOD areas will grow by an additional nine million households.

2. **Population:**
   Higher population density near transit stations supports increased public transportation options. Transit stations with sufficient capacity and frequency incentivize residents and workers within a walking distance to choose public



RICHARDSON, TEXAS

CASE STUDY

Richardson, a suburb north of Dallas, Texas, opened Galatyn Park, a 27.5 acre mixed-use development along the region's DART light rail line. This recently completed development is dense, and incorporates mixed land uses.* Galatyn Park was developed as a private-public partnership, and incorporates a light rail station, apartments, retail stores, plazas, hotels, and a public park.

** MacCleery, Rachel, Casey Peterson, and Julie D. Stern. "Shifting Suburbs: Reinventing Infrastructure for Compact Development." (2012).*

BARTLETT, ILLINOIS

CASE STUDY

The Village of Bartlett is a small town located south of Chicago. The Metra regional rail station is in Bartlett's downtown area, which incorporates mixed uses including various public services, commercial activity and multi-story residential buildings. The village created a TOD plan,* with support from the Regional Transportation Authority (RTA) in 2015 to leverage its regional rail connection. Increased housing is a primary focus of the plan, needed to attract and accommodate a younger workforce that relies on public transportation to commute to downtown Chicago for work.**

* *https://bartlettdowntowntod.com/2016/06/17/tod-plan-document-updated/*

** *Goodman Williams Group. Village of Bartlett TOD Plan: Market Analysis Technical Memorandum. 2015.*

transportation over personal vehicles, alleviating parking and traffic pressures. Increased population density promotes greater market activity and opportunities for tax generation.

C. Reduced parking requirements and flexible parking design

Establishing maximum parking requirements and incentivizing lower minimum requirements helps avoid excessive parking supply, which saves land for other, more productive uses. Below are examples of flexible parking design detail that support TOD goals.

1. **Unbundled Parking**
   Unbundled parking gives development occupants the opportunity to choose whether or not to pay for parking spaces. By not including the cost of parking with the cost of residential and commercial property, people will often choose not to commute by automobile.[37]

2. **Pricing:**
   Charging market effective fees for parking space use during peak hours can help generate revenues to cover the cost of parking in the short-term, and in the long-term, subsidize neighborhood quality of life programming and infrastructure. Flexible pricing is easier today than ever before, as technology now allows for variable pricing and mobile payments by users. These advances help parking operators to calculate appropriate parking costs to manage volumes. Considerations should be made to ensure that such strategies do not price out marginalized groups, while benefiting only those who can afford to pay.

3. **Structured Parking:**
   Multi-story structured parking in TOD areas can help improve land use efficiency. Building a structured parking lot is more expensive than a surface level lot. In fact, the cost of a single parking space can be as high as $37,300 in a garage, compared to $4,000 at ground level. However, in concentrated areas, building higher, or below ground can make sense as car commuters can park closer to the train, their home, and to retail.

4. **Shared Parking**
   Shared parking allows for limited parking facilities to be utilized by different groups of people or entities for multiple purposes.[38] For example, retail and office use peaks during the day, while residential use peaks at nighttime. Promoting shared uses allows for a single space to be maximized during the day and night. For example, in San Diego, one of the commuter rail stations shares its parking spaces with a multiplex theater. During the daytime on weekdays, the parking area is used by station, while it is also allowed to serve the theater in the evenings and on weekends.[39]

5. **Remote Parking**
   Additional, less expensive parking facilities can be located outside central TOD zones, away from transit centers. Allocation of parking outside of the TOD opens up space for mixed-use development within. Cheaper remote parking gives people more pricing options when commuting to job centers and transit stations. Alternative travel modes (such as walking and bike-sharing) and multi-model connection facilities help commuters easily travel in healthier and more sustainable ways. Well-designed streetscapes in the TOD area promote the walking experience and support safe and efficient use of remote parking users.

D. Pedestrian orientation/connectivity

Every transit user begins their transit trip as a pedestrian. It is important that the pedestrian experience is pleasant, efficient and is conducive to overall efficiency.

A study on walkability in Washington, DC found that neighborhoods that possess walkability features, have stronger performance in commercial, residential, and retail rents as well as residential home prices.[40] Another study in 2009 found that every point increase in WalkScore was associated with an additional $500 to $3,000 price premium in home values.[41]

The designs below present varying ways TOD can incorporate such pedestrian experiences.

LANSDALE, PENNSYLVANIA

CASE STUDY

Located 30 miles northwest of downtown Philadelphia, the city of Lansdale has recently opened a new SEPTA regional train stop on the former site of an industrial plant.* The opening of this station is an investment by local and state government officials, in partnership with SEPTA. This TOD planning has sparked residential infill building, as developers look at ways to accommodate residents desire for greater walkability and connectivity.**

* *http://www.newsworks.org/index.php/local/pa-suburbs/88249-in-montco-septas-newest-station-now-open-for-business*

** *http://planphilly.com/articles/2015/09/14/new-septa-station-in-lansdale-set-to-spur-transit-oriented-development*

A study on walkability in Washington, DC found that neighborhoods that possess walkability features, have stronger performance in commercial, residential, and retail rents as well as residential home prices.

- Dunphy, Robert, Deborah Myerson, and Michael Pawlukiewicz. Ten Principles for Successful Development Around Transit. 2003.

1. **Transit station design:**
   TOD areas can be designed to be pedestrian friendly. Entrances should be well linked to accessible routes and to popular public areas. Enhancing pedestrian and bicycle pathways will contribute to higher ridership.

2. **Building design:**
   Buildings designed to be easily accessed and navigated by foot will stimulate more walking. Designers hold a number of tools that can be leveraged to accomplish such activity, including appropriate scaling, landscaping, and the provision of sidewalks.

3. **Streetscape design:**
   TODs should offer streets with wide sidewalks and well-connected and bike lanes. Lighting improvements and traffic calming measures contribute to sense of safety. Emphasizing sidewalks, through increased size design, supports pedestrians and establishes a new preferred means of travel within the TOD.[42]

4. **Environment design:**
   Design features should improve the pedestrian experience in dense areas. Features include center median planting strips and curb expansion. Attention to the physical landscape to accommodate individuals with disabilities through prioritized wheelchair ramps and textured walkways (for the sight-impaired) can help a community demonstrate how it prioritizes inclusion and equal access.

E. Design and development regulation policies/ High Quality Design

TOD sites require zoning codes that provide for mixed-use and promote greater density. Station locations should be considered individually as well as collectively across the transit corridor, to ensure connectivity across transit lines. Transit lines can serve a number of purposes, including connecting workers and jobs (i.e. a commuter line) and linking residential neighborhoods with destinations centers (e.g. shopping districts, universities). Considering the purpose and future of a transit line will allow municipalities to determine the best zoning framework for a TOD.

City and regional stakeholders, planning for short-, mid-, and long-term development should consider current zoning allowances and restrictions when planning for staged growth. Street types, building types, density allowances, and open space considerations will all be subject to zoning regulation.

Communities can implement land use regulations that allow greater density and mixed-use development around regional train stations. Developers can apply for a conditional-use permit for buildings of increased height. New housing can be inclusively zoned, so that market-rate development incorporates affordable housing units. Communities can support zoning and financing to build structured parking lots in the place of surface parking lots.

COMMUNITY BENEFITS OF TOD

When communities facilitate TOD, and grow in a compact and location efficient manner, benefits appear at multiple levels: for households, for local economies, and for municipal budgets. Households have more choice between housing units at different sizes and price points, better proximity to jobs, and transportation options connecting the two. Municipalities grow efficiently, make better use of existing infrastructure, and create better resiliency for their tax rolls. And as both save money, the local economy grows. For example, TOD:

A. Lowers the cost of living by helping households live with fewer vehicles.

After the cost of housing, the cost of transportation is the second highest and fastest growing in a household budget. And unlike housing, transportation costs are split between the cost of owning multiple vehicles, the cost of driving them to many different destinations, and the cost of taking transit. Together, the both housing and transportation reflect the cost of a neighborhood and can consume a significant portion of a household budget. Within Lake County, for a household earning Area Median Income ($61,156), the two combined costs average 45% of income.[43] Within Porter County, these combined expenses would cost a typical household 49% of income per year.

But within a TOD, households can live closer to transit, jobs, retail, and schools, and choose to walk, bike, or take transit to reach them. Residents in TOD have more options to downsize from two cars to one, or in particularly compact TODs, no cars at all, creating the potential for large household savings. Within Lake County, the cost of owning, insuring, and maintaining a single car is $9,801.[44] TOD allows households to downsize the number of cars they own and save on this cost.

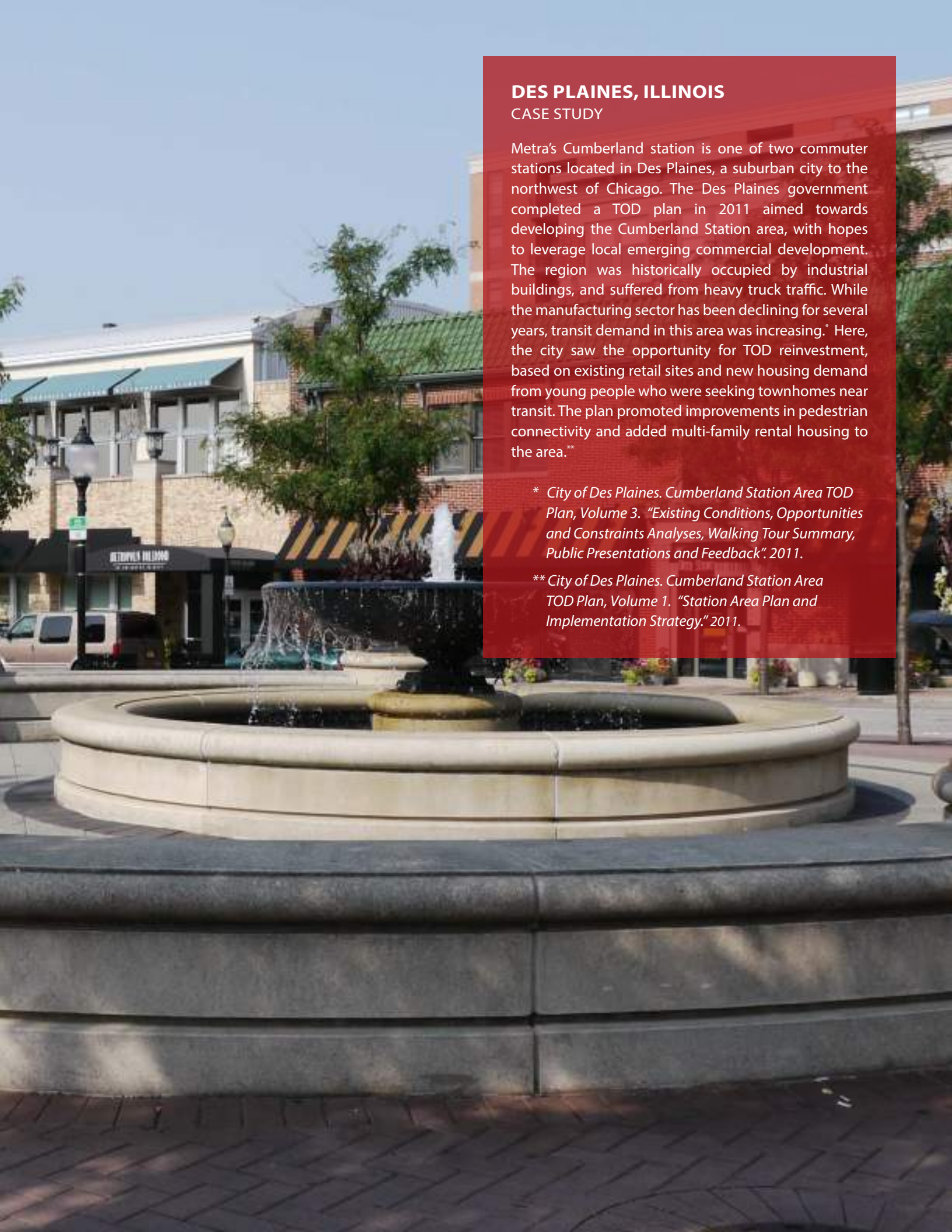
Those savings equate to more money in the pockets of local residents. Households can spend their savings at neighborhood businesses, improving the local economy and boosting sales tax revenue. The savings may also improve economic security, particularly for low- and moderate-income households, who would have more income left over to apply to variety of other needs such as health care and child care.

B. Connects households with jobs.

When commuters can easily walk to a rail station from their home, the number of jobs they can reach within a certain commute time greatly expands. For example, households in downtown Evanston can reach 1.3 million jobs, or 30% of the regional total, within a 60-minute transit ride, in addition to the jobs at Northwestern University.[45] By contrast, a household in an Evanston neighborhood lacking a station less than 2 miles away can reach 788,317 jobs within that 60 minute transit ride, or just 41% as many. For households that either choose to live or cannot afford to live with a car, that is a significant difference in job access and economic mobility between two proximate and otherwise nearly identical locations.

C. Boosts the local retail environment.

Retail follows rooftops. When a neighborhood adds a large number of consumers, it becomes easier for that area to support local businesses, particularly those that cater to a variety of daily needs. There is a significant spread in aggregate income, or the buying power of a community, from a dense and compact neighborhood to one with lower density and fewer housing units. Around Evanston's Davis Street station area, for example, the sum of all incomes equals $378,823,308.[46]



DES PLAINES, ILLINOIS

CASE STUDY

Metra's Cumberland station is one of two commuter stations located in Des Plaines, a suburban city to the northwest of Chicago. The Des Plaines government completed a TOD plan in 2011 aimed towards developing the Cumberland Station area, with hopes to leverage local emerging commercial development. The region was historically occupied by industrial buildings, and suffered from heavy truck traffic. While the manufacturing sector has been declining for several years, transit demand in this area was increasing.* Here, the city saw the opportunity for TOD reinvestment, based on existing retail sites and new housing demand from young people who were seeking townhomes near transit. The plan promoted improvements in pedestrian connectivity and added multi-family rental housing to the area.**

* *City of Des Plaines. Cumberland Station Area TOD Plan, Volume 3. "Existing Conditions, Opportunities and Constraints Analyses, Walking Tour Summary, Public Presentations and Feedback". 2011.*

** *City of Des Plaines. Cumberland Station Area TOD Plan, Volume 1. "Station Area Plan and Implementation Strategy." 2011.*

D. Can sustain local tax bases.

Like all other development, development near transit generates tax revenue. When that housing is located in a TOD – and if the scale of development is greater than a typical land use – municipalities can increase the revenue generated from that site. For example, a three-story mixed-use development in a downtown has been found to generate as much as 100 times more property tax revenue per acre than a single family home on an equivalently sized parcel.[47] As noted earlier, TOD can increase sales tax revenue if families that do not have cars shop locally rather than in a neighboring town. According to a 2014 study by the Chicago Metropolitan Agency for Planning, a building in a compact neighborhood like a TOD also costs municipalities less to provide water, sewer, police, and fire protection than an equivalent development in a greenfield area.[48]

E. Can increase and stabilize property values.

In addition to the increased tax increment that TOD may generate, it can also provide resilience during real estate market fluctuations. During the real estate downturn between 2006 and 2011, average sales prices of residential units held their value better around transit than away from it, reflecting market preference and demand for transit-served neighborhoods.[49] In the Chicago region, the average sales price for a property within a half mile of all Metra and CTA rail stations outperformed the regional average by 29.7%. Additionally, transit station areas with a higher frequency of service tended to have more stability in their real estate market during the downturn. This stability helps keep property tax revenues resilient during housing downturns

KENOSHA, WISCONSIN

CASE STUDY

Kenosha is a lakefront city in southern Wisconsin and is the terminus on the Chicago region's North Metra line.* The city has succeeded in linking their streetcar with the regional commuter rail in its downtown area. Local investment in its streetcar line has created a market for infill demand and associated development. Planners have focused on creating multi-family residential units in this area, where residents access regional rail for their work commutes. An increased residential population is supporting current commercial development and public service investment within the station area.

** http://maps.sewrpc.org/KRMonline/pdf/tod_portfolio_kenosha.pdf*

DEVELOPMENT IN NEARBY COMMUNITIES

The benefits of increased accessibility are not limited to communities with stations within their jurisdictions or to residents that live within walking distance of a station. Effective transit options can provide a more efficient commute to those who drive to the station, or use alternative means such as a bicycle or shuttle bus. The provision of this more efficient commute is an amenity benefit that extends to the communities that are located near commuter rail, but not within walking distance of a station. For example, park and ride commuters still benefit from a reliable commute with consistent transit times, avoid Chicago parking fees, and enjoy a more productive use of their time while on the train.

Intentional and well executed connections are critical for communities near transit to maximize the benefit to their residents. Well-designed roadways, trails and greenways allow residents of nearby neighborhoods to easily access transit stations. In some cases, shuttle buses or circulator routes can be used to efficiently move large groups of commuters to the station. More innovative strategies such as car and bicycle sharing programs can also be used to connect riders to the transit station. Once at the station, parking must be readily available, easy to access and secure, with clearly marked safe walkways to access the rail platforms. Perhaps most importantly, the transit service must be timely and reliable, or the incentive for commuters to choose transit instead of autos will be lost.

"Park and Ride" commuters, those who drive to a station and commute to work via transit, are voluntary riders. This means they have access to a car, and could choose to commute by car, but choose to commute via transit because of convenience, reliability or cost savings. If transit service, station amenities, and vehicles are not managed at a high level, some voluntary riders will not choose transit, and the ability of a community to capitalize on transit will be diminished.

Efficient transit services will shorten the "effective distance", meaning reduced commute time, of workers to their jobs, which can in turn attract and retain population, increase property values, and build the quality of place of nearby communities.

04. PLANNING FOR INVESTMENT

For the first time in almost a century, many American cities are growing at a faster rate than their surrounding suburbs. Across the country, cities are competing with one another to attract young professionals to live, work and play in their downtowns. Seniors and families are also benefitting from living in cities that contain high quality amenities and basic services, linked together by walkable streets and premium transit. There is a growing desire to live in and/or around lively urban environments, have the benefit of a walkable lifestyle, and have safe and efficient access to daily needs with the option of not having to use a car. Additionally, companies have taken notice, relocating to those areas that contain premium transit options as a way to attract highly-educated young workers. These changes have coincided with preference changes regarding how people choose to move about in cities. National trends show fewer young people getting drivers licenses and even fewer owning cars.

The planned improvements along the South Shore corridor and the creation of the West Lake line will provide the catalyst for the communities of Gary, East Chicago, Portage, Hammond, Munster, and Dyer to take advantage of the trends being seen at a national scale. The importance of creating vibrant, active urban environments around premium transit is vital to the success of the rail corridors and the prosperity of the impacted communities.

This chapter of the *Comprehensive Strategic Plan* sets forth the overall framework and use of land within each of the studied station areas. The proposed development plans shown on the following pages establish a series of development place types that when combined with improvements to the transportation network and emphasis on the built development will create the lively urban environments young professionals, seniors, and families are seeking.

Each station is unique and requires a careful understanding of the community and station area's past, present, and goals for the future. Realizing the current status of each community and how it came to be, is a vital part of the planning process that helps mold recommendations and create goals for each TOD

station and the immediate surrounding areas. The planning process to develop this document involved getting to know each community impacted by both the West Lake Extension and South Shore Line improvements. This was possible by reviewing existing plans, meeting with representatives from the communities, and then creating Future Development Plans consisting of development concepts, characteristics, and corridor recommendations.

The first step in the TOD planning process was to review past plans to evaluate existing conditions, goals, and projects in all the impacted communities. These consisted of local comprehensive plans, strategic and revitalization plans, neighborhood plans, regional corridor studies, and economic development and business plans that varied in content, detail, length, and completion dates. Reviewing existing community plans allows the goals of future TOD station areas to remain consistent and can be defended with established goals laid out in the plans already completed. Having a background in past efforts will also help frame a conversation when meeting with the project's stakeholders.

After existing plans were reviewed, meetings with community stakeholders were held with each of the communities to gain more information and understand current progress and projects. Community representatives were able to present an overall SWOT analysis and offer issues and suggestions to planning and implementing TOD. This information helped to shape the final recommendations for this document and thus guide the future of each station area.

Rather than applying conventional land uses to the properties surrounding each station, a place-based planning approach was used to define the look, feel, and form of future transit oriented development at a regional level. The place-types proposed as a part of this Strategic Plan not only put an emphasis on the future character of each development, but also allow for community specific guidelines and policies to be developed over time to encourage development that fits within the character of each community.

In order to respond to a number of unique conditions and development opportunities along both the proposed West Lake and the existing South Shore Corridors, a total of 12 planning place types were developed. The future place-types assigned to each area were determined by a combination of what is there now, what the community

CityCenterDC has become the unequivocal centerpiece of Downtown DC. Encompassing 10-acres in the heart of the District, CityCenterDC is a 2.5 million square foot vibrant neighborhood development enlivened with a mix of condominiums, apartments, offices, public spaces, hotel, restaurants and shops.

The creation of compact mixed-use neighborhoods with a diverse mix of land uses and destinations integrated with public transport and within close proximity of a variety of residential dwelling types allows residents to undertake and fulfil a variety of daily activities and needs in their neighborhood.

leadership would like to see in the future, and what uses are traditionally found within a quarter to half mile of a transit station. The station area development plans shown in Figures 4.1-4.8 identify the application of the defined place types created as a part of this planning process.

While the proposed place-types were designed to accommodate a large degree of flexibility, each place-type embodies the following principles:

Densify. To absorb urban growth in compact and dense forms, urban areas must grow vertically (densification) instead of horizontally (sprawl). In turn, high urban densities oriented towards transit support a transit service of high-quality, frequency and connectivity, and help generate resources for investment in system improvements and expansions. Transit-oriented density results in well-populated streets, ensuring that station areas are lively, active, vibrant and safe places where people want to live. Density delivers the customer base that supports a wide range of services and amenities and makes local commerce thrive.

Mixed-use neighborhoods. When there is a balanced mix of complementary uses and activities within a local area (e.g., a mix of residences, workplaces and local retail commerce), many daily trips can remain short and walkable. Diverse uses peaking at different times keep local streets animated and safe, encouraging walking and cycling activity, and fostering a vibrant human environment where people want to live. Inbound and outbound commuting trips are also more likely to be balanced, resulting in more efficient operations in the transit system.

Neighborhood Centers and Vibrant Ground Floors. A built environment with adequate public space promotes social interaction between residents. Sustainable urban communities must be sufficiently dense and contain a variety of uses that are complementary to residential life. Public spaces should be connected to the urban transport network and serve as vibrant, human-centered places of activity.

Diverse Housing Options. Creating new communities around transit development offers the opportunity to put forward a mix of upscale, market, and assisted housing. Residential development around transit, especially when it is part of a mixed-use strategy, can be so successful that it attracts wealthier households, resulting in escalating

real estate values, numerous upscale conversions, and rising rents. Preserving and expanding affordable housing is important as well, and is a special concern for development around transit because lower-income transit users often represent the core of the ridership.

Building a Place. Transit stations within a community presents an opportunity for the creation of a community or neighborhood center which in turn can generate both economic and cultural benefits. The transit station, and the surrounding development should include engaging public spaces, attractive street furniture and public art as a way to encourage activity and vibrancy.

Connected neighborhoods. Short and direct pedestrian and cycling routes require a highly connected network of paths and streets around small, permeable blocks. This is primarily important for walking and for transit station accessibility. A tight network of paths and streets offering multiple routes to many destinations can also make walking and cycling trips varied and enjoyable. Frequent street corners and narrower right of ways, with slow vehicular speed and many pedestrians, encourage street activity and local commerce. An urban fabric that is more permeable to pedestrians and cyclists than to cars also prioritizes non-motorized and transit modes.

Balance of Parking. The location and amount of parking within transit centered developments can greatly impact a community. Too much parking makes the area less pedestrian friendly and wastes space that could be used for the types of development that increase ridership. Too little parking—or the perception that there is too little parking—can undermine the economic viability of projects built to take advantage of transit, making leasing or sales difficult. Insufficient parking at the station itself can force transit patrons to park in the surrounding neighborhoods, creating problems for nearby residents and businesses. Flexible parking standards provide some latitude in providing the optimal number of parking spaces.

Transit oriented development can provide numerous benefits for residents. Greater walkability and connectivity provides opportunities to easily fit physical activity into daily life resulting in improved health.

STATION AREA PLANNING

There is no "one size fits all" approach to achieving a transit oriented development pattern. Each of the community's presented in this planning document are unique with their own character and transportation needs. The application of the proposed development placetypes at each station provide a means of classifying and differentiating each community and station based on shared characteristics such as land use, built form, and site amenities.

The proposed station area plans provide guidelines and recommendations on the following elements and are intended to provide a broad framework for both a denser transit core and a vibrant, connected transit neighborhood within each community.

A. Development Intent

The development intent section of each station plan is intended to broadly define the mix of future development, and how that development will interact with the NICTD maintained facilities as well as the adjacent community neighborhoods. Each station plan includes a description of the development intent, and a matrix of applicable place-types and the assigned mix of use categories.

B. Site capacity

A minimum amount of development has been provided for each development placetype to ensure that the intensity of new development supports the overall Plan vision of a vibrant mixed-use transit core. For non-residential and mixed-use developments, this minimum level of intensity is defined by a minimum Floor Area Ratio (FAR). A FAR is the ratio of total building area to total site area, where for example, a 40,000 square foot building on a 40,000 square-foot lot would have a FAR of 1.0. Within the planning area, the minimum FAR for non-residential and mixed-use developments on any one site shall be 1.0. Residential development intensity is expressed by density, the ratio of total dwelling units to total site acres. The recommended development capacities were used in calculating the return on investment discussed in Chapter 6.

C. Phasing and Costs

The properties surrounding each station, both existing and proposed, are complex. Each community has a unique set of challenges and opportunities that will require multi-year, incremental development approaches. Knowing that, it is important to consider the progression of development over a period of time. For each station area, the future development timeline includes short, medium, and long term phases. Short term development is expected to occur within zero to five years of the West Lake Corridor completion, medium term within five to fifteen years, and long term development is not anticipated to begin within fifteen years of the rail's completion. While the timelines presented on the following pages were used in the calculation of return on investment, they are primarily used to help inform the RDA, and the communities about when development and associated infrastructure projects may occur. Development within each community may require that some projects and areas move up in priority, while changing conditions, funding and market conditions mean some areas do not develop within the anticipated timeframe.

The methodology used to calculate the site development, building costs and transportation costs can be found in Appendix 'C'.

The proposed station area plans create the foundation for developmental recommendations at a community level. Additional site specific guidelines for each place type are addressed in the Overall Built Form section of this chapter.

The station areas are presented along the proposed North to South along the proposed West Lake Corridor and West to East along the existing South Shore Corridor.

1. HAMMOND GATEWAY STATION

A. Development Intent

The proposed development around the Hammond Gateway Station will be a vibrant mix of residential, employment, retail and entertainment uses. The existing South Shore station located at Hohman Avenue and Hanover Street will be relocated to form a centralized urban transit hub near Sheffield Avenue and Gostlin Street. The former station area will be redeveloped into a mix of low to mid rise residential towers with some ground floor retail located at the corners of the property. The development surrounding the gateway station is intended to be the most intensely developed area and will accommodate a variety of uses including commercial, office, health care, civic, entertainment, cultural, residential and open space. This broad area of mixed-use will feature structured parking, urban plazas and green space, and will be designed to create a connected, pedestrian centered environment.

The primary roadways leading into the station area will be flanked with traditional commercial centers that provide locations for people to shop, eat, socialize and take care of daily activities. Along Gostlin Street, and Sheffield and Hohman Avenues retail and commercial businesses on the ground floor will provide active pedestrian environments. Additional residential units will be available in upper story spaces.

The existing industrial character and uses of the area will remain to the southwest of the station and the proposed maintenance facility. This area will be buffered from the proposed residential and mixed-use areas by a large recreation space as well as a series of flexible office and light industrial developments.

The dense urban development around the train station will transition back to the scale and pattern of the existing community. Ongoing investment and improvements will be made within the surrounding neighborhoods to help stabilize and revitalize the areas within ½ a mile of the station.

B. Site Capacities

	Floor Area Ratio		Density	
	Min.	Max.	Min.	Max.
Non Residential Development	2	4		
Residential Development			16	42

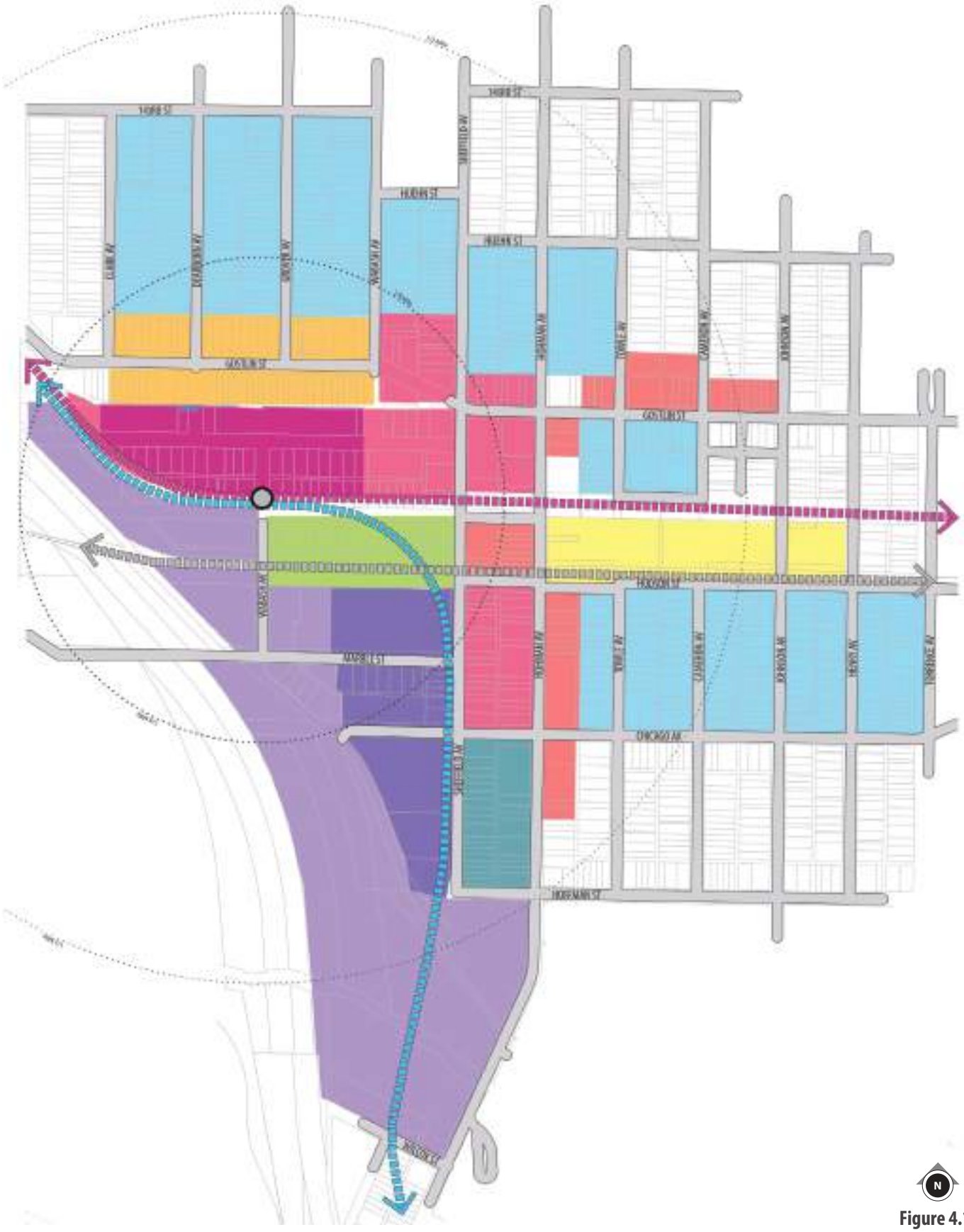


Figure 4.1

C. Phasing

Short Term

The proposed station area plan identifies the corner of realigned Chicago Avenue and Sheffield Avenue to be the priority within the short term phase. In an effort to provide opportunities for public and private partnerships, it is recommended that the southwest corner be developed as a mix of retail, residential and structured parking at the onset of the West Lake Corridor construction.

The proposed development can be used to supplement the necessary surface parking for the stations themselves, and can be used as a model of development for the area moving forward.

Anticipated construction costs: $50,451,404

Midterm

Within the midterm horizon, the redevelopment of the station's surface parking lot continues to the west. Existing surface parking spaces will be allocated to structure parking within mixed-use developments. Additional urban mixed-use projects will be focused along the realigned Chicago Avenue and will help create an active urban environment around the station. The former South Shore station will be redeveloped into market rate and affordable housing units. A mix of residential units will provide a buffer between the dense urban core and the existing neighborhoods to the north. Additional mixed-use development will develop along Gostlin Street and Sheffield and Hohman Avenues, the area's primary transportation corridors.

Anticipated construction costs: $356,566,922

Long Term

Within the long term horizon the surface parking lot for the station will be completely transformed into a dense mixed-use development. Existing surface parking spaces will be allocated to structure parking within mixed-use developments. Additional retail and office developments will extend along the southern stretch of Hohman Avenue with a flexible use development providing a transition between the dense urban pattern and the light industrial uses surrounding the maintenance facility. Neighborhood investment and redevelopment will be ongoing and will focus on providing improvements to facades, roadways, sidewalks and open spaces.

Anticipated construction costs: $303,512,326

2. HAMMOND SOUTH STATION

A. Development Intent

A small neighborhood scaled commercial node will anchor the station area at Harrison Avenue and 169th Street. The intersection will provide a mix of retail and office services with leasable areas of up to 50,000 square feet on smaller sites and will be highly visible and accessible for commuters approaching the station.

The surface parking area for the station will extend from 169th Street down to 173rd Street and will be buffered from the existing neighborhood by a mix of attached and detached single-family units. Active and passive recreation areas will be integrated into new residential developments and will be shared by all property owners. Residential development adjacent to the station will transition the scale of residential development back to the community's existing development pattern.

B. Site Capacities

	Floor Area Ratio		Density	
	Min.	Max.	Min.	Max.
Non Residential Development	1	2		
Residential Development			20	24

Figure 4.2

C. Phasing

Short term

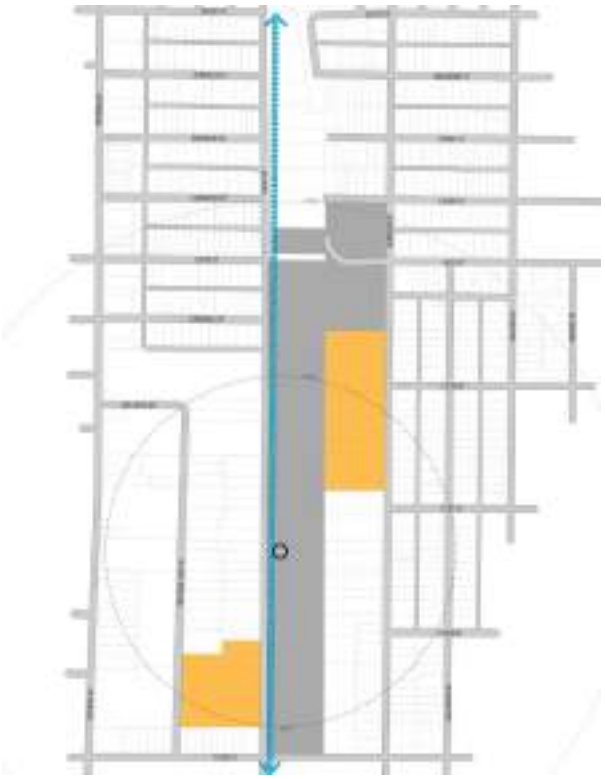
The initial TOD development efforts at the Hammond South Shore station will consist of concentrated retail and a large surface parking lot supporting the station. The neighborhood commercial retail area is located north and east of the station along Harrison Ave and 169th St, but will not detract from existing retail along Calumet Ave, about half a mile east of the station.

Anticipated construction costs: $48,265,963

Mid term

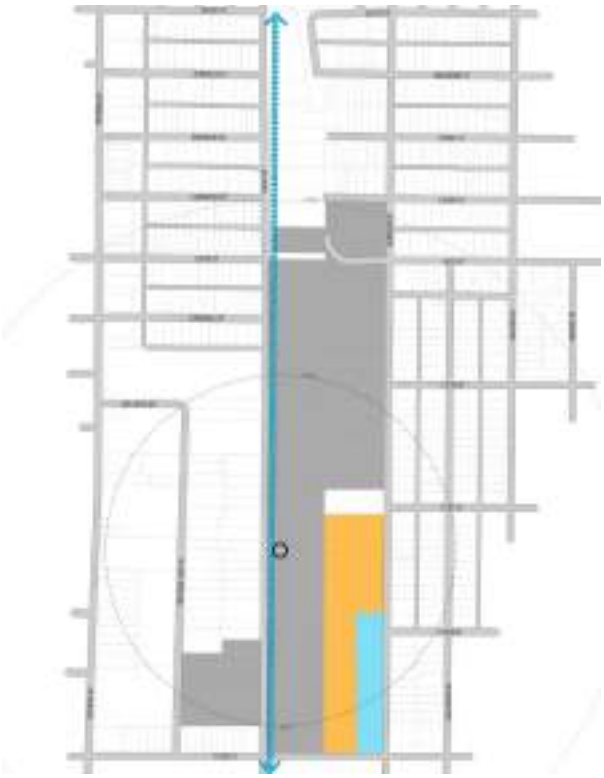
Within the midterm horizon, vacant properties between Lyman Ave and Meadow Lane Ave, and between the surface lot and Harrison Ave should be infilled with a variety of residential sizes, styles, and costs including duplexes, townhomes, attached and detached single-family housing.

Anticipated construction costs: $56,672,224



Long term
In the long term at the Hammond South Station, a mix of attached and detached residential units will infill plotted lots adjacent to the stations parking lot. Existing housing along Harrison Avenue will be revitalized focusing on structures, quality sidewalks, lighting, and other infrastructure.

Anticipated construction costs: $30,921,878



3. MUNSTER RIDGE ROAD STATION

A. Development Intent

The station at Munster Ridge Road will see an overall increase in density and character. The Manor Avenue and Ridge Road intersection to the northeast, southwest, and southeast will upgrade to a mixed-use node with a variety of retail and housing. Existing uses within half a mile of the station along the Ridge Road corridor will be supported and enhanced with lower density mixed-use and commercial uses, and are intended to form a streetwall to create a more urban environment. An area of parcels acquired by the City along Manor Ave north of Ridge Rd will serve as an open space and recreation area, with the intention of redeveloping into extra parking if deemed necessary in the future. Proposed residential units are limited to a maximum of 40 units per acre and should infill the area between the new track and Manor Avenue.

The station will be supported by a large surface lot with increased access from Briar and South Streets. A trail along the existing rail corridor will be taken out and rebuilt along the new West Lake Corridor to extend access to the station via non-vehicular modes of transportation.

Overall the area will feature a higher density than existing uses; a vibrant community that caters to a variety of users and uses, promoting a bustling TOD area, and supporting Munster's local economy.

B. Site Capacities

	Floor Area Ratio		Density	
	Min.	Max.	Min.	Max.
Non Residential Development	2	4		
Residential Development			20	41

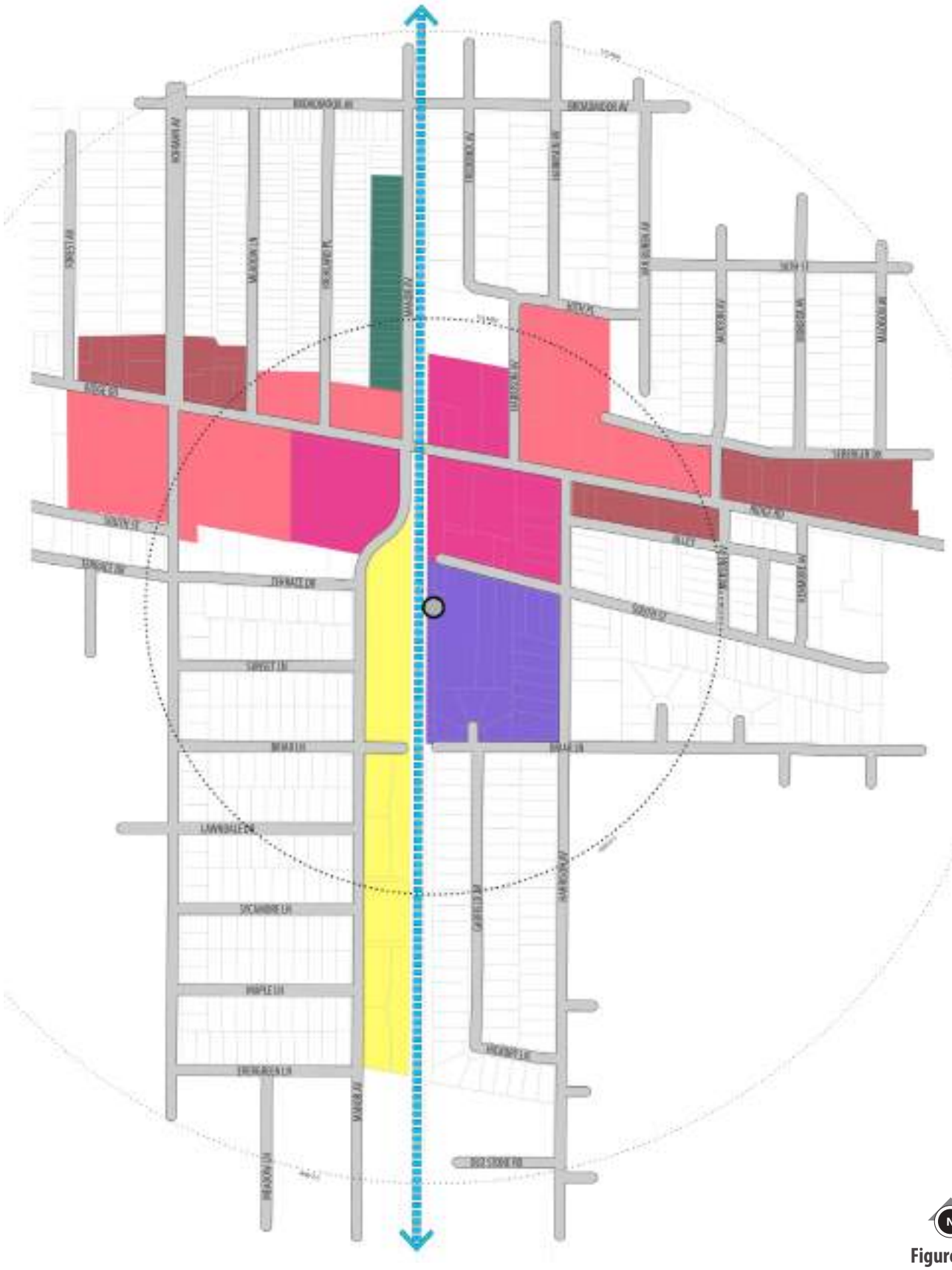


Figure 4.3

C. Phasing

Short term

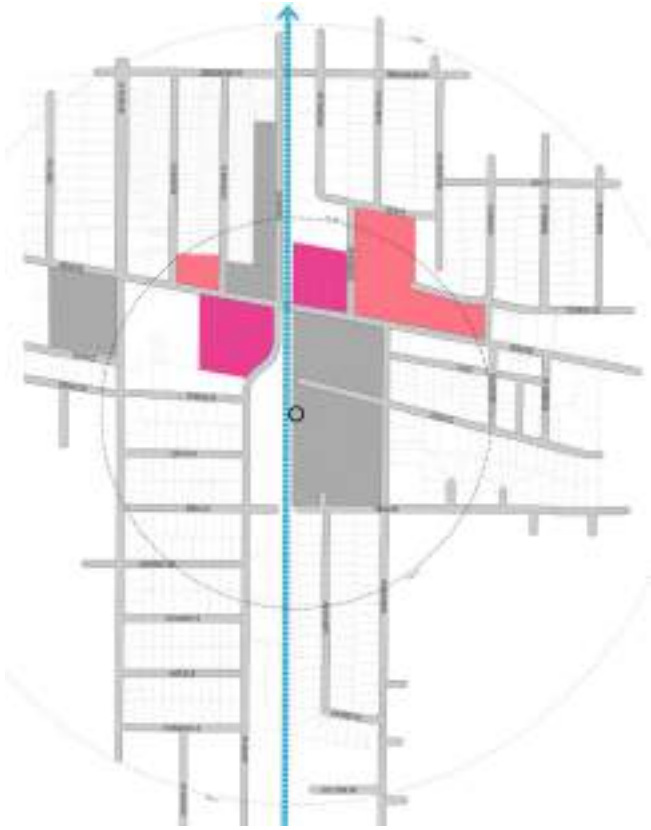
In the short term phase at the Munster Ridge Station there will be a center mixed-use development at the southeast intersection of Ridge Road and Manor Ave and a large parking lot around the station east of the tracks. This development will "kick start" the TOD area and promote use of the transit and living in the area. Currently vacant and easily developable properties and the northwest corner of Manor and Ridge are encouraged to be repurposed in the short term to further support the overall TOD development. These properties are intended to be neighborhood mixed-use developments.

Anticipated construction costs: $122,074,286

Mid-term

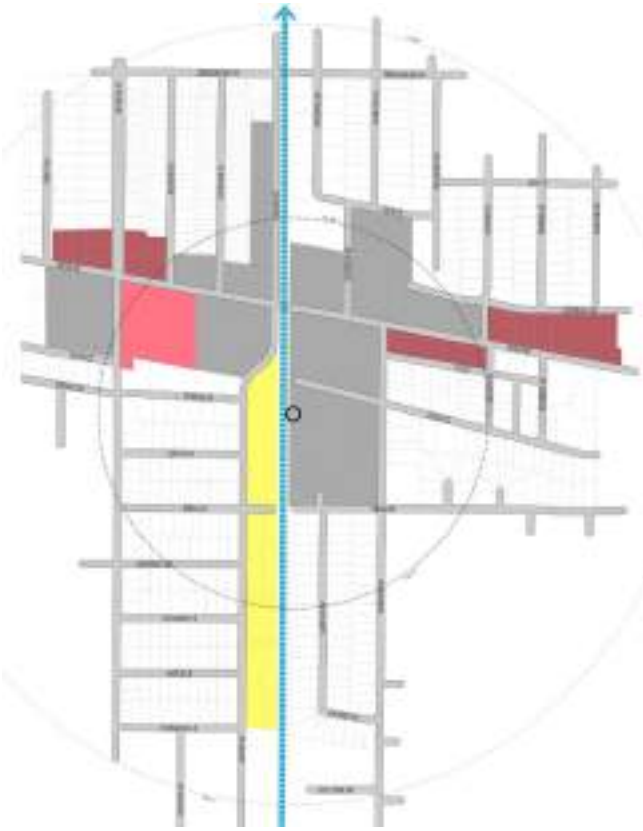
Center mixed-uses will continue to develop around the Manor and Ridge intersection at the northeast and southwest corners to include retail on the first floor and residential units in the upper floors. Further from the main intersection, more neighborhood mixed-use developments will contain similar uses at a lower density. Existing apartment buildings located along Manor Ave will be revitalized and infilled for a higher density residential area providing more and a variety of units.

Anticipated construction costs: $161,543,699



Long term
The long term phase is intended to finish improvements to the commercial and mixeduses along the Ridge Rd corridor. These developments should complete the urban street wall, infilling the rest of the proposed redevelopment with neighborhood commercial and neighborhood mixed-uses.

Anticipated construction costs: $305,116,048



4. MUNSTER/ DYER MAIN STREET STATION

A. Development Intent

At the terminus of this phase of the West Lake Corridor is the Munster/Dyer Main Street Station, with Main Street being the dividing line between the Town of Munster and the Town of Dyer. The tracks end at Sheffield Avenue with the layover facility and crew welfare building being located in Dyer on the east side of the tracks.

The TOD around the station will be a variety of mixed-use, retail, recreation, office, and residential uses. The densest area of the TOD is concentrated around Main Street, a major thoroughfare and is within walking distance of the station. These retail, office, and residential uses will be supported by a parking structure and surface lots. In the surrounding heavily populated neighborhoods, empty lots will be infilled with a variety of housing styles, sizes, and costs, with existing homes being encouraged for revitalization efforts. The highest density residential area will be located in Dyer, west of the tracks. The currently plotted neighborhood and a number of parcels along Main Street in Munster will be transformed into a traditional neighborhood development featuring a mix of uses centered on a neighborhood core. A regional campus area is proposed to serve as a high quality, lively destination for a regional activity center as an area to live, work, and recreate.

In order to access some of these areas, roadways will need to be added allowing better connectivity through new and existing development. Connections will be made from Margo Lane, and through Main Street to access new development. The current terminus of Main Street at Sheffield Avenue will continue west, underneath the new tracks, connect to Seminary Drive, and end connecting to Rose Bush Lane. Some roads and intersections will also be upgraded with amenities to reflect the density, character, and level of use.

B. Site Capacities

	Floor Area Ratio		Density	
	Min.	Max.	Min.	Max.
Non Residential Development	2	3		
Residential Development			7	24


ILLINOIS
INDIANA
HARTSFIELD VILLAGE
ASSISTED LIVING
TOWN OF MUNSTER
TOWN OF DYER
MID-AMERICA
REFORMED
SEMINARY
N

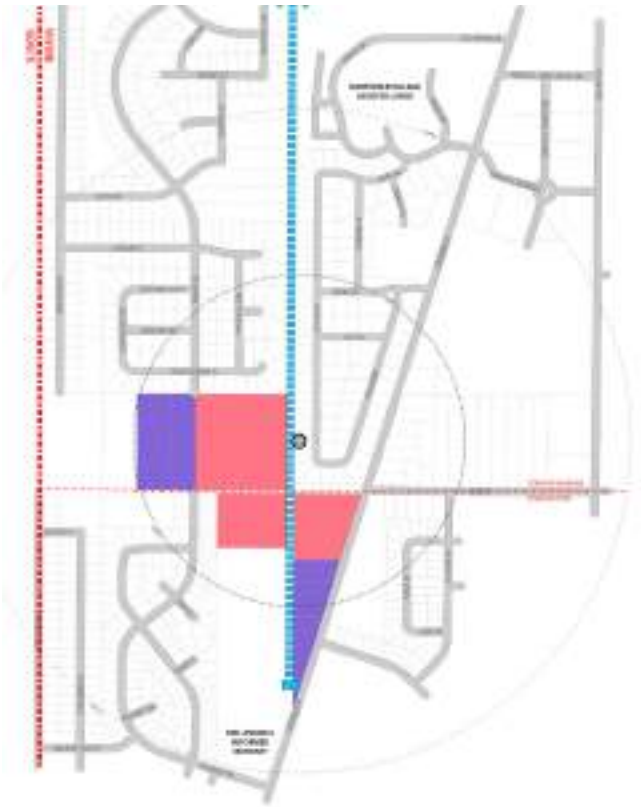
Figure 4.4

C. Phasing

Short term

Beginning to create a TOD at the Munster/Dyer Main Street Station will start with constructing a parking structure on the west side of the tracks that will be shared among the shops, offices, and residents of the mixed-use development along Main Street. This mixed-use area will be the heart of the TOD providing an exciting place to live, work, and play containing a variety of housing products and prices, recreational spaces, and amenities residents and visitors desire to experience. This mixed-use hub should provide amenities that serve all aspects of daily activities.

Anticipated construction costs: $131,634,800



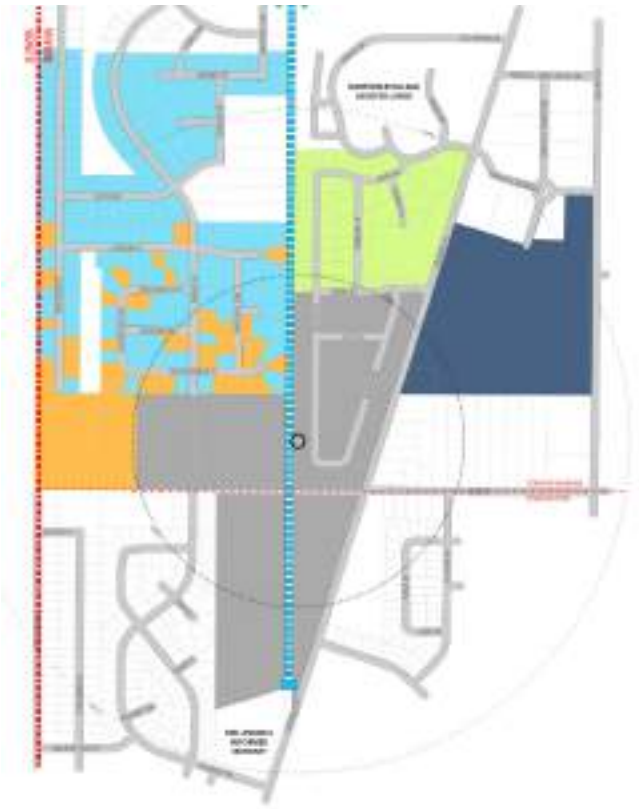
Mid term

During the next phase of developing the TOD, high density multi-family housing including apartments, condos, etc. will be built along the tracks acting as a buffer for the single-family neighborhoods, and allow residents a place to recreate and facilities allowing easy travel to destinations outside of the complex. The traditional neighborhood development immediately adjacent to the station in the currently platted land will be constructed creating a neighborhood with a mix of densities; a central core of businesses and restaurants, active and passive recreation, sufficient connectivity through bike lanes and sidewalks, and a variety of housing types and prices.

Anticipated construction costs: $154,491,966

Long term
In the last phase of TOD development, revitalizing and infilling existing neighborhoods with high quality housing will be a top priority. Empty lots in the subdivision northwest of the station should be built on with a variety of housing styles, cost, and size, increasing the vitality of the neighborhood and providing more options for potential residents. The subdivision will also be revitalized connecting segments of sidewalk, adding street lighting, and other infrastructure. Traditional neighborhood development will continue north in the last phase of construction, and a regional campus that features an office park, retail and services, or entertainment center will be planned and built that is geared toward a regional audience.

Anticipated construction costs: $835,337,796



5. GARY METRO STATION

A. Development Intent

The Gary Metro station resides in downtown Gary just off of I-90 and north of the Genesis Convention Center. Developing a TOD for this station provides a massive opportunity for redevelopment and revitalization in downtown Gary for a safer and more vibrant downtown.

High density, mixed-use in already dense parts of the City, namely along 4th and 5th Avenues, are located near the station with lower density, mixed-use further from the station along main thoroughfares. Being downtown, keeping existing parking structures is highly encouraged with a multitude of users sharing the spaces. Mixed-use developments will consist of retail and offices on the first floor and residences on the upper floors. Mid-level density housing will serve as a buffer to existing single-family residential from dense, busy areas. These flex residential areas and revitalized existing residences will incorporate a variety of sizes and styles, with a sufficient number of affordable units. Revitalization of the existing housing stock and area will include infill, evaluating the existing structures and making necessary repairs, as well as providing infrastructure like lighting, sidewalks, etc. for a higher quality of life.

Recreation will be an important use to include to provide residences and visitors an area to play; this including both passive and active areas.

With the influx of new residences, businesses, and riders, improvements to a majority of the corridors will be necessary to accommodate the large increase in traffic. Urban, landscaped, and pedestrian corridors are all appropriate in various parts of the city.

B. Site Capacities

	Floor Area Ratio		Density	
	Min.	Max.	Min.	Max.
Non Residential Development	1.50	4		
Residential Development			11	32


GENESIS CONVENTION CENTER
CITY HALL
UNITED STATES STEEL YARD
JEFFERSON ELEMENTARY SCHOOL
INDIANA AMERICAN WATER
LAKE COUNTY FOOD STAMP OFFICE
BUFFINGTON PARK
BORMAN SQUARE PARK
N

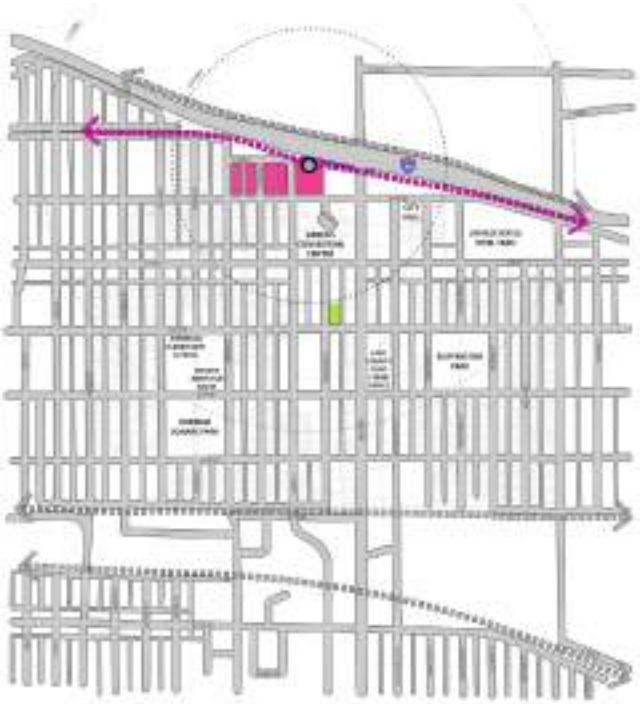
Figure 4.5

C. Phasing

Short term

Creating a TOD area at the Gary Metro station will start with high density mixed-use near the station. These few blocks of mixed-use development will include a vibrant pedestrian scaled area with new retail, restaurants, and offices on the first floor and a mix of market rate and affordable housing on the upper floors. The proposed new development will enhance the area currently occupied by the Greyhound facility, a large surface parking lot, and underutilized residential properties. There will also be a park space and plaza constructed on 6th Avenue.

Anticipated construction costs: $96,772,036

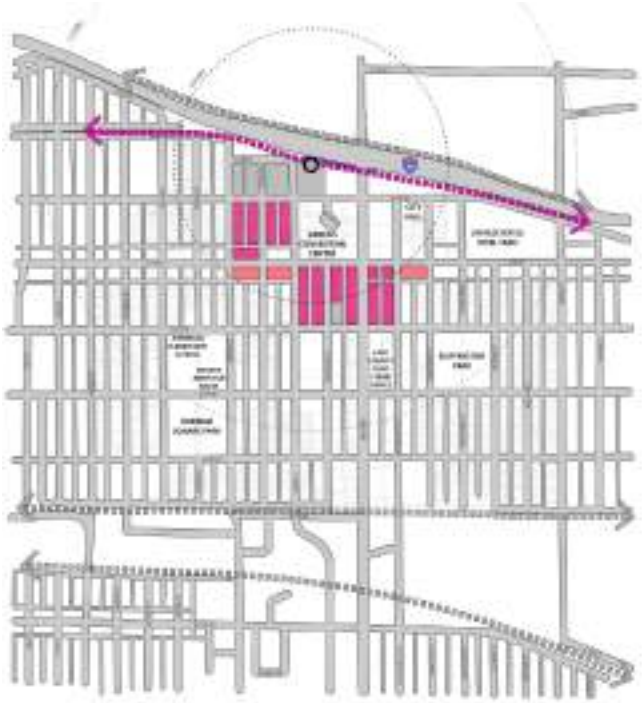


Mid term

In the mid-term time frame, new mixed-use development will continue south down to 6th Avenue, repurposing many existing buildings to include multiple uses, increasing pedestrian traffic downtown. Lesser dense mixed-use buildings will also be created, acting as a buffer between urban downtown and the surrounding neighborhoods. Borman Square Park is an existing park that will be revitalized to provide more amenities and open space for all ages and abilities.

With downtown being transformed into an urban core with significantly more residential units and increased density, the increase in both vehicular and pedestrian traffic create a necessity to increase capacity.

Anticipated construction costs: $249,079,299



Long term
After the downtown has been developed and revitalized, the current neighborhoods outside the core will be infilled and revitalize to provide a greater number of housing units of all styles and sizes, both market rate and affordable. Medium density housing is encouraged in areas it already exists, closer to higher density uses and buffers existing single-family residential.

The south side of 5th Avenue will see more low density mixed-use development west of Madison Street and east of Connecticut Street, as well as large areas of low density, mixed-use along Broadway Street, south of 7th Avenue.

Anticipated construction costs: $452,370,529

6. GARY MILLER STATION

A. Development Intent

The current Gary Miller station will change significantly with the planned relocation of the South Shore tracks. With this realignment, the portion of U.S. 12 from Clay Street to South Howard Street will be taken out and align south to create a T-intersection at U.S. 20.

An already bustling station, the Gary Miller TOD is proposed to center around a dense, mixed-use core at the station with a supporting, shared parking structure with retail, restaurants, and other businesses wrapping the structure with frontage on Lake Street. Further creating a more urban environment, a variety of residential units will be constructed throughout the TOD, including high density apartments and condos topping first floor retail at the core and along U.S. 20, high density complexes featuring anywhere from 15-40 units per acre, and attached and detached single-family homes infilling existing neighborhoods. Existing homes and neighborhoods will be revitalized, enhancing products and right-of-way infrastructure.

Industrial areas along U.S. 20 are intended to remain but will be revitalized to clean up unsightly equipment, facades, and landscaping, creating a noise, odor, and hazard free facility. The industrial areas will serve as high quality office space and light manufacturing facilities, and feature complementary smaller office and retail establishments buffering mixed-use retail spaces.

Increased traffic to the station will require upgraded facilities along U.S. 20, Miller Avenue, 7th Avenue, and Lake Street. Street right-of-ways will be more accommodating to pedestrians and bicyclists by establishing an efficient on-street bike lane network and a safe walking environment. Elements to accommodate a safe environment for pedestrians includes wide sidewalks, on-street parking, and street trees and other appealing landscaping.

B. Site Capacities

	Floor Area Ratio		Density	
	Min.	Max.	Min.	Max.
Non Residential Development	2	4		
Residential Development			15	41

Figure 4.6

C. Phasing

Short term

Before any development towards a TOD occurs, the South Shore will be realigned, taking out the portion of U.S. 12 from Clay Street to South Howard Street. In the earliest phase of creating a TOD at the Gary Miller station, high density mixed-use around the station will create an urban environment with shops, restaurants, and housing. A parking structure at the corner of the tracks and Lake Street will be constructed and shared by riders, residents, and all those visiting and shopping in the area.

Anticipated construction costs: $55,116,773

Mid term

After the area immediately adjacent to the station is developed, areas north, east, and south will be built and revitalized. Mixed-use will occur along main roads Lake Street and U.S. 20 supporting travelers along U.S. 20 and Lake Street being a main access to Lake Street Beach and providing high quality housing for those wanting easy access to the beach, station, and the area's amenities. The current light industrial area will be revitalized into professional offices, buffering mixed-uses for industrial uses along U.S. 20. High density residential complexes will be created, along with existing residential being revitalized and infilled to include townhomes, duplexes, etc. as part of the Lakefront District Revitalization Strategy plan completed in 2015.

Lake Street will continue to be revitalized to support travelers and businesses. New roads will also be constructed giving access to new high density residential. Other corridor improvements will be made to portions of Miller Avenue and 7th Avenue to help pedestrianize the area.

Anticipated construction costs: $269,174,011

Long term
Mixed-uses will continue west along U.S. 20 with retail, offices, and residences. Mid density residences will also continue west through existing neighborhoods as planned in the Lakefront District Revitalization Strategy. An office flex space to include a mix of professional office research, manufacturing, and light industry is planned existing industrial areas and will feature clean, fully enclosed procedures that pose no threat to health or safety and don't create an eye sore for the community. The housing stock in surrounding neighborhoods will be revitalized, eliminating any unsafe structures to provide high quality products.

Anticipated construction costs: $471,210,602

7. EAST CHICAGO STATION

A. Development Intent

Revitalizing East Chicago around the station and adding more desired amenities are priorities at the forefront of developing the TOD area at the East Chicago South Shore Station. The current station's extensive surface parking lot will be replaced by a structured garage south of the platform with the remaining land being used for mixed-use developments for local retail, restaurants, small offices, and a variety of residential units. Additional commercial will be located along Michigan Street west of Indianapolis Blvd with businesses supporting the surrounding neighborhoods' everyday needs and activities.

East Chicago's desire to activate the Grand Calumet riverfront will be seen through by creating an active recreational space. Access to the river and implementing a large recreational space for water-based activities like canoeing, kayaking, etc. accompanied by a campus of supporting services will create a unique, regional destination for East Chicago.

Connectivity around the station will be upgraded to create a more pedestrian friendly environment by revitalizing corridors to include wide sidewalks, street trees, on-street parking, etc. as well as paving a multi-use path along busy roads.

B. Site Capacities

	Floor Area Ratio		Density	
	Min.	Max.	Min.	Max.
Non Residential Development	2	3		
Residential Development			16	25

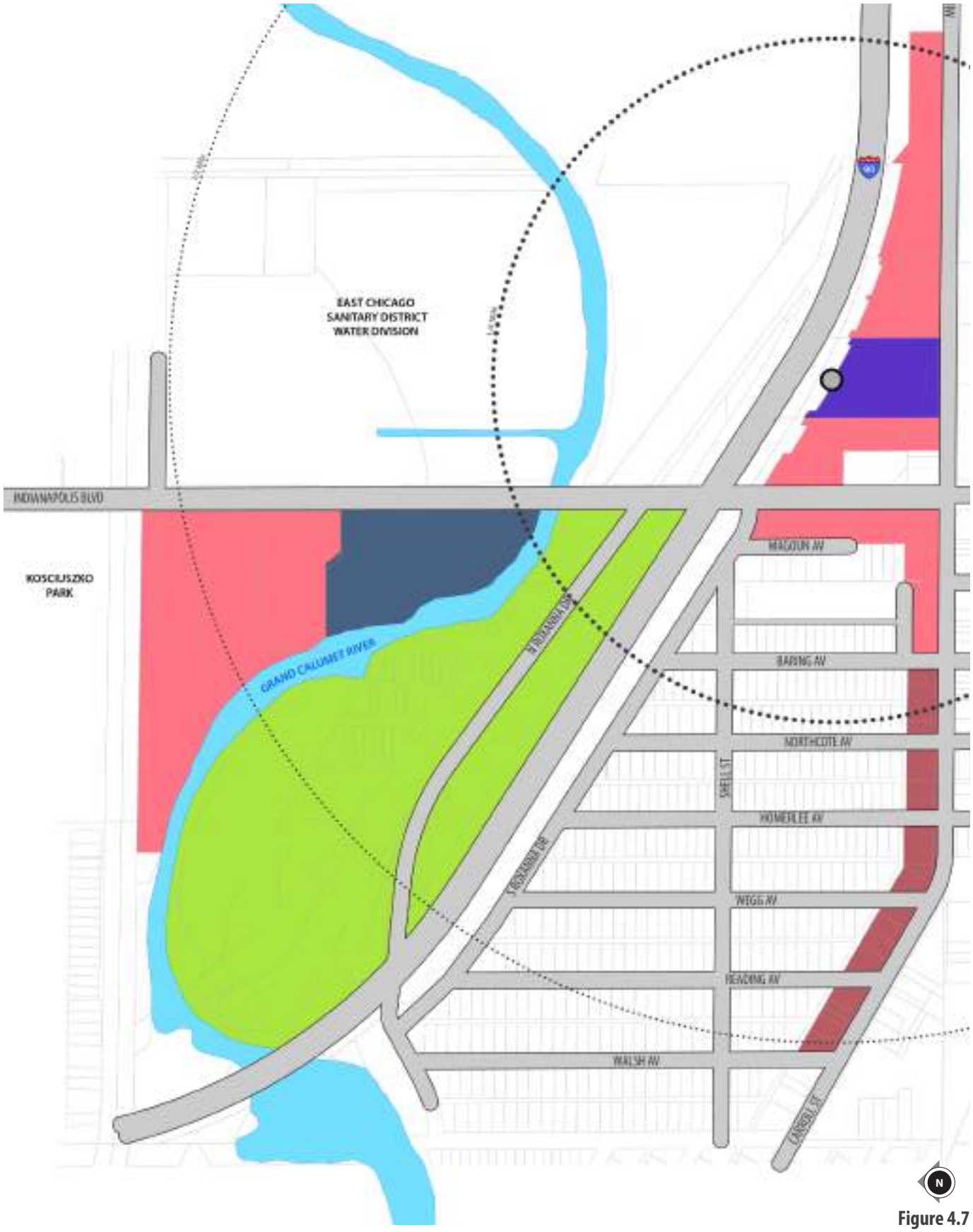

EAST CHICAGO
SANITARY DISTRICT
WATER DIVISION
INDIANAPOLIS BLVD
KOSCIUSZKO
PARK
GRAND CALUMET RIVER
MAGOUN AV
BARING AV
NORTHCOTE AV
HOMEPLEE AV
WEGG AV
HENDRIX AV
WALSH AV
CANNON DR
SHELL ST
CARNEGIE ST
N

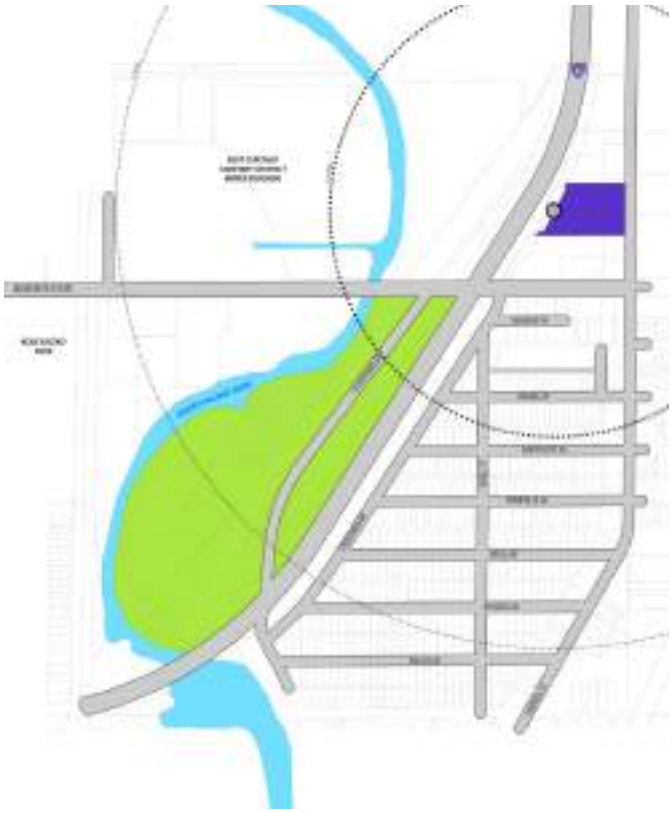
Figure 4.7

C. Phasing

Short term

In the first few years or creating TOD at the East Chicago station, a large recreation space will be implemented along the river. Because areas of the Grand Calumet River are being cleaned up, there is opportunity to increase access to the river. This space will be used as a place to recreate with amenities like trails, open space, and a variety of activities on the water.

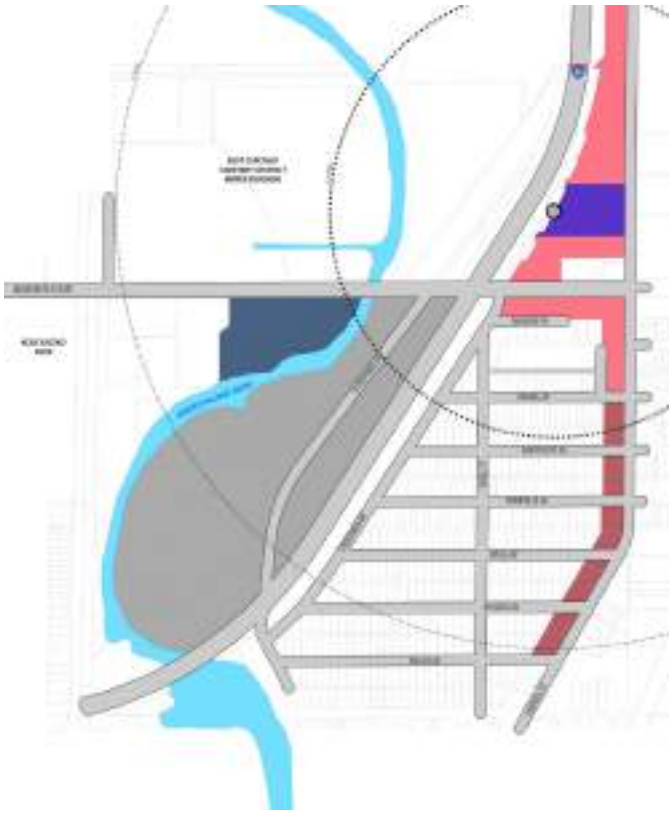
Anticipated construction costs: $66,500,000



Mid term

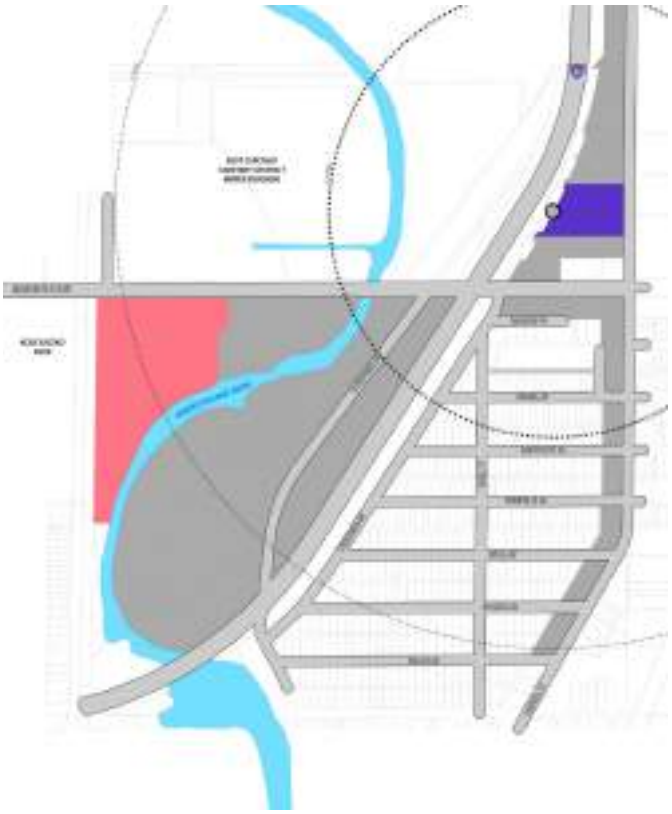
Building up the area around the station, there will be mixed-use development replacing the current station's surface lot as well as lots fronting Indianapolis Boulevard and Carroll Street. Continuing west down Carroll Street, commercial uses including a mix of small retail, commercial, and office services. A regional campus area will serve as a supporting use to the influx of travelers to the area.

Anticipated construction costs: $165,400,000



Long term
In the latest phase of TOD development, a mixed-use area will be constructed north of the river and west of Indianapolis Boulevard. Providing a hub for retail stopping and small businesses, more housing units, and small recreational areas. It will have easy access to the riverfront, Indianapolis Boulevard, the station, and the multi-use trail.

Anticipated construction costs: $110,200,000



8. PORTAGE/ OGDEN DUNES STATION

A. Development Intent

A TOD at the Portage/Ogden Dunes Station will open up opportunity for large lots of open land to develop, as well as continue implementing plans to improve existing facilities in place for the area. A mix of single-family homes, attached and detached will continue to develop around the marina on already platted land and extend south, while providing a sufficient stock of affordable units. Small, mixed-use establishments will occur along a newly constructed road creating a neighborhood scaled urban environment with local shops, food, recreational spaces, upper floor residential units, and other small businesses.

Connectivity will increase drastically around the Portage/Ogden Dunes station. A new road will be constructed with a roundabout at U.S. 12 and one at Stagecoach Road, extending south to connect at Ameriplex Drive creating better flow for station traffic and large, existing businesses. Extending the current trail network will also be a top priority creating connections to key destinations like the station, Ameriplex and other businesses, the Riverwalk and beach, and the new mixed-use development.

B. Site Capacities

	Floor Area Ratio		Density	
	Min.	Max.	Min.	Max.
Non Residential Development	2	3		
Residential Development			14	23

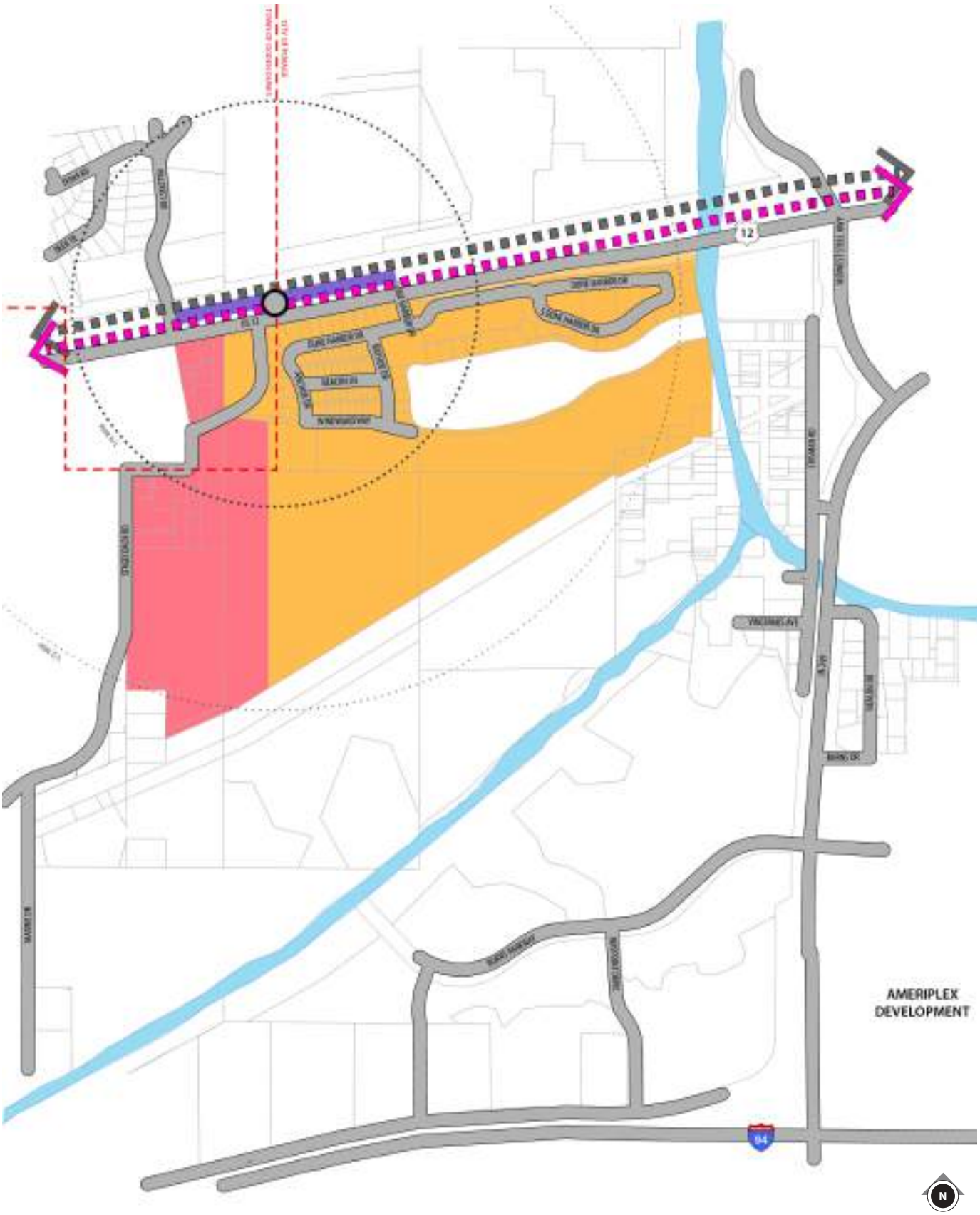


Figure 4.8

C. Phasing

Short term

The TOD in Portage will start with developing high quality residential on the north and west sides of the Marina. New residential products will include townhomes and duplexes, similar to the existing homes already on the plotted land around the marina.

Anticipated construction costs: $103,587919

Mid term

In the mid-term time frame residential units should continue to be developed around the Marina with similar character and sizes to those completed. A mixed-use development will occur along the new road south of the station for a more urban, pedestrian friendly environment with shopping, restaurants, and entertainment.

Anticipated construction costs: $189,001194

Long term
Flex residential development will continue south of the previous phase construction, adjacent to the mixed-use along the new road. Again, the housing should reflect the sizes and character of previous development and should be a mix of affordable and market rate housing.

Anticipated construction costs: $323,229,189

When designed properly, streetscapes provide a vibrant environment of street spaces that encourages activity, while supporting the efficiency and safety of all transportation users.

CIRCULATION AND STREETSCAPES

The streets surrounding transit stations need to support multiple transportation modes — automobiles, buses, pedestrians , bicyclists, and taxis — and provide for the safety of all users. The design of intersections and crossings, sidewalks and transit stops should consider the safety of the young, the elderly, and the mobility impaired. This approach to designing streets may necessitate tradeoffs due to space constraints, but the needs of pedestrians, bicyclists and transit users should be prioritized over the convenience of automobile drivers.

The intent of this strategy goes even further than the mere promotion of multimodality. Recognizing that, when designed properly, a city's streets become an integral part of its green space network, the recommendations included in this section provide a vibrant environment of street spaces that encourages activity, while supporting the efficiency and safety of all transportation users.

At this point, in the transit oriented design planning process it is difficult to identify the breadth and scale of impact each community's transportation network will need to address. It is clear that as these community's densify and see an increase in development that the existing transportation network will need to grow, modify, and change to accommodate the increase in vehicular, and non-motorized users. To accommodate the fluidity and unique character of the transportation planning process within each community the recommendations included here provide for series of streetscape and intersection typologies that provide descriptions for the functional movement along the roadways. Additionally, each typology features a set of guidelines designed to enhance the community, the adjacent neighborhoods and the transit centers themselves.

At the network level, the streetscape and intersection typologies use the existing transportation framework of each community to provide multiple routes to and from the transit center and transit adjacent neighborhoods. In most communities, no additional roadway corridors will be needed, but instead the recommendations focus on the enhancement of existing corridors to provide for additional travel lanes, nonmotorized facilities and landscape enhancements.

At the detail level, the Plan provides for broad standards and guidelines for new, multi-modal streets that promote access and mobility whether one is on foot, on a bike, a bus, or in a motor vehicle. The proposed streetscape and intersection typologies provide guidelines and recommendations on the following elements and are intended to provide a broad framework for infrastructure development within each community.

A. Character

The character description section of each streetscape typology is intended to broadly define the use and placement of the identified street or intersection type. Additionally the section will define the overall aesthetic and design intent of the various features and amenities included in the typology.

B. Features

Each streetscape and intersection typology includes a mix of facilities and amenities that vary depending on the overall character of the roadway. The typologies vary to allow for either active, vibrant streetscapes to buffered, high vehicular routes that provide regional connectivity. The intent of this section is to further define the recommended design details of each typology as well as identify additional amenities that should be planned for within the public right of way.

The application of each typology is shown on the proposed transportation network plans included in Appendix 'C'. The phasing and implementation of each community's transportation system will vary greatly depending on the development rate of each transit oriented development, roadway condition, functionality and available funding. The proposed transportation network plans should be used as a guide for future infrastructure development. The roadway network, including information on safety, capacity and condition should be reviewed as public and private development increase in each area, and on an annual basis to determine appropriate phasing for infrastructure implementation.

1. URBAN CORRIDORS

Character

Urban corridor typologies apply to areas with potential for continuous at grade retail/ commercial and mixed-use development on either side of the roadway. Urban corridors allow for active street fronts while ensuring that efficient vehicular movements along prominent road corridors are maintained. Urban corridors are characterized by a vibrant urban setting complete with animated building faces on both sides of the street, broad sidewalks, and street tree plantings suitable for high pedestrian and vehicular traffic. Building facades feature a high degree of transparency and pedestrian scaled elements. Storefront, sidewalk cafes and public space is also integrated into the streetscape. Rows of street trees planted within a continuous soil trench are covered with large, walkable tree grates and allow for an active streetscape. Street furniture includes pedestrian lighting, bicycle parking and embedded seating allowing pedestrians to have a place to linger. Urban corridors become a place of activity and a destination.

Urban corridors may range from 2-4 travel lanes and also have bike lanes and on-street parking. Public transit is common with frequent bus service and connections to both regional and local transit. Wide sidewalks with ample pedestrian and transit amenities are also common. Streetscape furnishings and public art is common, sometimes with a direct theme linked to a nearby center or neighborhood.

MOBILITY

- Corridors can range from 2 to 4 lanes of traffic and would be dictated by traffic studies and transportation impact studies. When urban corridors reach four lanes of vehicular traffic a central median or boulevard should be considered to mitigate traffic speeds and noise.
- Corridors should be designed to incorporate local public transportation routes and facilities including bus shelters, wayfinding signage, dedicated bus lanes or bus pull off areas.
- On street parking should be provided when deemed appropriate. On street parking should only be incorporated when travel speeds and volumes dictate.
- On street curb cuts should be consolidated whenever possible. Access to private development directly from an Urban Corridor should be minimized.

NON-MOTORIZED FACILITIES

- Public right of way should incorporate broad sidewalks, and a tree and furnishing zone on either side of the roadway. Access from the public sidewalk to private development should not be impeded.
- Bicycle facilities should be integrated within the public right of way on Urban Corridors. The use of dedicated or shared use lanes, bicycle boulevards or cycle tracks should be reviewed and integrated based on vehicular speeds and traffic volumes.
- Sidewalk materials should be traditional concrete with prominent or special interest areas being denoted with a change in material.
- Specialty materials such as pavers, or colored or textured concrete should be used in the Tree and Furnishing Zone.

LANDSCAPE

- Street Tree plantings planted in long connected trenches covered with walkable grates in zone between back of curb and sidewalk.
- Where possible, streetscape plantings within the right of way should be used to mitigate stormwater and water quality issues.

Streetlights

- Decorative and pedestrian lighting to be integrated with street light poles and coordinated with street trees in respect to placement and spacing.
- Placement of above ground utilities should be sensitive to the visual appeal and pedestrian function of the public realm.
- All streetscape pedestrian light poles to be located within the public right-of-way. Therefore, poles need to be located in the curbside tree and furnishing Zone.

OTHER

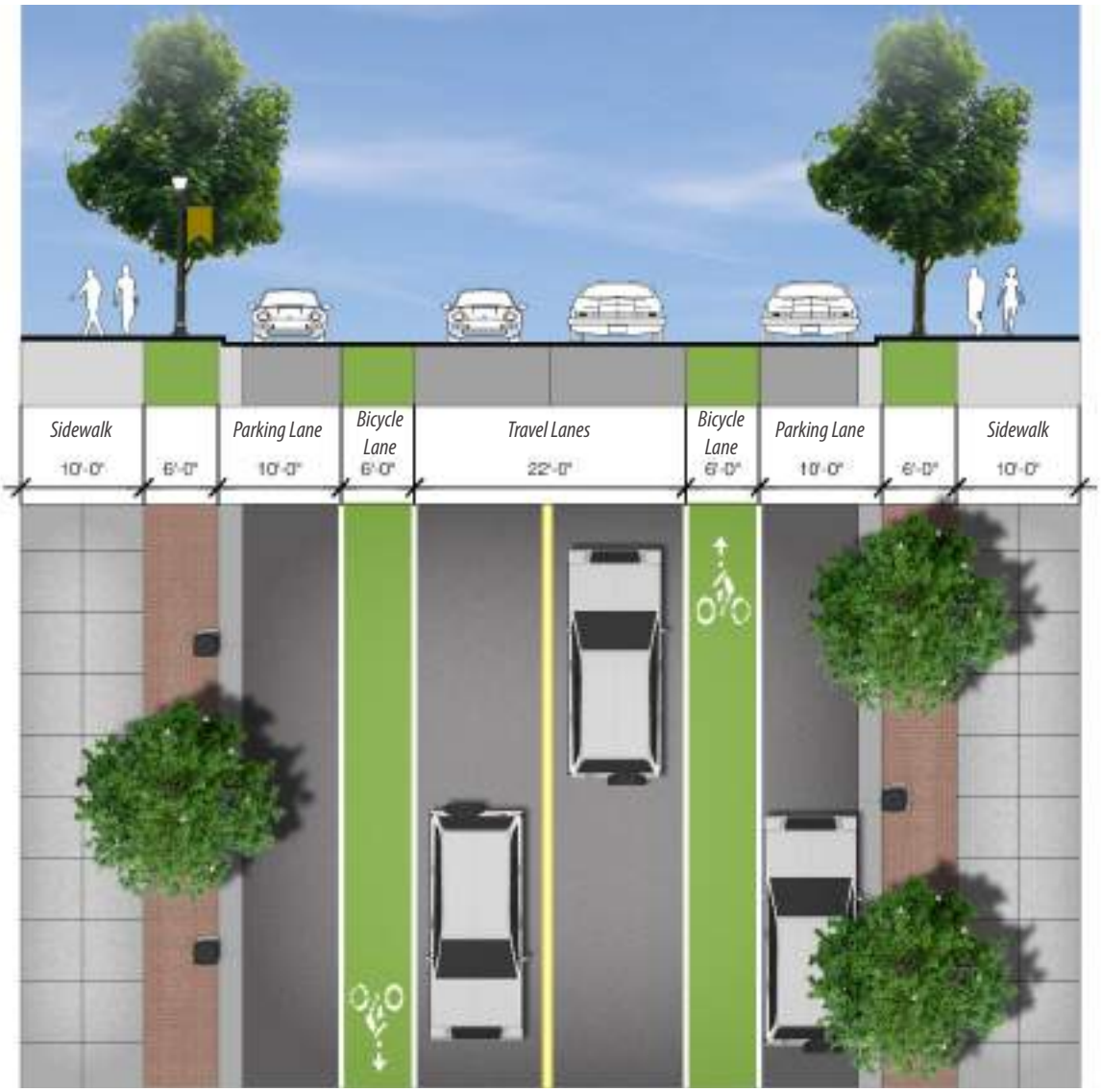
- Civic structures, public art, identify signage and community specific elements should be incorporated within the public right-of-way where appropriate.

2. PEDESTRIAN SCALED CORRIDORS

Character

Pedestrian scaled corridors have very limited application and are intended to enhance the retail and/or mixed-use district in which they are located. These corridors typically have two travel lanes and on-street parking both of which are used to encourage lower traffic speeds and volumes. Pedestrian corridors are characterized by smaller, pedestrian scaled development and amenities while still encouraging activity with surrounding development. Building fronting Pedestrian Corridors are designed to activate the sidewalk and feature a high degree of transparency and pedestrian scaled elements. Storefront, sidewalk cafes and public space is also integrated into the streetscape.

Pedestrian corridors can be applied to a community's existing primary roadways and service as a transition between dense, urban environments and the existing community development pattern. Public transit is common among these corridors. Bike lanes or routes are provided. Streetscape furnishings are common as well as landscaping, public art and other pedestrian and transit amenities. Buildings are located along the street to further enhance the pedestrian environment. Rows of street trees planted within a continuous soil trench are covered with large, walkable tree grates and allow for an active streetscape. Street furniture includes pedestrian lighting, bicycle parking and embedded seating allowing pedestrians to have a place to linger.



MOBILITY

- Corridors traditionally accommodate two lanes of traffic. Additional lanes or turn lanes could be integrated as necessary.
- Corridors should be designed to incorporate local public transportation routes and facilities including bus shelters, wayfinding signage, dedicated bus lanes or bus pull off areas.
- On street parking should be included within the public right-of-way and should be used as shared parking options for adjacent development.
- Pedestrian Corridors provide access to public and private development with the transit oriented development areas. Developments should utilize shared or consolidated entrances when possible.
- Development driveways should be paved so that the appearance of the sidewalk environment is not interrupted.

NON-MOTORIZED FACILITIES

- Public right-of-way should incorporate broad sidewalks, and a tree and furnishing zone on either side of the roadway. Access from the public sidewalk to private development should not be impeded.
- Bicycle facilities should be integrated within the public right-of-way on Pedestrian Corridors. The use of dedicated or shared use lanes should be reviewed and integrated based on vehicular speeds and traffic volumes. Larger scale facilities such as cycle tracks or bicycle boulevards are not recommended for Pedestrian Corridors.
- Sidewalk materials should be traditional concrete with prominent or special interest areas being denoted with a change in material.
- Specialty materials such as pavers, or colored or textured concrete should be used in the Tree and Furnishing Zone.

LANDSCAPE

- Street tree plantings planted in long connected trenches, covered with walkable grates in zone between back of curb and sidewalk should be incorporated in retail/commercial or mixed-use areas.
- Street tree plantings within residential areas should incorporate a vegetated buffer between the back of curb and sidewalk.
- Where possible, streetscape plantings within the right-of-way should be used to mitigate stormwater and water quality issues.

STREETLIGHTS

- Decorative and pedestrian lighting to be integrated with street light poles and coordinated with street trees in respect to placement and spacing.
- Placement of above ground utilities should be sensitive to the visual appeal and pedestrian function of the public realm.
- All streetscape pedestrian light poles to be located within the public right of way. Therefore, poles need to be located in the curbside tree and furnishing zone.

OTHER

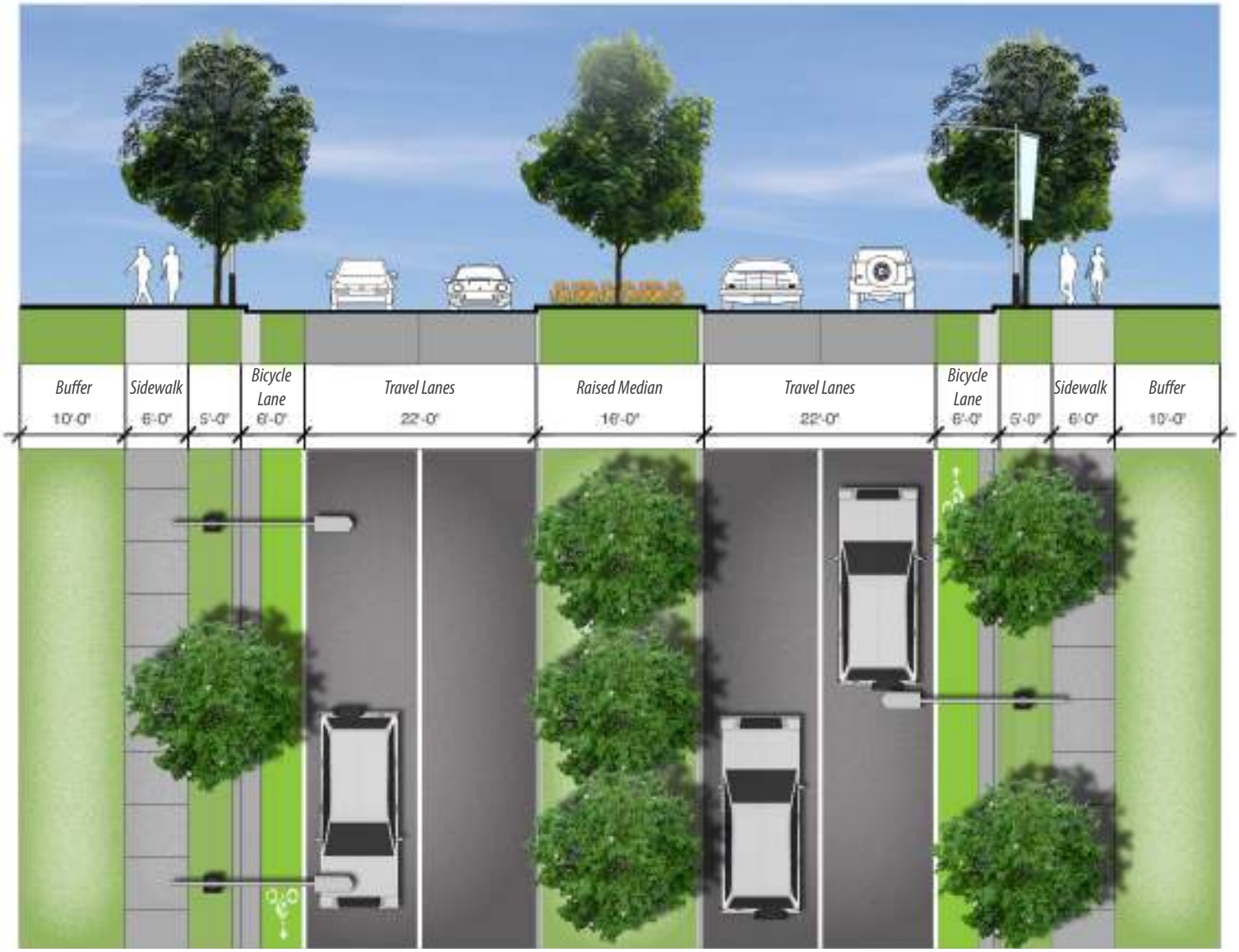
- Civic structures, public art, identify signage and community specific elements should be incorporated within the public right-of-way where appropriate.

3. SUBURBAN CORRIDOR

Character

Suburban corridors are oriented towards the automobile and moving traffic throughout the City or Town. These corridors can vary from four to six lanes wide and are often lined with commercial, office, and residential uses that link the City's neighborhoods and centers. Suburban corridors are characterized by their varied development pattern featuring low rise buildings with opportunities for denser infill development on vacant and underutilized properties. Direct vehicular access from the corridor into a site is typical. Although frontage roads may be found where single or multi-family residential uses exist. On-street parking can be incorporated in specific areas that allow slower moving traffic and lower vehicular volumes. Suburban corridors are not designed to be active streetscapes. Buildings are setback from the road, and facades have little to no interaction with the public right-of-way.

Suburban corridors are typically applied to a community's existing primary roadways and provide direct connections throughout the community. Public transit is common among these corridors, along with bike facilities. Street trees are placed within a continuous tree lawn to aid in buffering the roadway from the adjacent pedestrian facilities.



MOBILITY

- Suburban corridors can accommodate between four and six lanes of traffic. Number of lanes would be dictated by traffic studies and transportation impact studies. When Suburban corridors reach four lanes of vehicular traffic a central median or boulevard should be considered to mitigate traffic speeds and noise.
- In areas of high activity such as residential or mixed-use areas, frontage roads should be considered.
- Corridors should be designed to incorporate local public transportation routes and facilities including bus shelters, wayfinding signage, dedicated bus lanes or bus pull off areas.
- On-street parking should not be allowed on Suburban Corridors.
- Suburban corridors can provide direct access to public and private development with the transit oriented development areas. Developments should utilize shared or consolidated entrances when possible.
- Development driveways should be paved so that the appearance of the sidewalk environment is not interrupted.

NON-MOTORIZED FACILITIES

- Public right-of-way should incorporate sidewalks and should be buffered from the roadway by a Tree and Furnishing Zone.
- Bicycle facilities should be integrated within the public right-of-way on Suburban corridors. The use of dedicated or shared use lanes should be reviewed and integrated based on vehicular speeds and traffic volumes. Larger scale facilities such as cycle tracks or bicycle boulevards may be applied depending on right-of-way width and community preference.
- Sidewalk materials should be traditional concrete. Asphalt paths can be substituted and should be based on community preference.

LANDSCAPE

- Street tree plantings planted in long connected tree lawns should be placed between the back of curb and sidewalk.
- Street tree plantings within residential areas should incorporate additional vegetation within the tree lawn buffer between the back of curb and sidewalk.
- Where possible, streetscape plantings within the right-of-way should be used to mitigate stormwater and water quality issues.

STREETLIGHTS

- Lighting should be focused on roadway scale and placement. Pedestrian scaled lighting is not required along Suburban Corridors. Rodway lighting is to be coordinated with street trees in respect to placement and spacing.
- Placement of above ground utilities should be sensitive to the visual appeal of the public realm.
- All streetscape light poles to be located within the public right-of-way.

OTHER

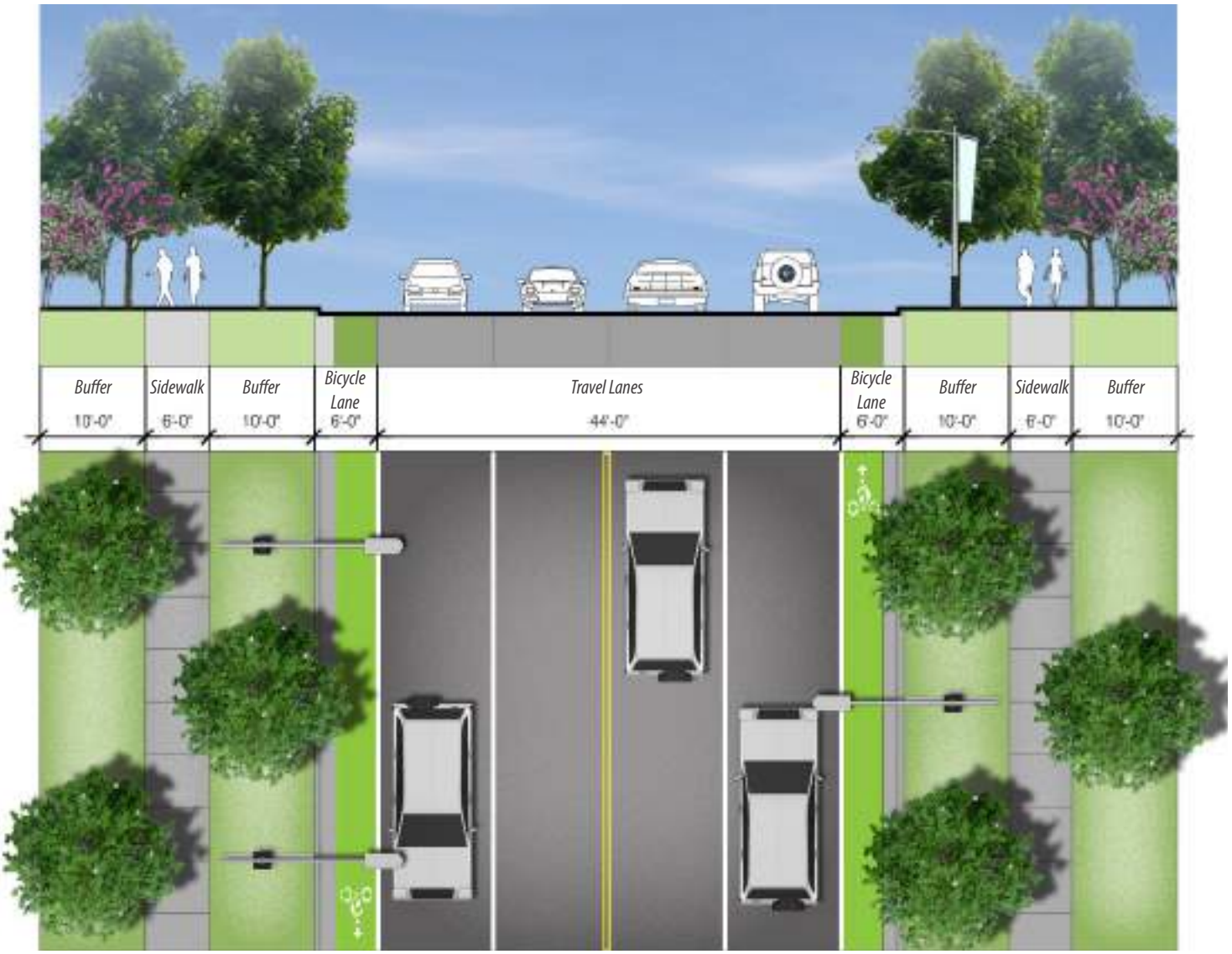
- Suburban corridors should contain minimal amounts of streetscape furniture, or public art. Where appropriate wayfinding signage can be incorporated into the tree lawn.

4. LANDSCAPE CORRIDOR

Character

Landscape corridors are intended to enhance the areas in which they are placed while also providing for efficient traffic flow to and through the area. These corridors can vary from two to four lanes and are characterized by ornamental landscaping, street trees, and wide landscaped medians and modest to deep site setbacks. The development pattern along landscape corridors is varied and features a mix of building heights and densities. In most instances landscape corridors are not intended to be active streetscapes. However, in densely populated urban areas landscape corridors can be adjusted to have active street facades that utilize build-to lines, zero setbacks and amenity space within the public right-of-way.

Landscape corridors can be applied to a community's existing and secondary roadways and can provide direct connections to development. Pedestrian sidewalks and on-street bicycle facilities should be included within the public right of way. On-street parking can be accommodated in key areas. Large vegetated buffers or lawns should be included at both the back of curb and the back of sidewalk to allow for a high degree of landscaping. The landscape elements along these corridors not only provide aesthetic value but also provide visual buffers between sensitive land uses such as single-family residential, office/flex areas, and industrial or warehousing areas.



MOBILITY

- Landscape corridors can accommodate between two and four lanes of traffic. Number of lanes would be dictated by traffic studies and transportation impact studies.
- Landscape corridors can include a central median in areas where size and character dictate.
- Local public transportation routes and facilities including bus shelters and wayfinding signage, should be accommodated within the public rightofway where necessary.
- On-street parking should be included within the public rightofway in areas where it would benefit development.

NON-MOTORIZED FACILITIES

- Public right-of-way should incorporate sidewalks and should be buffered from the roadway by a wide Tree and Furnishing Zone.
- Bicycle facilities should be integrated within the public rightofway on Suburban corridors. The use of dedicated or shared use lanes should be reviewed and integrated based on vehicular speeds and traffic volumes. Larger scale facilities such as cycle tracks or bicycle boulevards may be applied depending on right of way width and community preference.
- Sidewalk materials should be traditional concrete. Asphalt paths can be substituted and should be based on community preference.

LANDSCAPE

- Street tree plantings planted in wide connected tree lawns should be placed between the back of curb and sidewalk, as well as the back of sidewalk and private property.
- Buffer lawns should incorporate additional vegetation within the tree lawn buffer between the back of curb and sidewalk where appropriate.
- Where possible, streetscape plantings within the right-of-way should be used to mitigate stormwater and water quality issues.

STREETLIGHTS

- Decorative and pedestrian lighting to be integrated with street light poles and coordinated with street trees in respect to placement and spacing.
- Placement of above ground utilities should be sensitive to the visual appeal and pedestrian function of the public realm.

OTHER

- Civic structures, public art, identify signage and community specific elements should be incorporated within the public right of way where appropriate.

TRANSIT ACCESS GUIDELINES

While each station area is designed around a transit core, the provision of and access to local public transportation is an essential component of an urban, multi-modal environment. Communities within Northwest Indiana are currently being served by a number of public and private transit providers that offer fixed route bus systems with complementary paratransit, private intercity bus and motor coach, as well as public and private demand response transit services for the elderly and disabled. While transit oriented development traditionally is focused around rail, it is important to understand how local public transportation facilities can impact the success and growth of the development.

Transit oriented development areas are intended to be denser, vibrant, accessible and active cores within the communities. To ensure that goal, it is important to look at the transportation system at both a regional and community level for the communities along the West Lake and South Shore corridor. A regional Transit Framework was prepared during NIRPC's planing process for the *2040 Comprehensive Regional Plan*. The plan is a vision for how both local and regional transit investments program could support the revitalization of key communities within Northwest Indiana. The vision synthesizes information from several recent planning efforts (including the Midwest Regional Rail Initiative, INDOT Rail Plan, NICTD West Lake Corridor Study, past Northwest Indiana Regional Bus Authority Strategic Plans, and the Marquette Plan), the locations of the revitalization areas, the alignments of existing and proposed transit services, multimodal connection opportunities, and the major corridors and focal points identified in CRP workshops. While the recommendations focus on high capacity transit services it is recognized that a key component to the success of the system will be the integration of local fixed route, demand response, and other local transit services.

New local bus services and amenities in areas where the population density would support it will be critical to connecting the communities along the West Lake and South Shore corridors with each other and the regional employment, shopping, and services centers. In order to encourage the development of a connected local public transportation system it is recommended that communities look for ways to incorporate the following:

- Allow for easier access for commuters or travelers from outside the City by providing park and ride lots in key locations;
- Create new opportunities for ridesharing including carpooling;
- Promote other transportation demand management (TDM) alternatives;
- Create an ordinance to designate that parking spots in "prime" locations at large retail and office developments within the transit oriented design areas be reserved for carpools and vanpools;
- Increase public transportation access for lower wage and lower income workers;
- Provide for the inclusion of necessary amenities (bus shelters, signage, bus lanes etc. in the development of both public infrastructure and private development.

BICYCLE & PEDESTRIAN GUIDELINES

Northwest Indiana is becoming a premier location for bicycle and pedestrian users. While each community along the West Lake and South Shore corridors has planned for the integration of nonmotorized transportation, regionally nonmotorized transportation is actively supported and planned with the adoption of the Northwest Indiana Blueways and Greenways plan in 2008 and the Complete Streets Guidelines and the Pedestrian and Bicycle Transportation Plan in 2010. The priorities and opportunities in these plans include off- and on-road facilities as well as water trail routes and will help establish an accessible region and a transportation system that supports the health of all people and places.

Studies show that the walkability of the streets surrounding a station has a significant impact on whether people will choose to walk and ride transit, and the placement of transit station facilities should not get in the way of walkability and placemaking. A strong pedestrian orientation, with adequate room for circulation, safe street crossings, an inviting station area, and amenities for transit users is important. Shorter blocks and more connected streets allow pedestrians, bicyclists, cars and buses more travel options, thereby minimizing the distance and time spent getting to the station. At a broader community scale a growing library of data is clearly showing the positive effects of non-motorized facility development on a local economy. Trails and sidewalks are associated with higher property values and attraction to home buyers or renters. In addition trails and sidewalks attract new businesses and serve as a vital economic development tool.

While non-motorized initiatives and strategic planning has begun at a regional level, it will need to become a key area of focus for the local municipalities as the demand for transit oriented demand grows. Communities will need to support and strategically incorporate non-motorized facility planning into their planning processes for community development, transportation planning and zoning codes. It is recommended that communities begin to consider the following:

- Support a full bike route network that connects people to popular origins and destinations within Cool Springs and the Franklin area
- Encourage bikeshare programs and bicycle amenities including bike racks and shower facilities within private development;
- Install infrastructure to support pedestrian and bicycle access including a full network of sidewalks on both sides of every street and pedestrian intersection improvements;
- Incorporate universal design practices for new roadway corridors that take into consideration the needs of all non-motorized users;
- Incorporate design parameters such as narrower lane widths, on street parking, curb bump outs at corners, visibility at intersections and marked crosswalks that encourage slower traffic speeds in appropriate areas.

The transit station, and the surrounding development should include engaging public spaces, attractive street furniture and public art as a way to encourage activity and vibrancy.

OVERALL BUILT FORM

In keeping with the vision of a vibrant, mixed-use development centered on transit, the placetype recommendations of this Plan are intended to establish an overall framework of both public and private development. This section provides high level guidelines for the overall mix of development and uses, the character and placement of buildings that will line streets, and opportunities for creating active recreation spaces, and human-scaled and active ground floors. The development guidelines are place-type specific and are intended to provide additional direction on intended development form, function and amenities.

The place-type development guidelines address the following elements:

A. Intent statement

The development intent section of each place-type is intended to broadly define purpose, mix and placement of future development.

B. Primary and secondary land uses

In order to provide additional information on the intended development type and use around each station, a broad list of uses were created during the planning process. The list included in Appendix 'D', is meant to be a starting point and should be expanded as community's move forward with site specific planning and zoning amendments. Each place-type includes guidelines on the intended primary and secondary land uses. Additionally, each place-type includes a development ratio that was used in determining the construction costs included in Appendix 'C'.

C. Development form

The physical placement and character of each development will play a large role in the success of each community's station area. The development form recommendations describe where on site the buildings should be located, how the facades should be treated when adjacent to a roadway and how materials should be used to create active or passive streetscapes. The development form section also incorporated minimum lot coverage amounts that were used in calculating the construction costs found in Appendix 'C'.

D. Parking

Parking standards are important elements when designing for transit oriented developments. For each place-type a recommendation on parking type, design, and location are provided.

E. Site design

Transit oriented developments incorporate a wide variety of amenities into each site including landscaping, pedestrian space and amenities, public art, as well as functional spaces such as service drives and access points. Thesite design section provides broad guidelines on landscaping and conventional site amenities.

F. Site access

While each development or site will be unique in how it is accessed by pedestrians, cyclists, or motorists, this section provides a high level set of guidelines that should be considered as development regulations, are refined by each community.

Together these design recommendations, and the development intent and capacity information included in the Station Area Planning section (pages 65-97) set the framework for each community to plan for and implement transit oriented development around each unique station area.

1. CENTER RESIDENTIAL

A. Intent Statement

Center Residential developments incorporate both low to mid rise residential towers with some ground floor retail – likely at the corners or focused at a logical location within the overall development and attached single-family dwelling types into a dense residential neighborhood. Parking is structured below or above ground and is accessed via secondary roadway or alleys. Residents are well served by local and regional transit, and can walk or bicycle to nearby retail areas for many of their daily needs. Open space should be developed as a component of the residential development and provide connectivity through the site and would include a variety of urban open spaces including plazas, squares, and pocket parks.

Center Residential developments are located immediately adjacent to the transit station and are the heart of the transit oriented development district.

B. Land Uses

Center residential development is comprised of the following use categories and are intended to be developed within the stated intensity and/or density.

		Floor Area Ratio		Residential Density	
		Min.	Max.	Min.	Max.
Office					
Retail	25%	3.0	5.0		
Institutional					
Light Industrial					
Residential: *Market Rate*	60%			26	41
Residential: *Affordable Housing*	15%				
Recreation and Open Space					

Residents are well served by local and regional transit, and can walk or bicycle to nearby retail areas for many of their daily needs. Open space should be developed as a component of the residential development and provide connectivity through the site.

C. Development Form

Buildings should be sited along right-of-way with minimal setbacks in order to create a street wall or continuous façade.

Development should be a mixture of attached residential and mid to high rise buildings, generally 3-5 stories.

Transparent building facades should be provided for retail areas with entrances along the sidewalks.

Minimum Lot Coverage: 70%

Minimum Street Frontage: 80%

D. Parking

Maximum surface parking within a development should be limited to 15% of the total spaces provided.

Parking facilities should be shared between developments.

In areas immediately adjacent to the station, parking should be located within structured garages. Structured garages should be integrated into the building mass and exterior façade.

Developments adjacent to the station and at nearby intersections should incorporate parking in structures or behind buildings. On-street parking can be incorporated on streets with lower traffic volumes.

Parking shall be accessible from alley or internal or secondary roads only.

Pedestrian entrances to all parking shall be directly from the street, except that underground parking garages may be entered directly from a building.

Bicycle parking should be located in a secure location near the primary entrance of retail and commercial developments.

E. Site Design

Development landscaping should include street trees, ornamental trees, plazas, and street planters. Pedestrian amenities, bicycle parking, and bus shelters for developments located along existing or planned routes.

Decorative street lighting and complementary site lighting should be used throughout the development.

Developments to have access from primary corridors and common or shared access points are encouraged.

Buildings shall have side and rear access for parking and service/delivery functions. The primary pedestrian entrance shall be accessible directly from the primary street through the front facade.

F. Site Access

Building entrances shall be on the primary street façade of the building.

Secondary building entrances should also be located along other building facades when connections to pedestrian sidewalks can be made.

Primary vehicular routes should encouraged access management by including shared access points and curbed medians where necessary.

KEY NOTES

1. Building height between 3 and 5 stories.
2. Building facades have a high degree of transparency.
3. Decorative street lighting should be used throughout the development.
4. Developments to have access from primary pedestrian corridors with common or shared access points.
4. Development landscaping should include street trees, ornamental trees, plazas, and street planters. Pedestrian amenities, bicycle parking, and bus shelters for developments located along existing or planned routes.

2. CENTER MIXED-USE

A. Intent Statement

The Center Mixed-Use developments are intended to be the most intensely developed areas around the train station. It accommodates a variety of uses including commercial, office, health care, civic, entertainment, cultural, residential, and open space. The Center Mixed-Use development is oriented around a formal framework of streets that provide not only vehicular access, but multi-modal transportation options including walking, bicycling and transit stops. The development is anchored by either the West Lake or South Shore train station and can be found around major intersections adjacent to the station. Center Mixed-Use developments include a compact development pattern with taller buildings, more refined street grid and a lively streetscape environment within a more centralized district. An increased residential population will help add vitality, extend the hours of activity, and provide a built in market for retail, services, and entertainment uses.

Center Mixed-Use developments are located immediately adjacent to the transit station and along with Center Residential developments form the heart of the transit oriented development district.

B. Land Uses

Center Mixed-Use development is comprised of the following use categories and are intended to be developed within stated intensity and/or density.

		Floor Area Ratio		Residential Density	
		Min.	Max.	Min.	Max.
Office	10%	2.0	4.0		
Retail	25%				
Institutional					
Light Industrial					
Residential: *Market Rate*	50%			23	35
Residential: *Affordable Housing*	15%				
Recreation and Open Space					

Center Mixed Use developments include a compact development pattern with taller buildings, more refined street grid and a lively streetscape environment within a more centralized district.

C. Development Form

Buildings should be sited along right-of-way with minimal setbacks in order to create a street wall or continuous façade.

Development should be a mixture of attached residential and mid to high rise buildings, generally 4-5 stories.

Transparent building facades should be provided for retail areas with entrances along the sidewalks.

Minimum Lot Coverage: 70%

Minimum Street Frontage: 80%

D. Parking

Maximum surface parking within a development should be limited to 15% of the total spaces provided.

Parking facilities should be shared between developments.

In areas immediately adjacent to the station, parking should be located within structured garages. Structured garages should be integrated into the building mass and exterior façade.

Developments adjacent to the station and at nearby intersections should incorporate parking in structures or behind buildings. On-street parking can be incorporated on streets with lower traffic volumes.

Parking shall be accessible from alley or internal or secondary roads only.

Pedestrian entrances to all parking shall be directly from the street, except that underground parking garages may be entered directly from a building.

Bicycle parking should be located in a secure location near the primary entrance of retail and commercial developments.

E. Site Design

Development landscaping should include street trees, ornamental trees, plazas, and street planters. Pedestrian amenities, bicycle parking, and bus shelters for developments located along existing or planned routes.

Decorative signage and wayfinding should be incorporated to identify uses.

Decorative street lighting and complementary site lighting should be used throughout the development.

Developments to have access from primary corridors and common or shared access points are encouraged.

Buildings shall have side and rear access for parking and service/delivery functions. The primary pedestrian entrance shall be accessible directly from the primary street through the front facade.

F. Site Access

Building entrances shall be on the primary street façade of the building.

Secondary building entrances should also be located along other building facades when connections to pedestrian sidewalks can be made.

Primary vehicular routes should encouraged access management by including shared access points and curbed medians where necessary.

KEY NOTES

1. Building height between 4 and 6 stories and should be oriented towards the street.
2. Transparent building facades should be provided for retail areas with entrances along the sidewalks.
3. Decorative street lighting and complementary site lighting should be used throughout the development.
4. Developments to have access from primary pedestrian corridors with common or shared access points. Building entrances shall be on the primary street façade of the building.

3. CENTER RECREATION

A. Intent Statement

Center Recreation and Open Space is land used for public owned urban parks, plazas, and/ or recreational uses and is intended to provide recreation opportunities for the densely developed properties adjacent to the West Lake or South Shore train station. Center Recreation and Open Space developments include both active and passive recreation opportunities such as walking trails, gathering plazas, open lawns, playgrounds and landscaped areas. The Center Recreation and Open Space developments incorporate high quality materials to complement the surrounding mixed-use core. Center Recreation and Open Space developments are developed and maintained by implementing public/ private partnerships and are intended to be a regional recreational destinations for the community.

B. Land Uses

Center Recreation and Open Space development is comprised of the following use categories and is intended to be developed within stated intensity and/or density.

		Floor Area Ratio		Residential Density	
		Min.	Max.	Min.	Max.
Office					
Retail					
Institutional					
Light Industrial					
Residential: *Market Rate*					
Residential: *Affordable Housing*					
Recreation and Open Space	100%				

Center Recreation and Open Space developments include recreation opportunities such as walking trails, gathering plazas, open lawns, playgrounds and landscaped areas. Developments incorporate high quality materials to complement the surrounding mixed use core.

C. Development Form

Buildings needed to support both recreation and open space uses.

Buildings should be placed so that they minimize the impact to the surrounding property.

D. Parking

Maximum surface parking within the development can equal 100% of the spaces provided.

Onsite parking should be developed so that there is limited impact to the recreational areas of the development.

E. Site Design

Development landscaping should be placed to preserve existing features including tree stands, specimen trees, hill tops, and fencerows.

Development should include a mix of both natural and ornamental landscaping. Amenities include pavilions, water fountains, splash pads, benches, tables, and bike racks.

F. Site Access

Open space to have access from primary corridors and secondary corridors.

Parking and services should be accessed through an internal or secondary road.

Center Recreation and Open Space developments include recreation opportunities such as walking trails, gathering plazas, open lawns, playgrounds and landscaped areas. Developments incorporate high quality materials to complement the surrounding mixed use core.

4. FLEX RESIDENTIAL

A. Intent Statement

Flex Residential developments incorporate attached and detached single family dwelling types into a connected neighborhood utilizing more compact lot sizes. Flex residential units are usually seen as duplexes, townhouses, and other semi-attached/medium density developments. When developing large lots of flex residential, passive or active recreational space should be developed as a component of the development and shared by all property owners. Overall densities will vary depending on surrounding development patterns and densities but are typically between 8 and 15 units per acre.

Flex Residential developments are used within ¼ to ½ mile from a transit station and are used to transition the scale of residential development back to the community's existing development pattern.

B. Land Uses

Flexed Residential development is comprised of the following use categories and are intended to be developed within stated intensity and/or density.

		Floor Area Ratio		Residential Density	
		Min.	Max.	Min.	Max.
Office					
Retail					
Institutional					
Light Industrial					
Residential: *Market Rate*	85%			20	32
Residential: *Affordable Housing*	15%				
Recreation and Open Space					

Flex residential units are usually seen as duplexes, townhouses, and other semi-attached/ medium density developments.

C. Development Form

Units are oriented towards local streets.

Setbacks and side yards will vary.

Building placement should complement the surrounding residential development.

Use high quality craftsmanship and materials at the ground level, with ample use of texture, articulation and use of natural materials like brick, wood, and stone.

Natural materials and tones are encouraged.

Minimum Lot Coverage: 50%

Minimum Street Frontage: 70%

D. Parking

Parking for no more than two cars shall be provided in individual garages integrated into the back of the attached residential unit.

Detached residential units shall provide parking for no more than two cars in an individual garage located at the rear of the property.

On-street parking can be incorporated on public and/or private side streets with lower traffic volumes.

Bicycle parking should be located in a secure location near the primary entrance of retail and commercial developments.

E. Site Design

Landscaping includes public right-of-ways including street trees and ornamental trees.

Amenities include sidewalks, buffer yards, and shared active and passive recreational spaces.

F. Site Access

Vehicular access is by way of rear alleys or private driveway.

KEY NOTES

1. Units are oriented towards local streets. Setbacks and side yards will vary.
2. On-street parking can be incorporated on public and/or private side streets with lower traffic volumes.
3. Landscaping includes public right-of-ways including street trees and ornamental trees.
4. Amenities include sidewalks, buffer yards, and shared active and passive recreational spaces.

5. FLEX MIXED-USE

A. Intent Statement

Flex Mixed-Use developments serve as a mixed-use development for office and retail space. These developments provide a broad range of uses that include professional offices, retail, restaurants, and more. Flex Mixed-Use developments are defined by their combination of office and retail space without providing any residential space. These mixed-use developments typically serve as a buffer between other residential categories, such as Neighborhood Mixed-use, and other commercial or office/ flex uses.

B. Land Uses

Flex Mixed-use development is comprised of the following use categories and are intended to be developed within stated intensity and/or density.

		Floor Area Ratio		Residential Density	
		Min.	Max.	Min.	Max.
Office	40%	2.0	3.0		
Retail	60%				
Institutional					
Light Industrial					
Residential: *Market Rate*					
Residential: *Affordable Housing*					
Recreation and Open Space					

Flex Mixed-Use developments are defined by their combination of office and retail space without providing any residential space.

C. Development Form

Buildings should be sited along right-of-way with minimal setbacks in order to create a street wall or continuous façade.

Transparent building facades should be provided for retail areas with entrances along the sidewalks.

Mixture of low and mid-rise buildings generally 1-3 stories.

Buildings should utilize traditional architecture using community history and culture for inspiration.

Minimum Lot Coverage: 70%

Minimum Street Frontage: 80%

D. Parking

Maximum surface parking within the development can equal 100% of the spaces provided.

Shared parking facilities are encouraged between adjacent developments.

Parking lots are accessed by secondary roads only.

Vehicular access should be coordinated and shared between buildings to provide efficiencies for loading, unloading and turning movements.

Above ground surface parking lots for employees and visitors can be located in the front of buildings. Access drives, and service and loading areas should be located in the rear and shared between like facilities.

Overhead doors shall be located to the side or rear of structure to minimize visibility from public streets. Open service areas and loading docks shall be screened by an opaque barrier a minimum of 6 feet in height. Walls, fences or landscape screening shall have 100 percent opacity to effectively conceal service and loading operations from adjoining streets.

Additional on street parking spots can be incorporated on streets with lower traffic volumes.

E. Site Design

Landscaping includes public right-of-ways including street trees and ornamental trees.

Foundation plantings should be required along the building, with additional plantings being used to screen parking lots and to buffer existing adjacent uses.

Decorative signage and wayfinding to identify uses.

Decorative street lighting and complementary site lighting should be used throughout the development.

F. Site Access

Developments to have access from primary corridors and common or shared access points are encouraged.

Parking and services should be accessed through an internal or secondary road. Buildings shall have side and rear access for parking and service/delivery functions.

The primary pedestrian entrance shall be accessible directly from the street, through the building frontage.

Primary access to units above the ground floor shall be through a lobby accessed from the street or the courtyard.

KEY NOTES

1. Buildings should be sited along right-of-way with minimal setbacks in order to create a street wall or continuous façade.
2. Transparent building facades should be provided for retail areas with entrances along the sidewalks.
3. Mixture of low and mid-rise buildings generally 1-3 stories.
4. Developments to have access from primary pedestrian corridors with common or shared access points. Building entrances shall be on the primary street façade of the building.
5. Amenities include sidewalks, buffer yards, and shared active and passive recreational spaces.

6. NEIGHBORHOOD COMMERCIAL

A. Intent Statement

The Neighborhood Commercial developments provide a mix of retail and office services with leasable areas of up to 50,000 square feet on smaller sites of less than five acres.

Neighborhood Commercial developments are traditionally located adjacent to primary roadway corridors with a high level of vehicular access and visibility with buildings prominently located directly adjacent to rights-of-way. Neighborhood Commercial developments can be used to transition between existing development and more intense development blocks. Parking is predominately well landscaped surface lots located to the side and rear of the building, and larger surface parking lots are placed within the interior and arranged to maximize sharing between multiple uses. Buildings are predominately one to two stories with traditional, modern architecture characteristics and materials. Buildings incorporate a high level of transparency and incorporate a 360 degree architecture façade treatment.

Neighborhood Commercial developments are located along major thoroughfares approximately ½ a mile from the West Lake or South Shore station and are intended to serve a radius of one to three miles. Neighborhood Commercial developments traditionally include stand-alone buildings and small commercial centers and can be used to transition from a dense, mixed-use development pattern along the community's major thoroughfares.

B. Land Uses

Neighborhood Commercial development is comprised of the following use categories and are intended to be developed within stated intensity and/or density.

		Floor Area Ratio		Residential Density	
		Min.	Max.	Min.	Max.
Office	45%	1.0	3.0		
Retail	55%				
Institutional					
Light Industrial					
Residential: *Market Rate*					
Residential: *Affordable Housing*					
Recreation and Open Space					

Buildings are predominately one to two stories with traditional, modern architecture characteristics and materials. Buildings incorporate a high level of transparency and incorporate a 360 degree architecture façade treatment.

C. Development Form

Building sits along sidewalks to create defined street wall. Transparent building facades and entrances along sidewalks. Buildings abut one another with minimal side or no side yards. Mixture of low to mid-rise buildings generally 1-3 stories. Building materials should include stone, brick, and glass. The corners of buildings located at the intersection of two streets should be emphasized in order to create identity, take advantage of the high visibility, and enhance way finding.

Minimum Lot Coverage: 50%

Minimum Street Frontage: 60%

D. Parking

Maximum Surface Parking (% of total spaces) is 90% with single use parking facilities; shared use facilities are encouraged.

Vehicular access for parking and loading is at the rear and side of the building via secondary roads only.

Surface parking areas shall not front primary thoroughfares.

Shared parking between uses is encouraged.

Bicycle parking should be located in a secure location near the primary entrance.

E. Site Design

Landscaping includes public right-of-ways including street trees and ornamental trees.

Foundation plantings should be required where possible, with additional plantings being used to screen parking lots and to buffer existing adjacent uses.

Pedestrian amenities, bicycle parking and bus shelters for developments located along existing or planned routes.

Decorative signage and wayfinding to identify uses.

Decorative street lighting and complementary site lighting should be used throughout the development.

F. Site Access

Developments to have access from primary corridors and common or shared access points are encouraged.

Parking and services should be access through an internal or secondary road.

Buildings shall have side and rear access for parking and service/delivery functions.

The primary pedestrian entrance shall be accessible directly from the street, through the front of the building/street side with a secondary access from the parking lot side or through a courtyard.

Primary access to units above the ground floor shall be through a lobby accessed from the street or the courtyard.

KEY NOTES

1. Mixture of low to mid-rise buildings generally 1-3 stories. Building materials should include stone, brick, and glass.
2. The corners of buildings located at the intersection of two streets should be emphasized in order to create identity, take advantage of the high visibility, and enhance way finding.
3. Landscaping includes public right-of-ways including street trees and ornamental trees.
4. Decorative street lighting and complementary site lighting should be used throughout the development.
5. The primary pedestrian entrance shall be accessible directly from the street, through the front of the building/street side.

7. NEIGHBORHOOD MIXED-USE

A. Intent Statement

The Neighborhood Mixed-Use developments are traditional commercial centers primarily serving local commuters and the surrounding neighborhood. These areas are pedestrian oriented and within easy walking distance to serve the surrounding neighborhoods. They provide locations for people to shop, eat, socialize, and take care of daily activities. Infill development opportunities may exist that would help add to the traditional fabric and character of these areas. Residential and office uses should be integrated to diversify the mix of uses and create job opportunities, respectively. Streetscape furnishings and pedestrian amenities are abundant and intended to reflect the community's history and cultural aspects of the area. These features should be customize each community's aesthetic character.

Neighborhood Mixed-Use developments are located along major thoroughfares approximately ½ a mile from the West Lake or South Shore station. The Neighborhood Mixed-Use development can serve as a transition from the denser transit core and will allow for redevelopment of the community's existing commercial and retail uses.

B. Land Uses

Neighborhood Mixed-Use development is comprised of the following use categories and are intended to be developed within stated intensity and/or density.

		Floor Area Ratio		Residential Density	
		Min.	Max.	Min.	Max.
Office	30%	2.0	3.0		
Retail	25%				
Institutional					
Light Industrial					
Residential: *Market Rate*					
Residential: *Affordable Housing*	30%			11	25
Recreation and Open Space	15%				

Development in these neighborhoods would be primarily single-family residential infill on vacant lots coupled with public improvements to the street/sidewalk network and associated amenities such as streetlights, benches, and bike racks.

C. Development Form

Buildings sit adjacent to sidewalks to create a defined streetscape/façade. Transparent building facades and entrances along sidewalks. Buildings abut one another with minimal side or no side yards. Mixture of low to mid-rise buildings generally 1-3 stories. Traditional architecture using community history and culture for inspiration.

Minimum Lot Coverage 70%

Minimum Street Frontage: 80%

D. Parking

Maximum surface parking within the development can equal 60% of the spaces provided.

Shared parking facilities are encouraged between adjacent developments.

Residential parking should be located within a garage, or shared structured facility.

Parking for retail and office uses should be located behind buildings and should be shared between facilities.

Parking may be accommodated at the rear of the building in up to two levels of above ground parking that is incorporated into the building, below ground, or both. A façade liner of developable space shall conceal above ground podium parking from view.

Above ground surface parking is permitted in the rear of the building with frontage along secondary roads.

Above ground surface parking may be forward of the building when the building's primary façade is along an existing thoroughfare.

Parking requirements should take into consideration pedestrian traffic, bicycle parking, and off-site parking to utilize a reduced amount of parking where possible.

On-street parking can be incorporated on streets with lower traffic volumes.

Bicycle parking should be located in a secure location near the primary entrance of retail and commercial developments.

E. Site Design

Landscaping includes public right-of- ways including street trees and ornamental trees.

Foundation plantings should be required along the building where possible side yards, with additional plantings being used to screen parking lots and to buffer existing adjacent uses.

Pedestrian amenities, bicycle parking and bus shelters for developments located along existing or planned routes.

Decorative signage and wayfinding to identify uses.

Decorative street lighting and complementary site lighting should be used throughout the development.

Public gathering spaces and outdoor seating areas for restaurants (to meet the open space land use requirement).

F. Site Access

Vehicular access to developments is encouraged to be from primary corridors and common or shared access points.

Parking and services should be access through an internal or secondary road.

Buildings shall have side and rear access for parking and service/ delivery functions.

The primary pedestrian entrance shall be accessible directly from the street, through the front of the building/street side.

Secondary entrances should be located along the rear of the building to provide a direct point access from the parking lot.

Primary access to units above the ground floor shall be through a lobby accessed from the street, parking lot or a courtyard.

KEY NOTES

1. Buildings abut one another with minimal side or no side yards. Mixture of low to mid-rise buildings generally 1-3 stories.
2. Landscaping includes public right-of- ways including street trees and ornamental trees.
3. Foundation plantings should be required along the building where possible side yards, with additional plantings being used to screen parking lots and to buffer existing adjacent uses.
4. Public gathering spaces and outdoor seating areas for restaurants (to meet the open space land use requirement).

8. NEIGHBORHOOD RECREATION

A. Intent Statement

Neighborhood Recreation and Open Space is land used for publicly owned parks, and/or recreational uses and is intended to provide recreation opportunities for adjacent residential neighborhoods. Neighborhood Recreation and Open Space developments can include both active and passive recreation opportunities such as walking trails, open lawns, playgrounds and landscaped areas. These recreation spaces are developed and maintained by the municipalities. Neighborhood Recreation and Open Space developments should be linked to both residential, commercial and mixed-use developments by using multi-modal pathways including sidewalks, shared use paths and on street bicycle facilities.

B. Land Uses

Neighborhood Recreation and Open Space development is comprised of the following use categories and are intended to be developed within stated intensity and/or density.

		Floor Area Ratio		Residential Density	
		Min.	Max.	Min.	Max.
Office	40%	2.0	3.0		
Retail	60%				
Institutional					
Light Industrial					
Residential: *Market Rate*					
Residential: *Affordable Housing*					
Recreation and Open Space	100%				

Neighborhood Recreation and Open Space developments should be linked to both residential, commercial and mixed use developments by using multi-modal pathways including sidewalks, shared use paths and on street bicycle facilities.

C. Development Form

Buildings needed to support both recreation and open space uses.

Buildings should be placed so that they minimize the impact to the surrounding property.

Minimum Lot Coverage: N/A

Minimum Street Frontage: N/A

D. Parking

Maximum surface parking within the development can equal 100% of the spaces provided.

Onsite parking should be developed so that there is limited impact to the recreational areas of the development.

E. Site Design

Development landscaping should be placed to preserve existing features including tree stands, specimen trees, hill tops, and fencerows.

Development should include a mix of both natural and ornamental landscaping.

Landscaping should include grass, shrubs, trees, gardens, rain gardens, bioswales, etc.

Amenities include pavilions, playgrounds, tables, benches, and bike racks. Sidewalks, possible driveway access to primary roadway, but not required, on street parking.

F. Site Access

Open space to have access from primary corridors and secondary corridors.

Parking and services should be access through an internal or secondary road.

9. NEIGHBORHOOD REVITALIZATION

A. Intent Statement

The Neighborhood Revitalization concept provides for the preservation and enhancement of existing urban single-family residential neighborhoods proximate to the transit station. Development in these neighborhoods would be primarily single-family residential infill on vacant lots coupled with public improvements to the street/sidewalk network and associated amenities such as streetlights, benches, and bike racks. On a neighborhood by neighborhood basis, programming for improvements to existing homes may be made available to allow for existing residents to improve their homes.

Neighborhood Revitalization areas are not intended to see an increased overall density. Instead, strategic capital improvements will be used to stabilize these core neighborhoods in order to prevent further decline and to encourage growth and infill within these areas. Public improvements such as roadway repair and repaving, sidewalk repair and construction, street tree plantings and building façade improvements will add vibrancy to the area and spur infill development and owner pride within these established neighborhoods.

The Neighborhood Revitalization concept is applied to established residential neighborhoods within a ½ mile radius of the transit station. These areas are significantly developed, primarily with single-family detached units, and offer some infill opportunities.

B. Land Uses

Neighborhood Revitalization development is comprised of the following use categories and are intended to be developed within stated intensity and/or density.

		Floor Area Ratio		Residential Density	
		Min.	Max.	Min.	Max.
Office	40%	2.0	3.0		
Retail	60%				
Institutional					
Light Industrial					
Residential: *Market Rate*	100%				
Residential: *Affordable Housing*					
Recreation and Open Space					

C. Development Form

Residential infill would follow local residential zoning guidelines. 1-2 story single-family homes.

D. Parking

Primarily off street with some parking capacity within the right of way.

E. Site Design

Landscaping includes street trees and on-site landscaping that follows local residential zoning codes.

Amenities include sidewalks, buffer yards, and shared recreational space. Individual lots are accessed off secondary roadways system developed as a component of the neighborhood.

F. Site Access

Access patterns should match existing development patterns.

Development in these neighborhoods would be primarily single-family residential infill on vacant lots coupled with public improvements to the street/sidewalk network and associated amenities such as streetlights, benches, and bike racks.

10. OFFICE/ FLEX

A. Intent Statement

Office/ Flex developments serve as employment and production hubs and provide for a broad range of uses that include office, research, assembly, clean manufacturing and warehousing space. Office/Flex developments are characterized by fully enclosed professional office, technology, and research & development facilities. In addition, these developments can serve as places of light assembly, advanced manufacturing, warehousing or processing of goods and materials that do not create fumes, glare, odors, noise, smoke or health or safety hazards outside of the building in which the process takes place.

Office/Flex developments are setback from the street and buffered from surrounding development by transitional uses or landscape areas that shield the view of structures, loading docks or parking areas. Buildings are 1-2 stories and can have large footprints (100,000- 250,000 sf), with drives adjacent to the building, large surface lots for employee parking, and bays for loading. Buildings are clustered so that uses that support or serve one another are located in the same areas. Buildings typically share parking, access, and loading space, with employee parking on the opposite sides of the building. Buildings have minimal embellishments and are composed of at least two principal surface treatments/finishes.

Office/ Flex developments are setback from the street and buffered from surrounding development by transitional uses or landscape areas that shield the view of structures, loading docks or parking areas.

B. Land Uses

Office/Flex development is comprised of the following use categories and are intended to be developed within stated intensity and/or density.

		Floor Area Ratio		Residential Density	
		Min.	Max.	Min.	Max.
Office	50%	2.0	3.0		
Retail					
Institutional					
Light Industrial	50%	2.0	3.0		
Residential: *Market Rate*					
Residential: *Affordable Housing*					
Recreation and Open Space					

C. Development Form

Buildings fronting primary thoroughfares should utilize modest setbacks and build to lines to create a consistent street façade.

Buildings fronting secondary roadways can be setback from the road to incorporate greenbelts and landscape plantings.

Building materials include stone, brick, glass, precast concrete, architectural metal, synthetic siding, concrete masonry, and tilt-up panels.

Minimum Lot Coverage: 60%

Minimum Street Frontage: 50%

D. Parking

Maximum surface parking within the development can equal 100% of the spaces provided.

Shared parking facilities are encouraged between adjacent developments.

Parking lots are accessed by access roads only. Vehicular access should be coordinated and shared between buildings to provide efficiencies for loading, unloading and turning movements.

Above ground surface parking lots for employees and visitors can be located in the front of buildings.

Truck parking, access drives, and loading areas should be located in the rear and shared between like facilities.

Overhead doors shall be located to the side or rear of structure to minimize visibility from public streets. Open service areas and loading docks shall be screened by an opaque barrier a minimum of 6 feet in height. Walls, fences, or landscape screening shall have 100 percent opacity to effectively conceal service and loading operations from adjoining streets.

E. Site Design

Landscaping includes greenbelts, with shade trees and shrub material, should be incorporated along primary roadways.

Landscape should be used to screen views or service areas and parking lots.

Greenspaces should be used to connect buildings and provide pedestrian access.

Buffer yards should be planted to provide separation between uses of differing intensities.

Amenities include sidewalks, trails, buffer yards, and bicycle parking. Parking lots are accessed by access roads only.

F. Site Access

Vehicular access should be coordinated and shared between buildings to provide efficiencies for loading, unloading, and turning movements.

Overhead doors shall be located to the side or rear of structures to minimize visibility from public streets.

Open service areas and loading docks shall be screened by an opaque barrier.

KEY NOTES

1. Buildings fronting primary thoroughfares should utilize modest setbacks and build to lines to create a consistent street façade.
2. Building materials include stone, brick, glass, precast concrete, architectural metal, synthetic siding, concrete masonry, and tilt-up panels.
3. Landscaping includes greenbelts, with shade trees and shrub material, should be incorporated along primary roadways.
4. Amenities include sidewalks, trails, buffer yards, and bicycle parking. Parking lots are accessed by access roads only.

11. REGIONAL CAMPUS

A. Intent Statement

Regional Campus developments serve as activity centers accommodating multistory and large footprint buildings oriented to the regional market. These centers are sometimes referred to as lifestyle or power centers, and have a high level of roadway and transit access and visibility. Retail, service, office, institutional, and entertainment uses are provided typically in a large format with surface parking or parking garages.

Regional Campus developments can accommodate a diverse mix of uses, building type and densities depending on the location and are intended as regional destinations where people work, shop and recreate.

B. Land Uses

Regional Campus development is comprised of the following use categories and are intended to be developed within stated intensity and/or density.

		Floor Area Ratio		Residential Density	
		Min.	Max.	Min.	Max.
Office	40%	2.0	3.0		
Retail	50%				
Institutional	10%				
Light Industrial					
Residential: *Market Rate*					
Residential: *Affordable Housing*					
Recreation and Open Space					

These centers are intended as regional destinations where people work, shop and recreate. Regional centers may also contain residential uses to capitalize on the adjacent train station.

C. Development Form

Buildings sited along sidewalks or may be setback from the street.

A transition in building height should occur so that taller buildings are not located immediately adjacent to existing, less intense development.

A mixture of low, mid and high rise buildings, generally 1-5 stories.

Transparent building facades and entrances along sidewalk.

The corners of buildings located at the intersection of two streets should be emphasized in order to create identity, take advantage of the high visibility and enhance wayfinding.

Minimum Lot Coverage: 60%

Minimum Street Frontage: 60%

D. Parking

Maximum surface parking within the development can equal 75% of the spaces provided.

Shared parking facilities are encouraged between adjacent developments.

Above ground surface parking lots shall be located along secondary roadways with access being provided from access roads only.

Multiple points of ingress/egress should be provided for each parking lot to ensure efficiencies in vehicular movement during peak traffic times.

E. Site Design

Landscaping includes street trees, ornamental trees, plaza, and street planters.

Service areas should be screened from view by either hedge rows, walls, or fencing.

Pedestrian amenities, bicycle parking, and bus shelters for developments located along existing or planned routes.

Decorative signage and wayfinding to identify uses.

Decorative street lighting and complementary site lighting should be used throughout the development.

F. Site Access

Entrances shall be on the primary street façade of the building. When buildings face existing thoroughfares, the primary entrance should be located along road corridors that provide vehicular access.

Pedestrian walks should connect primary building entrances and employee/guest parking areas. In large surface parking areas pedestrian walkways should be extended through the lot to provide a protected path for pedestrians.

Additional sidewalk connections should be provided to adjacent public facilities where applicable.

KEY NOTES

1. A mixture of low, mid and high rise buildings, generally 1-5 stories.
2. The corners of buildings located at the intersection of two streets should be emphasized in order to create identity, take advantage of the high visibility and enhance wayfinding.
3. Pedestrian amenities, bicycle parking, and bus shelters for developments located along existing or planned routes.
4. Entrances shall be on the primary street façade of the building. When buildings face existing thoroughfares, the primary entrance should be located along road corridors that provide vehicular access.

12. TRADITIONAL NEIGHBORHOOD DEVELOPMENT

A. Intent Statement

The Traditional Neighborhood Development concept provides for a mix of uses and densities centered on a mixed-use core. Traditional Neighborhood Developments incorporate both attached and detached single-family dwelling units, as well as a neighborhood core that allows for retail, office and commercial uses. Traditional Neighborhood Developments are master planned and typically incorporate a grid street system, alleys, continuous sidewalks and pedestrian amenities. Shared active and passive recreational areas are included in the development, along with supporting institutional and civic uses where applicable. Densities in a Traditional Neighborhood Development are higher than conventional subdivisions but will vary depending on surrounding development patterns and densities.

B. Land Uses

Traditional Neighborhood Development is comprised of the following use categories and are intended to be developed within stated intensity and/or density.

Figure X: *Traditional Neighborhood Developments incorporate both attached and detached single family dwelling units, as well as a neighborhood core that allows for retail, office and commercial uses.*

C. Development Form

Dwellings should relate to and address the street. The main entrance of buildings – not the garage – should be oriented to the street, and the progression of public to private characteristics of traditional neighborhoods should be preserved.

Minimum Lot Coverage: Retail Development – 60%

Minimum Street Frontage: Retail Development – 80%

D. Parking

Maximum surface parking within the development can equal 75% of the spaces provided.

Shared parking facilities are encouraged between adjacent developments.

Above ground surface parking lots shall be located along secondary roadways with access being provided from access roads only.

Parking for no more than two cars shall be provided in individual garages integrated into the back of the attached residential unit.

Detached residential units shall provide parking for no more than two cars in an individual garage located at the rear of the property.

On-street parking can be incorporated on side streets with lower traffic volumes.

Bicycle parking should be located in a secure location near the primary entrance of retail and commercial developments.

E. Site Design

Landscaping located at the entrance to the development and includes street trees.

Amenities include sidewalks, trails, buffer yards, and shared active and passive recreational space.

F. Site Access

Individual lots are accessed off an internal roadway system developed as a component of the subdivision.

On-street parking, Off-street parking located behind structures.

REGIONWIDE TRANSIT INCENTIVIZED COMMUNITY DEVELOPMENT

For the purposes of this strategic plan update, detailed station area development plans were created for eight stations along the proposed West Lake Corridor and existing South Shore rail lines. While these station plans illustrate the type of development that can be incentivized by rail, and the potential for transformative transit oriented development around station areas, these examples are not intended to imply that the benefits of increased accessibility to Chicago are limited to these specific locations. Indeed, these benefits will extend to other station areas, including those extending to LaPorte and St. Joseph Counties, and to Northwest Indiana communities that do not have a transit station within their jurisdiction. Some further examples are illustrated below.

Highland, Schererville and St. John

The communities of Highland, Schererville and St. John are included in a group of Lake County municipalities that are within a relatively close commuting distance to Chicago, but do not have easy access to transit options. Many Chicago commuters from these areas drive to north Lake County to board the South Shore line, or simply opt for an automobile commute. The development of the West Lake Corridor would position these communities much closer to transit, making them more attractive to potential residents seeking an easier commute to Chicago. Further, the West Lake Corridor would provide a closer access point to residents who are either unable, or willing to travel to North Lake County to board the train. By developing policy and infrastructure priorities to facilitate connectivity with the West Lake Corridor, these communities can reduce the barriers to a Chicago commute.

The above communities are good examples of municipalities that will see increased real estate values concomitant with high end residential development and population increases. It is a normal response to greater commuter transit access for communities to experience both property value increases and economic activity growth in their jurisdictions. These economic impacts are included within the economic modeling analysis completed for this report.

Valparaiso

Some communities have taken the initiative to provide transit options for their residents, on their own, and Valparaiso is one such city. Valparaiso has crafted a strategy for downtown development and "business class" commuter bus service that provides its citizens a significant level of connectivity to Chicago. The Valparaiso ChicaGo Dash coach service is a successful example of innovative transportation planning. Plans are being made to emphasize higher density residential, commercial and retail development in the downtown area, building on the ChicaGo Dash service. The City's strategy places a priority on effectively integrating this Chicago commuter service into the fabric of downtown development as an important City amenity.

Although a number of years into the future, and given the proposed travel time improvements on the South Shore line once double tracking is complete, the City may be able to integrate the ChicaGo Dash service to the South Shore for an enhanced commuter experience.

While the costs of moving goods may have declined dramatically, the cost of moving people is still high. After all, time is a major input into human travel, and the value of time continues to rise as people become more productive. Even if changes in transportation technology make it possible to locate goods production anywhere in the world, there will still be an advantage from clusters that minimize the costs of moving people across space."

-Agglomeration Economics, Glaeser, 2010

05. ECONOMIC IMPACT METHODOLOGY AND RESULTS

The economic impacts in this analysis are estimated using the REMI (Regional Economic Models, Inc.) Policy Insight+ (PI+) model. This is a dynamic economic policy model that simulates the regional economic response to changes in thousands of different economic variables. REMI PI+ measures the direct response of an economic stimulus, but also the follow-on indirect and induced impacts that result from changes in household spending patterns, supply chain purchases, and demographic shifts. A major advantage of PI+ is to evaluate changes in "economic geography," or the interaction of productivity, efficiency and access within markets. The PI+ model for this analysis is structured into the following four regions:

1. Lake and Porter Counties (the RDA Region)
2. La Porte and St. Joseph Counties (the remainder of the NICTD service area)
3. The remaining Indiana Counties
4. Cook County, Illinois

The model, structured in this way, allows for the close examination of the economic interactions between Cook County, Illinois (Chicago) and the RDA region. This regional structure also provides the data necessary to calculate the full economic and fiscal impacts of the rail projects to the State of Indiana.

METHODOLOGY OVERVIEW

The economic impact methodology is designed to capture the various components, or layers, of economic impact generated by the RDA's commuter rail projects. Economic impacts are measured by comparing the economic outcomes of a set of policy variable changes to a control, or baseline, forecast. In this case, the baseline forecast is identified as the "Current Infrastructure - 2040" scenario. This scenario incorporates the following components:

- The standard REMI socio-economic forecasts for all regions in the PI+ model.
- Ridership projections provided by NICTD assuming no rail infrastructure or capacity improvements.
- Highway traffic estimates provided by the Northwest Indiana Regional Planning Commission (NIRPC), and based on the NIRPC 2040 socioeconomic forecast.
- No assumption of future capital or infrastructure investments.

The economic impacts produced in this analysis measure the extent to which the outcomes of the alternative policy forecasts differ from the "Current Infrastructure" baseline forecast. Two alternative scenarios are evaluated in this analysis. The first is the "West Lake Corridor" scenario, which includes the construction and operation of the West Lake Corridor extension from the proposed Hammond Gateway station to the proposed Munster/Dyer Main Street Station. The second scenario is the "West Lake plus Double Tracking" scenario. This scenario incorporates the West Lake Corridor extension, but also includes the double tracking of the existing South Shore line to Michigan City, and other rail and catenary improvements, including the installation of high-level boarding platforms at all NICTD stations.

The high level inputs for each modeling scenario include the project costs for each component of the rail project as provided by NICTD, ridership modeling for each commuter rail scenario, and the station area plans that are illustrated in Chapter 4 of this report. These inputs were converted into economic policy variable assumptions and were used to mode the following economic stimuli within the regional economy:

- **Public Investment** – The federal, state and local dollars spent on the construction and operation of commuter rail facilities, transportation assets, and associated development.
- **Private Investment –** The private sector dollars spent on transit-supportive investment in the areas surrounding commuter rail stations.

Economic Impact Modeling Flowchart

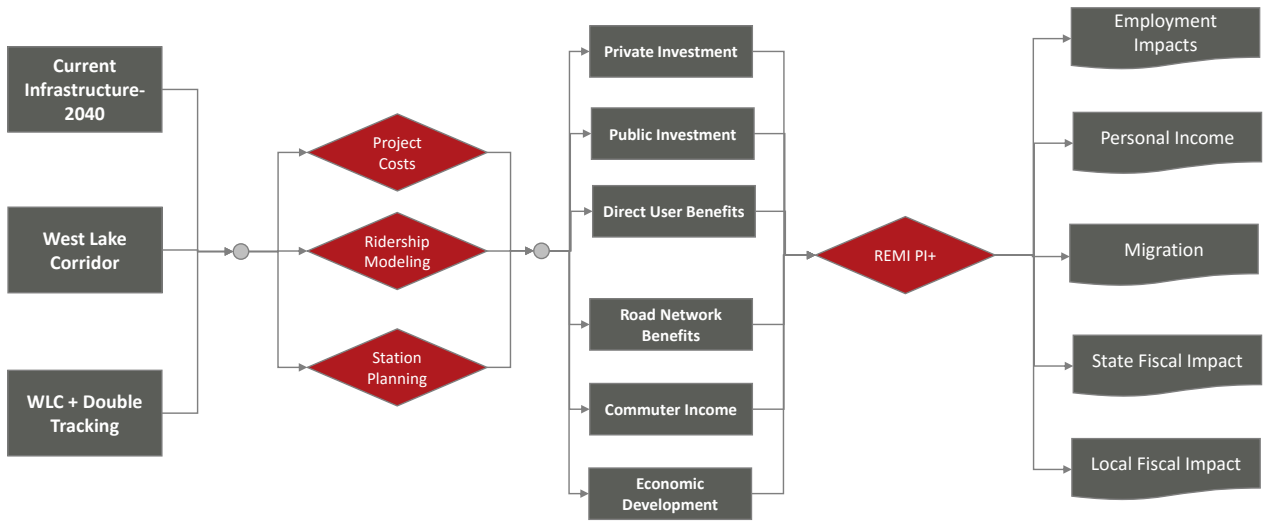


Figure 5.1

The economic impact analysis evaluates the outcomes of two commuter rail investment scenarios against the baseline, "Current Infrastructure" scenario. Several components of economic are incorporated in the modeling, and the outcomes are expressed in terms of personal income, employment and population changes.

- **Direct User Benefits –** The quantifiable, monetized benefits that accrue to directly to the new users of the commuter rail system attracted by increased levels of service.
- **Road Network Benefits –** The benefits that accrue to users of the regional road and highway system that stem from the efficiencies gained by offloading auto commuters to the commuter rail system.
- **Commuter Income –** The regional impact of commuters returning wages earned at relatively high paying jobs in Chicago to the Northwest Indiana regional economy.
- **Economic Development –** The impact of the ongoing employment and spending activities that occur surrounding rail stations as the result of transit oriented development.

The REMI PI+ model was used to evaluate the regional economic response to these stimuli. These economic impacts are quantified in terms of employment impact, personal income impact, and gross regional product. The PI+ model also provides feedback on a number of other socioeconomic data points, including demographic shifts, supply chain response and commuter patterns.

The personal income and capital investment impacts were then translated into fiscal impacts for major state and local revenue streams, including State Income Tax, State Sales Tax, Local Income Tax and Local Property Tax. These fiscal impacts are used to estimate the return on investment of the RDA commuter rail projects as required in HEA 1001-2015.

RIDERSHIP ESTIMATES

A major input assumption to the economic modeling is the estimate of the ridership response to improvements in NICTD's rail service. To a large degree, the regional benefit of a transit investment is the extent to which it provides access to employment, and removes autos from the road network. The ridership estimates used in analysis were provided by NICTD, via its subcontractor AECOM. NICTD used the Federal Transportation Authority's STOPS (Simplified Trips on Traffic Software) to estimate the ridership change in the West Lake Corridor and the WLC+Double Tracking Scenarios. This is the same modeling framework that is used in the FTA's approval process for transportation funding initiatives.

The ridership modeling process incorporates the commuter rail infrastructure and service changes under each scenario, and using the NIRPC 2040 socio-economic forecast, produces estimates of transit ridership given those changes. The horizon year for the ridership modeling is 2040. Estimates for intermediate years are calculated by interpolating the change between current year ridership and 2040 ridership.

NICTD estimates current ridership on the South Shore line to be 12,200 daily. The 2040 No-Build Scenario ridership projection produced by the STOPS model is 14,477 daily boardings. The West Lake Corridor scenario adds 6,823 boarders for a daily total of 21,300, an increase of 47% over the baseline. The West Lake + Double Tracking scenario results in over 24,000 daily riders, an increase of 66% over the baseline scenario.

The daily ridership numbers capture boardings along the entire NICTD system, both those in Indiana for westward travel toward Chicago, and boardings for return trips to Northwest Indiana. Isolating the ridership data to boardings at Lake and Porter County stations provides a proxy of the increase in the number of individuals using commuter rail as a result of the service and capacity improvements. In the 2040 No-Build Scenario there are 5,970 daily boardings in Lake and Porter County. In the West Lake Corridor Scenario, Lake and Porter County

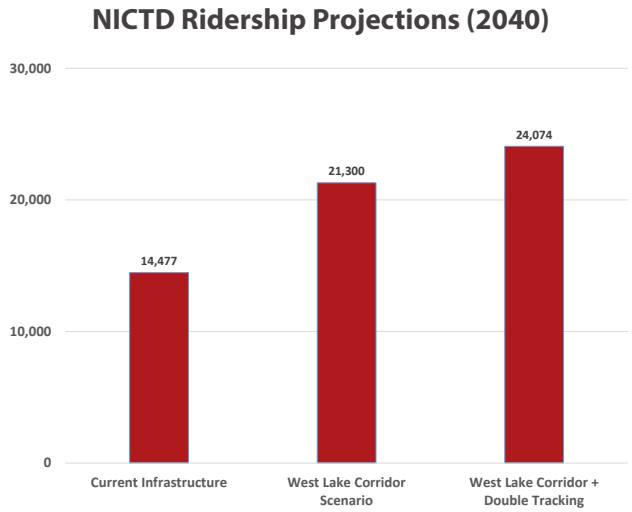


Figure 5.2

Commuter rail ridership in the West Lake Corridor Scenario is expected to exceed the baseline by 47%. The West Lake Corridor + Double Tracking scenario results in a 66% in a projected 66% increase in ridership.

Source: NICTD

boarding increase to 8,853 which indicates that an additional 2,900 people will commute from Lake and Porter County to Chicago via rail. In the WLC+ Double Tracking scenario, Lake and Porter County daily boardings increase by 4,500 over the No-Build Scenario.

The ridership estimates produced by the STOPS model are intentionally conservative. Foremost, the population impacts resulting from the projected station area redevelopment and transit oriented development that is likely to occur has not been incorporated into the ridership modeling. The STOPS model does not assume significant increases to parking capacity at rail stations, as would occur if multilevel parking structures were developed. Finally, the ridership responses in the STOPS model are undergirded by the NIRPC 2040 socioeconomic forecast which does not include assumptions about the demographic response to the West Lake Corridor extension.

Projected Lake and Porter County Boardings

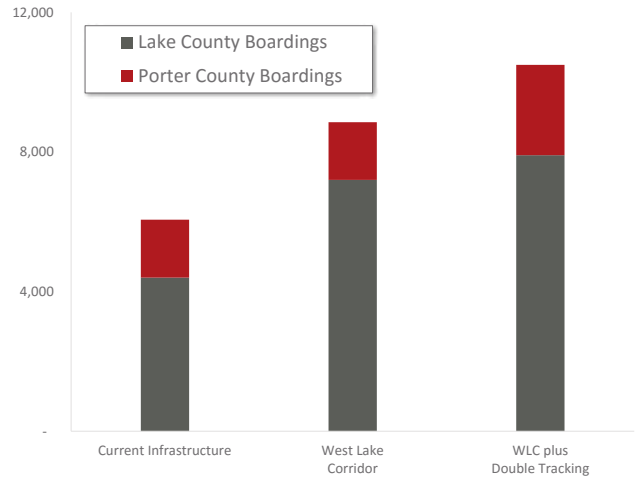


Figure 5.3

The West Lake Corridor project is projected to increase Lake and Porter County boardings by 2,900 daily over the baseline projection. The West Lake Corridor + Double Tracking scenario is projected to increase boardings by 4,500 riders daily.

Source: NICTD

COMMUTER RAIL CONSTRUCTION IMPACT

The construction of the West Lake Corridor and the completion of double tracking improvements are major public works projects that will provide significant construction-related employment opportunities throughout the work period. In addition to the magnitude of construction spending, there are two variables that can affect the level of economic impact resulting from public investment: the proportion of local spending as opposed to out of region spending, and the amount of funding from non-state and local general revenue sources.

Construction spending that is funded by general state and local revenue sources essentially results in a transfer of economic benefits. In this case, monies that are expended on Northwest Indiana rail projects are not spent on other investments or government services within the region and the State.

The local economy only benefits from the portion of construction spending that occurs within the region. Some spending, such as for professional services, vehicles and rolling assets, and on interest for debt "leaks" out of the region. This leakage is accounted for to accurately evaluate the impact of construction spending in the RDA region.

Estimated in-region spending amounts to $522M for the West Lake Corridor Project, and increases to $710M for double tracking on the existing South Shore line and related improvements.

Federal funding sources, however, are considered net new impacts to the region, and the State. Both commuter rail projects will apply for Federal grant programs to finance 50% of the project construction cost (Federal New Starts grant for the West Lake Corridor, and Federal Core Capacity grant for the Double Tracking Improvements). In the absence of these projects, the Region would forego these Federal funds, which would be either spent in other geographies or rolled back into the Federal budget. A major driver of the construction period benefit of the RDA rail projects is the ability to leverage state and local dollars to access Federal funding that would not otherwise be available to the region.

In addition to Federal funds, gaming revenues are considered net new revenues to a region in modeling the economic response. The reason for this is two-fold. First, gaming taxes are voluntary in an economic sense and do not detract from otherwise available funding sources. Secondly, a significant portion of Northwest Indiana casino tax revenues are generated by Illinois residents, so this represents a revenue stream that would not otherwise be made to the region. Because gaming revenues are a major source of funding for the RDA, a portion of the local construction contribution from the RDA is considered as net new spending in the economic impact modeling.

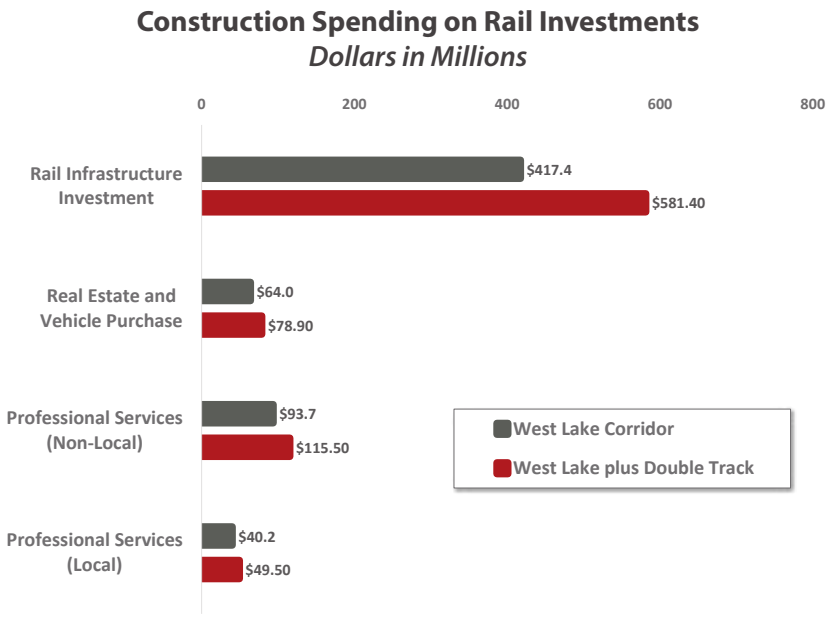


Figure 5.4

Construction related spending within the region produces economic activity and supports jobs during the construction period.

Out of region spending, including interest on debt and some professional services spending is considered "leakage" and is not included in the economic impact modeling.

Source: NICTD, Policy Analytics, LLC

DIRECT USER BENEFITS

Commuter rail conveys a number of benefits directly to riders who are able to forego auto transportation for their mobility needs. These benefits eventually affect the broader regional economy as they modify consumer spending habits or mitigate externalities that impose regional economic costs. Four types of direct user benefits are modeled in this analysis:

- Vehicle operating and parking cost reduction
- Environmental benefits
- Safety benefits

Vehicle Operating and Parking Cost Reduction

Public transit provides an alternative to auto transportation and its accompanying costs. Individuals who commute by auto incur fuel costs and maintenance costs for the upkeep and repair of their vehicles. Analysis by the American Automobile Association estimates that fuel cost amounts to $0.11 per mile, and non-fuel operating cost amounts to $0.47 per mile. Applying those rates to the estimated increase vehicle miles avoided due to commuter rail service improvements results in an estimated annual savings of $22.9M in the West Lake Corridor scenario, and $47.8M in the WLC + Double Tracking scenario. While vehicle operating savings does provide more discretionary income for transit users, it is largely a transfer effect in the broader economy. Because much auto maintenance spending is local, a reduction in maintenance costs for commuters equates to a reduction in sales for the local auto maintenance industry. In addition, the vehicle operating savings experienced by commuters are offset to some degree by spending on fares.

An operating cost benefit specific to the Chicago region is the reduction in parking cost. The cost of parking in downtown Chicago is high, and can exceed $50 per day. If the premium for Chicago parking is assumed to be $20 (which is conservative, but allows for the possibility of employer-sponsored parking or other lower cost arrangements), the total annual parking cost savings provided by rail access is estimated at $20.5M in the West Lake Corridor scenario and $34.8M in the WLC+Double Tracking scenario. This represents a net economic benefit to the Northwest Indiana region, as dollars that would otherwise be spent out-of-region can now be spent within the local economy.

Safety Benefits

Commuters who travel via rail instead of auto reduce their risk of auto collisions, resulting in monetary property damage and personal injury savings. The U.S. Department of Transportation estimates that there are 189 vehicle crashes per 100 million vehicle miles traveled. Of these, 70% are property damage only (PDO) collisions, 29.1% are injury accidents, and less than one percent are fatality accidents. Extrapolating with these rates, the ridership increase from the West Lake Corridor increase will result in 75 fewer vehicle crashes annually in Lake and Porter Counties. The double tracking and related improvements, when added, reduce vehicle crashes by a total of 111 throughout the NICTD operating area.

Annual Vehicle Operating Cost Benefits (2040)

		West Lake Corridor	WLC + Double Tracking
Annual Vehicle Miles Traveled Avoided		39.5M	82.4M
Annual Vehicle Operating Cost Savings (Millions)			
Fuel Cost	$0.11 per mile	$4.42	$9.23
Non-Fuel Cost	$0.47 per mile	$18.50	$38.57
Parking Cost	$20 per car daily	$20.47	$34.82
	Total	**$43.39**	**$82.62**

Figure 5.5

Commuter rail provides a benefit to riders by reducing the cost of owning and operating passenger vehicles. Parking fees also constitute a significant cost to Chicago commuters that can be avoided by the use of transit.

Source: American Automobile Association

While the economic cost of vehicle crashes, especially when injuries are involved is extremely variable. However, the Federal Highway Administration provides a statistical framework known as the Abbreviated Injury Scale (AIS) to estimate the economic impact of traffic accidents using a consistent methodology. Using this framework, the increased commuter rail ridership in the West Lake Corridor scenario produces $7.7M in safety benefits annually, and the WCL+Double Tracking scenario produces $11.6M in economic benefits.

Environmental Benefits

The emission of pollutants, which is caused by vehicles fueled by fossil fuels, is a regional cost that is caused by auto users, but is imposed on the entire region. Substituting rail transportation for auto transportation reduces the environmental impact of vehicle emissions, and reduces the costs imposed in terms of mitigation efforts, public health impacts and economic development.

Using metrics provided by the Environmental Protection Agency, the annual savings of reduced vehicle emissions is $1.03M annually for the West Lake Corridor Scenario and $2.15M for the WLC+Double Tracking Scenario.

These environmental benefits do not produce additional spending in the economy or direct employment, but they increase the amenity value of the region, and make the region a more attractive destination for potential residents.

Commuter Rail Safety Benefits

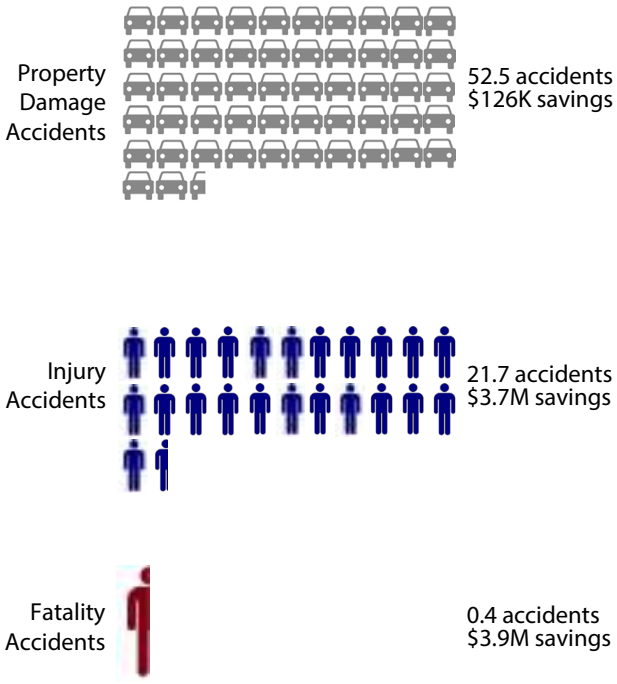


Figure 5.6

Sources: Federal Highway Administration, Abbreviated Injury Scale (AIS); National Highway Transportation Safety Administration

Monetized Annual Impact of Reduced Vehicle Emissions

	Cost per Metric Ton	Grams per 100 Miles	Monetary Benefit (100 VMT)	Cost Savings (Thous.) Total West Lake Corr.	Cost Savings (Thous.) Total WLC + Double Track
Carbon Dioxide	$46	36,840.0	$1.69	$669.3	$1,396.8
Volatile Organic Compounds	$1,999	103.4	$0.21	$81.6	$170.4
Nitrogen Oxides	$7,877	69.3	$0.55	$215.6	$449.9
Particulate Matter	$360,383	0.4	$0.16	$62.6	$130.7
		Total	**$2.61**	**$1,029.1**	**$2,147.8**

Figure 5.7

Substituting auto transportation for rail transportation reduces the environmental impacts of vehicle emissions.

Sources: Environmental Protection Agency; Federal Highway Administration

COMMUTER INCOME BENEFITS

One of the unique benefits of commuter rail investment in Northwest Indiana is that it enhances accessibility to a major world marketplace. The employment base in Chicago is vast, and as explained in Chapter 2, jobs in Chicago pay a significant premium over similar jobs in Northwest Indiana. Northwest Indiana residents who work in Chicago essentially "export" their labor, in that they trade professional services to buyers out of the region in exchange for income that returns to the region.

While income earned out of state is generally not taxed in Indiana, commuters return a significant portion of their income to their home state, where it is spent within the local economy. This household spending sustains local business and employment, and also creates demand for real estate in the home economy.

The NICTD ridership forecasts were used to estimate the level of increased commuter earnings from investment in transit. Passenger survey data was used to estimate the share of work-related vs. leisure commuter rail trips, and current wage data was applied to estimate commuter wages.

Commuter income was evaluated on two levels: 1) the total amount of wages earned in Chicago by NICTD riders, and 2) the wage "premium" earned by NICTD riders at Chicago jobs over similar jobs in Northwest Indiana.

To estimate conservatively, only the portion of commuter income that is above and beyond the wages a worker would earn in a similar job in Northwest Indiana is used as an input into the economic model. In total, the additional commuters in the West Lake Corridor scenario return a total of $183M in commuter income to the region. The wage premium over Northwest Indiana jobs for these workers is $49M. In the WLC+Double Tracking scenario, new riders generate an estimated $264M in commuter income, which is a $78.5M wage premium over Northwest Indiana jobs.

Commuter Income Benefit

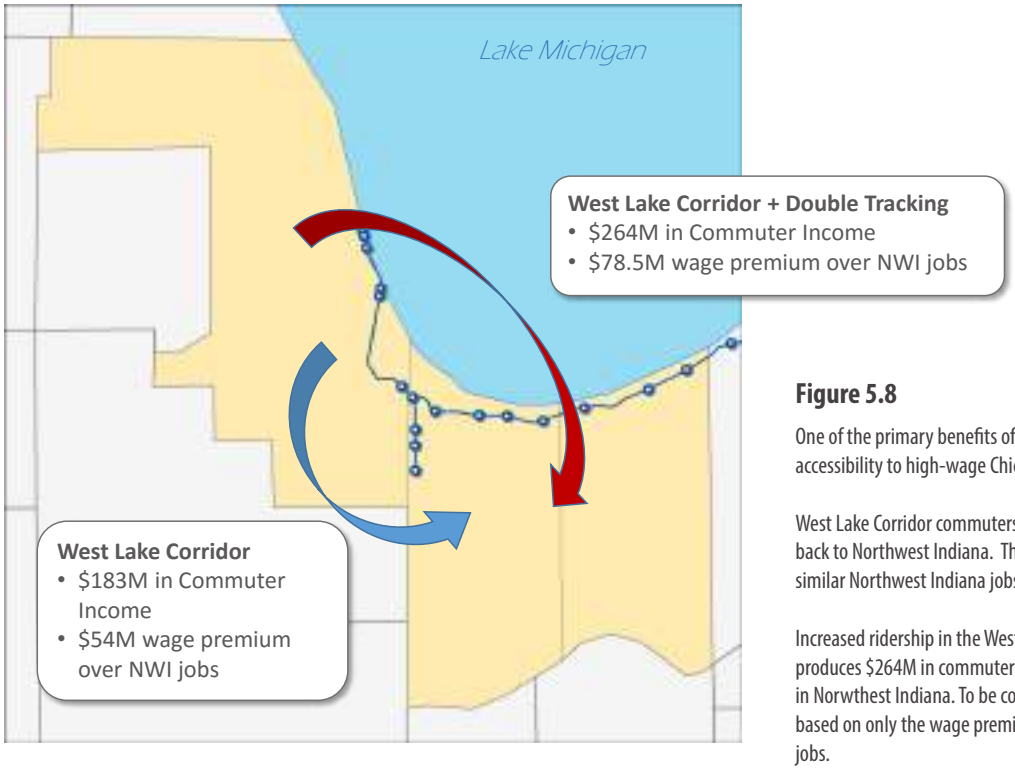


Figure 5.8

One of the primary benefits of increased commuter rail services is improved accessibility to high-wage Chicago jobs.

West Lake Corridor commuters bring an estimated $183M in annual earning back to Northwest Indiana. This constitutes a $54M wage premium over similar Northwest Indiana jobs.

Increased ridership in the West Lake Corridor + Double Tracking scenario produces $264M in commuter income, a $78.5M premium over similar jobs in Norwthest Indiana. To be conservative, the economic impact modeling is based on only the wage premium Chicago jobs pay over Northwest Indiana jobs.

ROAD NETWORK IMPACTS

As Chicago commuters adopt commuter rail as a substitute for auto commuting, additional capacity will be available for other types of traffic on Northwest Indiana roadways. This increased transportation efficiency provides and economic benefit to all sectors of the economy. The academic research on the interaction between public transportation and congestion has been mixed. However, recent research has shown that because mass transit generally offloads traffic from the most congested routes at the most congested times, that it does produce significant, measurable reductions in traffic congestion.

This is an accurate description of the traffic dynamics in Northwest Indiana. Most workers who commute to Chicago by car use either the untolled Borman Expressway (80/94) or the Indiana Toll Road (I-90). Both of these routes experience major congestion in AM and PM peak periods, which is only expected to increase in the future. By offloading commuters from these highly trafficked routes in peak times, increased commuter rail usage provides a measure of congestion reduction.

In order to simulate this impact in Northwest Indiana, the NIRPC Transportation Demand Model was specially calibrated to reflect in increase in commuter rail ridership in the West Lake Corridor and WLC+Double Tracking scenarios. Average peak period trip times between Northwest Indiana and Cook County, Illinois were then compared with average peak period trip times in the no-build scenario. The modeling showed that the West Lake Corridor scenario resulted in a 1% reduction in average peak period trip times, and the WLC+Double Tracking scenario resulted in a 1.3% reduction in average trip times.

Avg. Peak Perod Trip Time Reduction between Northwest Indiana and Chicago

Scenario	Avg. Trip Time Reduction
West Lake Corridor	-1.00%
West Lake plus Double Tracking	-1.30%

Figure 5.9

Offloading commuters from the Borman and the Toll Road provides more highway capacity to other users and reduces trip times.
Source: NIRPC TDM Model

Though these travel time changes may seem diminimus, when applied to the 21 million annual peak period trips between Northwest Indiana and Chicago, the impacts aggregate quickly. The impacts of travel time reduction were modeled using three policy parameters in REMI PI+:

- Commodity Access Index – a measure of the efficiency of access between input goods and services and produces.
- Labor Access Index – a measure of the "economic distance" between workers and firms.
- Cost of Production – Travel time improvements provide cost benefits to firms for which transportation is an input of production.

The road transportation benefits accrue to all sectors of the regional economy.

STATION AREA DEVELOPMENT

Successful communities are able to leverage commuter rail access as a key component in their overall economic development strategy. Commuter rail provides better accessibility to employment in Chicago, and if harnessed wisely, will stimulate demand for housing, places of business, and eventually employment centers adjacent to commuter rail stations. Many of Chicago's Illinois suburbs have seen significant transit oriented development surrounding Metra access points. The potential for station area development in Northwest Indiana is described in detail in chapters 2 and 3 of this report. In an economic impact sense, station area development produces regional benefits in the construction phase, and as businesses begin to locate near commuter rail stations.

Construction Impacts

Station area plans were developed for eight stations on the West Lake Corridor and South Shore commuter rail lines. Though additional development will likely occur at other station areas, and in municipalities that benefit from rail but do not have stations located within their jurisdiction. For the purposes of the economic impact analysis, the short range and mid-range investments are assumed to be completed in the 20 year window between 2022 and 2041. So ensure the estimates are conservative, the long range investments contemplated in the station area plans are not included in the economic impact modeling.

"In all areas at all distances from the city center, commute times have been rising. Higher levels of congestion mean that the speed of travel has slowed significantly. Those speeds are slowest in big metropolitan areas, and this congestion is one of the big costs of living in a large metropolitan area."

Agglomeration Economics, Glaeser, 2010

The long-term station area construction investment is shown in the above chart. By the year 2040, an estimated $2.2 billion in capital investment is projected across all eight station area locations. The investment growth curve is moderate through 2029, when mid-term construction activity at the Munster/Dyer, Gary Metro and Gary Miller stations is projected to come online. The capital investment includes a mix of site preparation, multi-family residential, and retail/office construction, and necessary street, streetscape and greenway improvements necessary to facilitate access to the rail stations.

The construction spending produces a net new economic impact to the region to the extent that it is financed by private dollars. For the economic impact modeling it is assumed that most road and infrastructure costs are funded by public sources, and that public subsidies are required to fund 5% of the facilities construction cost. The economic impact of construction spending occurs throughout the duration of construction spending.

Station Employment Impacts

The long-term economic impact of station area development comes from the business activity and employment supported by firms that locate near transit stations. The station area plans produced for this report contain estimates of future office and retail/restaurant space at each station location. Using standard estimates of employees per square foot, the commercial space at each station was converted into an estimate of employees at full build-out. The table below shows the projected mix of employment by industry in 2046.

In the short term, transit oriented development is heavily residential, as individuals seek to live near their transit stations. Over time, retail, restaurant and personal services industries begin to expand and leverage the demand from the new residential base. Over time, office and professional jobs begin to increase as businesses choose to locate in areas accessible to transit that provide a wide range of amenities.

Estimated Cumulative Station-Area Development Spending

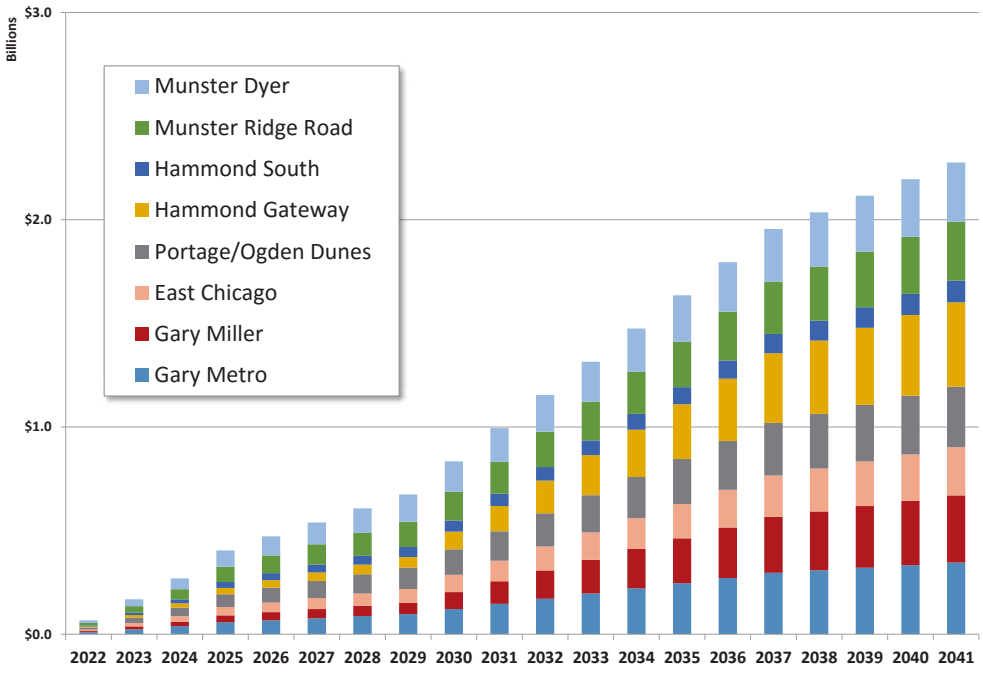


Figure 5.10

Prospective station area plans were developed for eight stations along the West Lake Corridor and the exiting South Shore rail line.

The short-term and mid-term components of these plans estimate $2.3 billion in capital investment at station ares over a 20-year timeframe.

More rail-related investment will likely occur in other communities that benefit from accessibility to Chicago. These investments are not included in the economic impact analysis.

ECONOMIC IMPACT RESULTS

The various economic impacts of the RDA's rail investments, construction, direct user, commuter, road network, and community development, were modeled in REMI PI+ by adjusting the corresponding economic policy variables. PI+ is a sophisticated model that accounts for changes in demand, the ability of a region to supply demand and changes in imports and exports to determine the net new economic impact for a particular region. In addition, the model was structured so that the economic benefits of enhanced commuter rail access are offset by the public costs required for the construction and maintenance of the asset. Economic impacts are estimated by comparing the outcomes of an alternative policy scenario with the REMI regional control (baseline) forecast which assumes no change to economic policy variables. Two different alternative scenarios are analyzed in this report, the West Lake Corridor scenario, and the West Lake + Double tracking scenario.

The time horizon for the analysis extends until 2046. This timeline includes two construction periods: the commuter rail construction period which extends from 2018 to 2022, and the community development construction period which extends from 2022 to 2040.

PERSONAL INCOME

Stimulating personal income growth by enhancing connectivity between Northwest Indiana and Chicago is the major policy objective of the RDA's commuter rail investments. The NICTD investments drive personal income growth by three primary means – enhancing commuter access Chicago, providing road transportation efficiency improvements in Northwest Indiana, and stimulating station area economic development.

The West Lake Corridor scenario results in an average increase in personal income for Lake and Porter Counties of $28M per year, totaling $843M by the year 2046 (nominal dollars). The WLC+Double Tracking scenario results in an average annual increase in personal increase of $50M, resulting in a total increase of $1.5B by 2046. This value represents the total personal income gain to Northwest Indiana residents, including commuter income gained for individuals working in Chicago. It also includes the secondary income impacts from supplier purchasing and follow-on household spending as dollars work their way

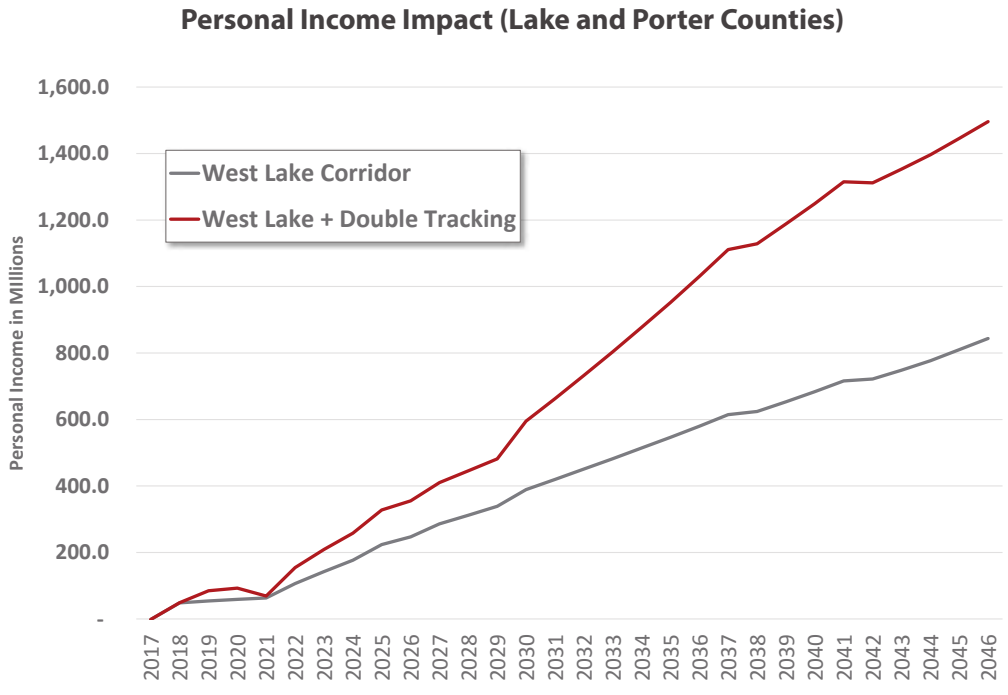


Figure 5.11

Personal income growth is driven primarily by additional commuters in the early stages of the planning horizon. After 2030, personal income growth is driven by employment at station areas.

The commuter rail investments are projected to result in $843 in personal income in the West Lake Corridor scenario, and $1.5B in the West Lake Corridor + Double Tracking scenario annually (nominal dollars).

through the regional economy. A major driver of the difference between the two scenario results is the large amount of development projected at the Gary Metro, Gary Miller, and Portage stations contained in the mid-range development plans.

The Northwest Indiana personal income benefits stem from two sources, productivity and efficiency improvements, and the transfer of economic activity from other regions. Benefits such as transportation network improvements, cost of production decreases, and labor accessibility gains produce an incremental increase in economic output given no change in inputs. These productivity increases allow firms to be more profitable and employees to be more productive. The second source of personal income gain occurs as Northwest Indiana becomes more competitive in attracting investment and residents in the greater Chicago region, and in the greater Midwest competitive context. Increased transit access, shorter transit times, and transit supportive development all help Northwest Indiana compete for more of the Chicago region's investment dollars than it has historically received.

Figure 5.12 shows that approximately 40% of the personal income benefit in Lake and Porter County, Indiana is due to a shift in personal income from Cook County. This occurs as Northwest Indiana attracts more of the regional investment that would otherwise be destined for Cook County. Though the Cook County shift is the largest, the magnitude of investment causes other regional shifts as well. Approximately 3% of the personal income benefit to Northwest Indiana is the result from a shift in economic activity from other regions of Indiana.

The reality that a major investment in transportation infrastructure causes intra-regional shifts of economic activity begs the question of whether the economic benefits are to some extent a zero-sum game. Critics will question, "is it a real economic benefit if it comes at the expense of another part of the region." The response to that question is multi-faceted. First, despite any shifts of economic activity, the RDA commuter rail projects provide significant net economic benefits to the entire region. Second, the reason economic activity shifts to Northwest Indiana is that it can be used more efficiently there. Assuming the projected rail improvement and transit-supportive community development occurs, there will be unmet demand for capital investment, new housing units, and consumer services that presents a promising business opportunity for investors and entrepreneurs.

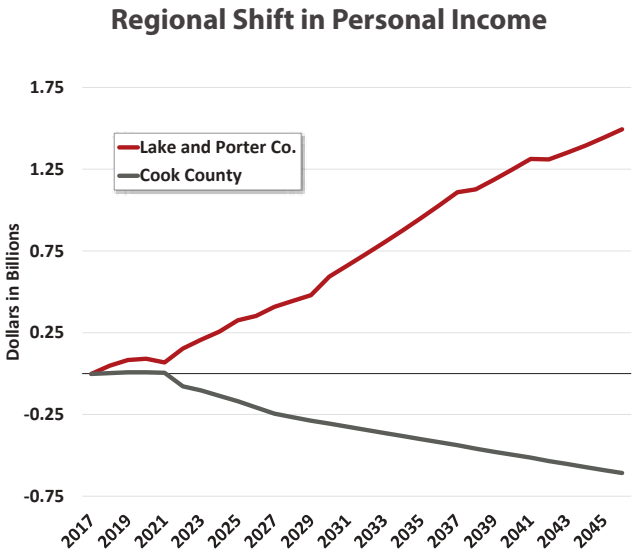


Figure 5.12

As Northwest Indiana becomes more regionally competitive, there is a shift in personal income from the Illinois side of the Chicago metro to the Indiana side.

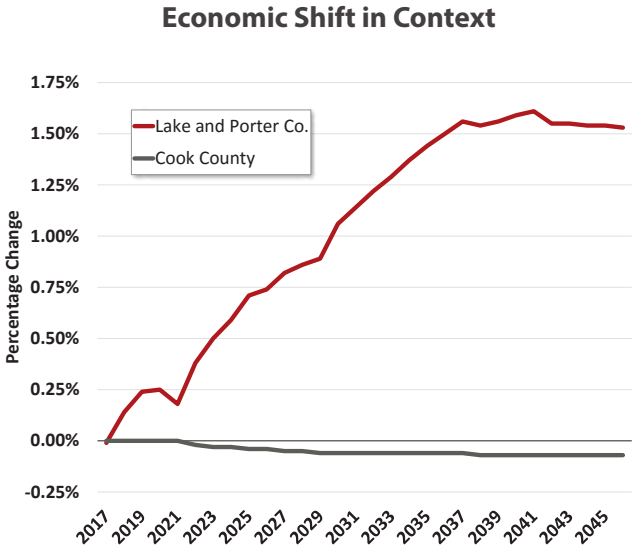


Figure 5.13

The economic shift from Cook County, while providing a benefit to Indiana, represents only 0.07% of Cook County personal income.

Third, in a macroeconomic sense, because Chicago is the major source of capital for regional investments, investors located in Chicago who invest in Northwest Indiana development projects will earn a higher rate of return on investments than if they had only invested in Illinois-side projects. Finally, as shown in the chart below, though the increase in personal income is significant for Northwest Indiana (a 1.5% increase by 2046). The personal income shift, when compared to the overall Chicago MSA economy is diminimus (a 0.07% decrease by 2046).

Despite the fact that the RDA commuter rail investments are projected to stimulate an increase in Chicago region personal income, there are certainly competitive elements at play. Chicago's suburban communities have and will always be in competition for investment dollars and potential residents. This is a healthy process that encourages prudent governance, smart investing and innovative economic development strategies. In order for Northwest Indiana communities to prosper, they must be able to successfully compete with Chicago suburban area on the Illinois side of the region. In addition, for Indiana stakeholders, income earned and dollars spent in Indiana generate income and sales tax revenue that is not collected if the economic activity occurs in Illinois.

EMPLOYMENT

The economic activity catalyzed by enhanced accessibility to Chicago and station area development will be a significant driver of employment in the region. In the early stages of the forecast period, most jobs are construction industry jobs associated with the development and construction of commuter rail assets. Over the longer term, these jobs are replaced ongoing business activity as residents and firms are attracted to the region. By 2046, Northwest Indiana commuter rail investments support an additional 2,500 annual jobs in the West Lake Corridor scenario, and 5,700 annual jobs in the WLC + Double Tracking scenario.

Similar to the personal income impacts, employment impacts are projected to accelerate quickly around the year 2030 in the WLC + Double Tracking Scenario. The Gary Miller, Gary Metro and Portage station all have substantial amounts of developable area within the ¼ mile and ½ mile radius used in the station area planning analysis. The double tracking improvements will significantly reduce travel times on the South Shore line and increase reliability. These improvements, plus the road realignment and infrastructure improvements contemplated in the station area plans will help in unlocking the potential of these communities' relatively close proximity to Chicago. This

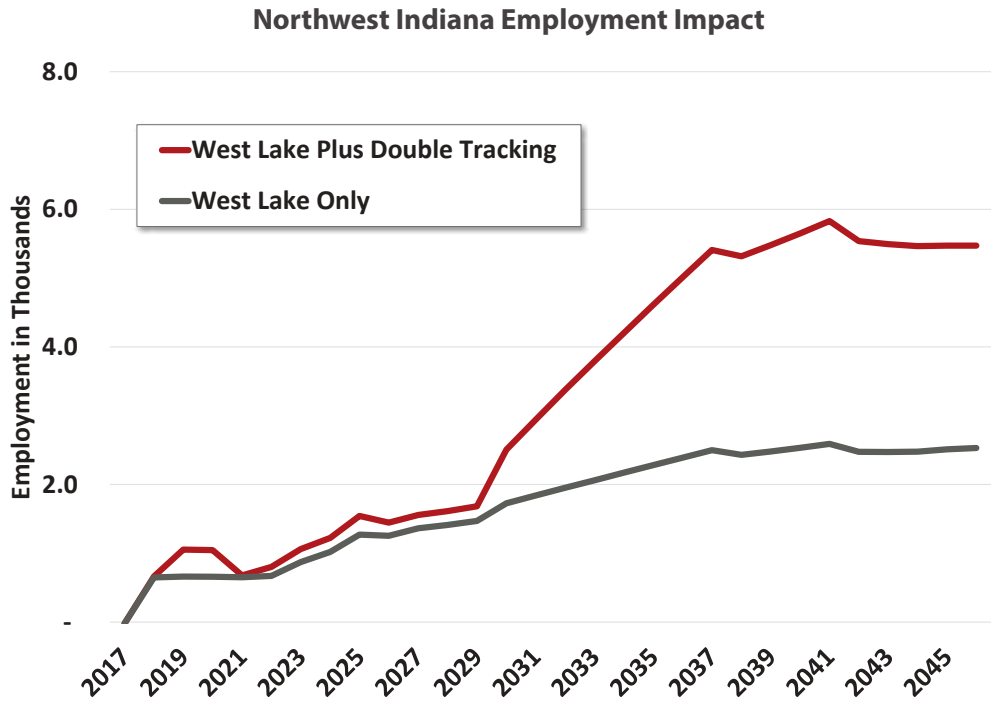


Figure 5.14

The West Lake Corridor project is projected to generate 2,500 annual jobs within the region by 2046. The West Lake + Double Tracking scenario generates a total of 5.700 jobs for the region.

Significant levels of investment in response to faster commuting times at Gary metro, Gary Miller and Portage explain the incremental increase in jobs in the Double Tracking scenario.

level of employment impact occurs when, communities are able to capitalize on a Metra-like transit asset to realize development patterns similar to many communities on the Illinois side of the Chicago MSA.

Construction sector jobs dominate the employment impacts in the early years of the projection, comprising 61% of employment between 2018 and 2022. After the construction period ends, retail and hospitality sector jobs make up the plurality of the employment increase as firms meet the demand of individuals relocating to and commuting from commuter rail stations. Over the long term however, employment in the professional services industry comprises the largest category of employment. These "new economy" jobs, centered in the technology, telecommunications, and technical/scientific industries are the types of jobs needed to attract talented, highly educated professionals to Northwest Indiana.

In addition to supporting new jobs within Northwest Indiana, commuter rail investment results in employment opportunities for residents who live in Northwest Indiana, but work elsewhere (largely Chicago).

The West Lake Corridor + Double Tracking Scenario produces an additional 1,500 jobs for individuals who live in Northwest Indiana, but work outside the Region.

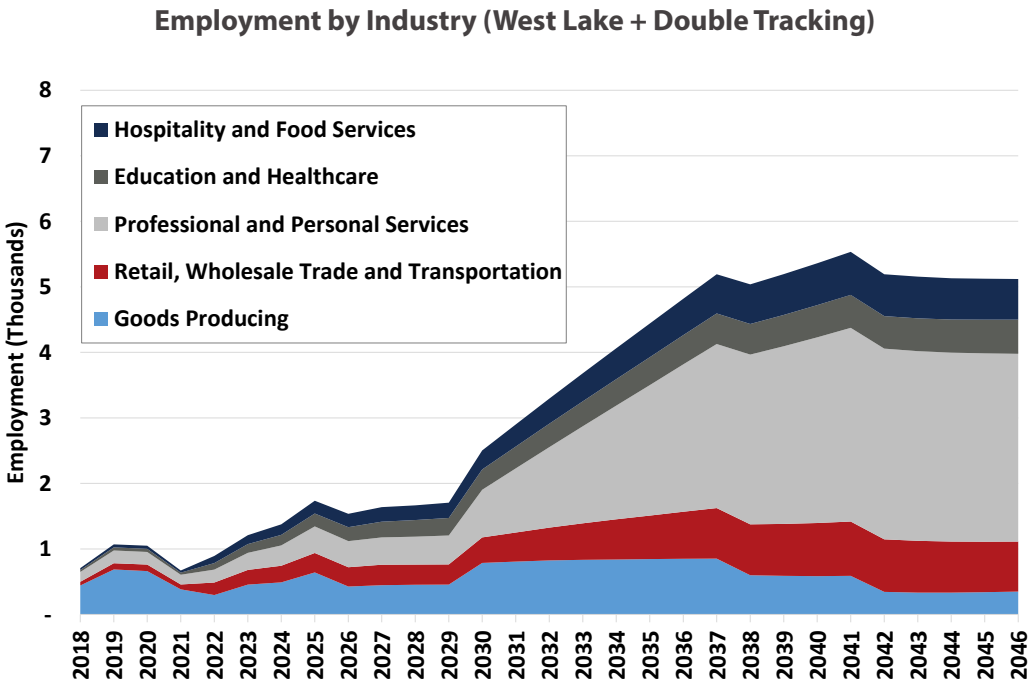


Figure 5.15

The employment mix supported by station area devepment along the commuter rail line is well diversifed into professional and technical sectors, that are not currently strongly represented in North Lake County.

POPULATION CHANGE

Improved commuter rail accessibility encourages migration to Northwest Indiana as Chicago commuters experience similar transportation times as other suburban areas, but may enjoy significant cost of living benefits. This is known as an amenity benefit, or a non-income feature that attracts migrants to a specific location. Furthermore, the modern urban design concepts featured in the station area plans will help Northwest Indiana communities compete for newer generations of workers. Northwest Indiana communities will be able to leverage the commuter rail infrastructure to attract sustainable, high density developments with a mix of residential and commercial uses.

The estimated population impacts of the RDA commuter rail projects are shown in the chart below. The West Lake Corridor scenario attracts approximately 8,000 residents to Northwest Indiana by 2046. The WLC + Double Tracking scenario, with associated station area developments in Gary, East Chicago and Portage is projected on increase population by more than 11,000. This is a 1.4% increase over the baseline No Build scenario.

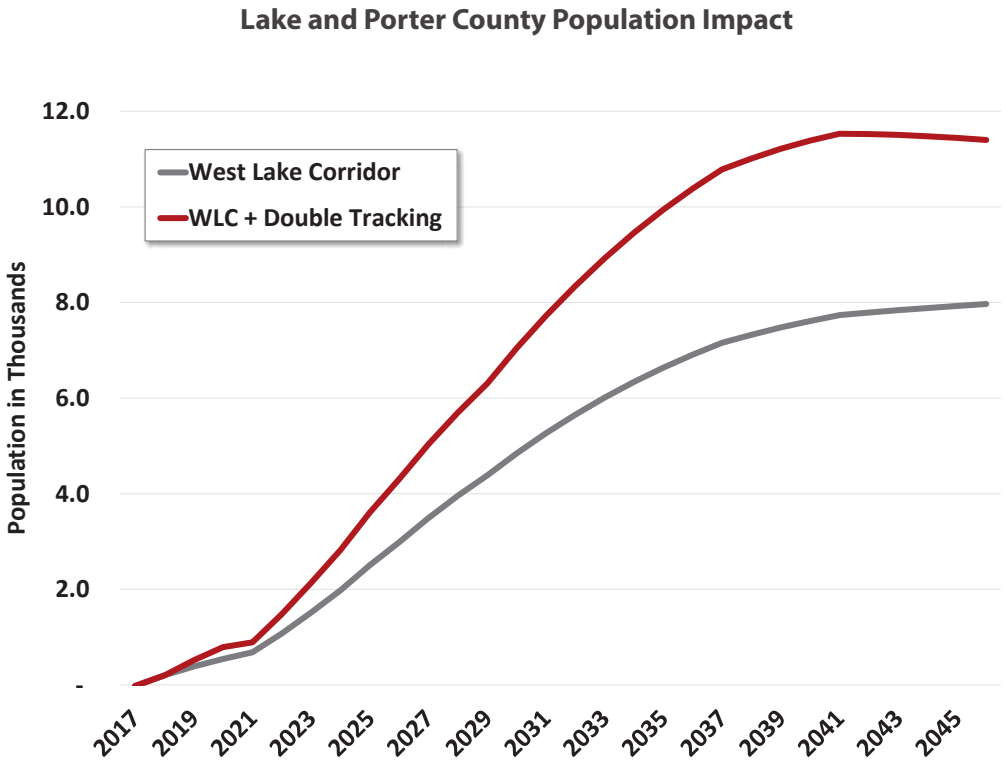


Figure 5.16

Public transportation is an amenity benefit, and providing commuter rail service on par with what is provided on the Illinois side of the Chicago metro area will allow Northwest Indiana to better compete for potential residents and workers.

06. VALUE CAPTURE AND ROI

Public investments in transportation infrastructure produce value for the citizens living and working within the geography affected by those investments. For transit, its value to the public has been well understood for almost a hundred years, and the groups impacted are:

1. The general public which will derive benefits from the overall efficiencies that occur and the expenditures that are made within the local, regional, and state economies.
2. The users of the new or expanded transportation asset experience faster more efficient travel and reduced costs. The users will pay the transit fare or the highway toll, but in every case the user fee does not cover the entire cost of providing the asset.
3. The owners of or developers of property whose assets increase in value with proximity to the new or improved transportation infrastructure.

The theory of "who should pay" follows the rule "who benefits". As a result, it has been the standard public policy for transit that the cost should be shared among the public generally, the direct users of the transit service, and those who receive the measurable economic benefit. When transit was a fully local service, the property tax was the revenue source, derived from the public generally, and contributed by the city government. The users contributed via the farebox. The property owners with retail or commercial locations near transit might see higher taxes or fees which they should be willing to contribute because of the increase in property values provided by the transit access.

While in prior decades the governments making the investments in transit were municipalities, as the federal government and state governments have taken a larger role in sharing the cost and even the control of transportation assets, the funding sources have become wider in breadth and the beneficiaries are seen more widely as well. Because development around transit stations produces "above baseline" economic activity, resulting in more retail sales and additional wages and salaries, sales tax revenues and income tax

revenues also get a boost. The governments sharing in the revenue increases due to the direct transit investments and the surrounding transit oriented developments are now well understood to include not only the local municipalities, but regional and state governments as well.

This broader view of transit impacts is demonstrated in the willingness of state and regional authorities and governments to dedicate a portion of their broader tax bases to transit. In many cases this is structured as an ability of a local or regional transit authority to enact a region-wide sales tax, normally a state revenue source, and have the entire enacted rate devoted to the capital and operating costs of transit. In other cases, only the increase in sales or income taxes is captured and used to support transit. However, in the past few decades, transit funding support has moved into new revenue sources and across wider geographies.

"EDRG (2007) used quantitative analysis to estimate that the current Chicago region transit plan provides an estimated 21% annual return on investments, an enhanced plan provides a 34% return, and adopting Transit-Oriented Development, as proposed in the region's official comprehensive plan, would increase the return to 61%."

"Evaluating Public Transit Benefits and Costs", Victoria Transport Policy Institute, Littman, December 2015.

STATE FISCAL IMPACT

The State of Indiana's two major revenues are the State income tax and the State sales tax. The State income tax, based on the adjusted gross income (with some exceptions) of Indiana residents raises approximately $5.2B per year for the state. The State income tax applies only to income earned in Indiana. Northwest Indiana residents who commute to Chicago pay Illinois income taxes on the portion of income earned in Illinois, but do not pay Indiana income taxes. Therefore, the fiscal impact analysis excludes any income earned outside of Indiana by commuters.

The State sales tax is a 7% tax on the final sales price for any taxable transaction. The sales tax applies to all taxable sales in Indiana, tax revenue from out-of-state spending is captured within the State. There is also a corresponding "Use Tax" which is levied against purchases of "sales taxable items" purchased by Indiana residents, but outside of Indiana. The sales tax generates approximately $7.3M annually in revenue for the State of Indiana. A small portion of that funding (0.123%) is allocated to the Commuter Rail Service Fund, of which NICTD is the beneficiary.

Transit investments create value and economic activity within the private local and regional economy. Around station areas, there will be increased ridership both at the new stations and on the current South Shore because of reduced commute times. In numerous examples across the U.S. the response of the private markets to the new or increased transit access is new development and higher property values. This investment in terms of construction at the station areas will result in higher levels of economic activity, measured in personal income. Personal income is a broad economic measure that includes: wages and salaries, business income, proprietors income, and transfer payments. It is the tax base for State sales taxes and income taxes.

The State required an evaluation of the fiscal or revenue impacts of the transit investments planned by the RDA and NICTD as part of the West Lake, South Shore Double Tracking and associated TOD projects. The modeling done for this report estimated that these two transit investments and the follow on private development will produce an additional $843 million in State Personal Income for the West Lake only scenario, and $1.5 billion in Personal Income for the combined West Lake plus Double Tracking scenario over the first 20 years. These economic responses result from the additional population drawn into the region, the investment in structures, the new business activity, and the additional dollars brought back to the region from Chicago commuters and spent within the region; along with all of the "follow-on" economic responses generated by these activities.

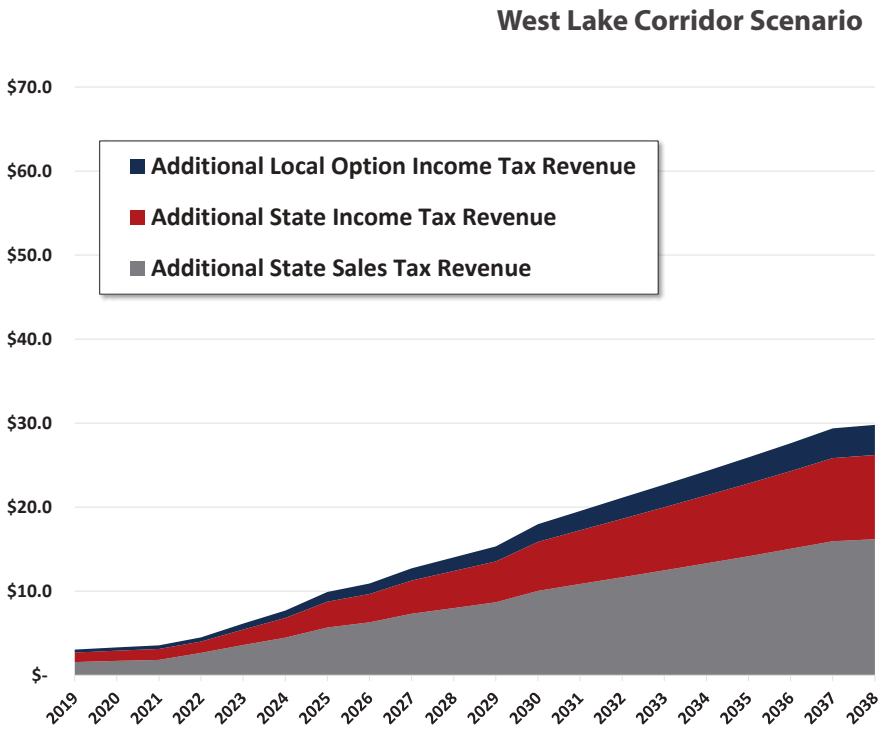


Figure 6.1

The commuter rail and station area investments included in the West Lake Corridor Scenario produce a cumulative total of $171M in additional State Sales Tax, and $101M in additional State Income Tax in Lake and Porter Counties over a 20 year period.

These investments produce $36.5M in local option income taxes over the same time period.

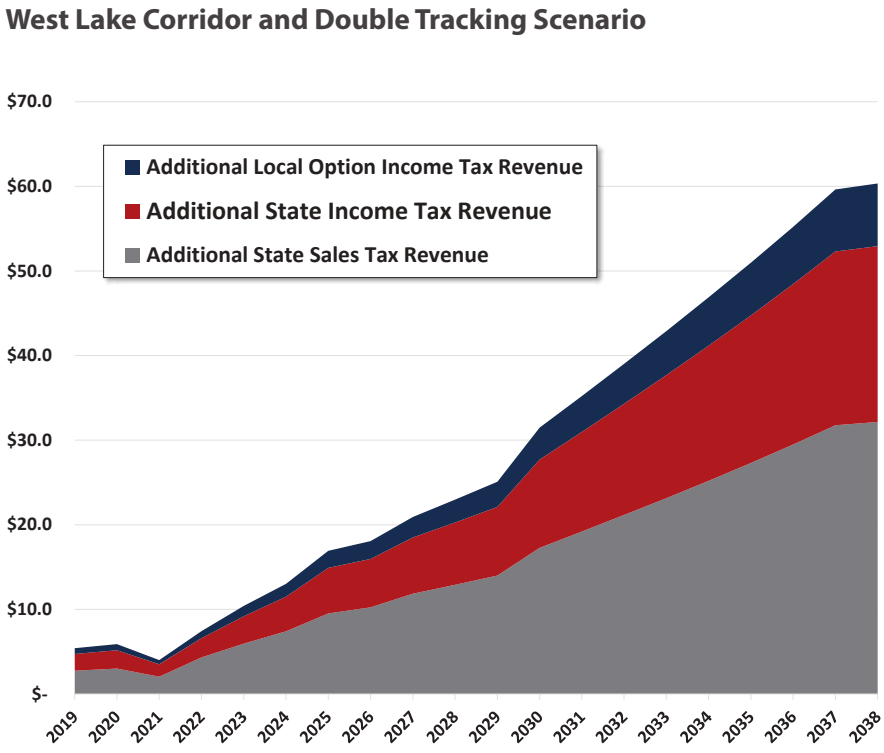


Figure 6.2

The commuter rail and station area investments included in the West Lake Corridor Scenario + Double Tracking Scenario produce a cumulative total of $310M in additional State Sales Tax, and $192M in additional State Income Tax in Lake and Porter Counties over a 20 year period.

These investments produce $69M in local option income taxes over the same time period.

For purposes of estimating the State sales and income tax revenues generated by these transit investments, this report uses the average coefficient of either sales tax or income tax on State Personal Income to generate a projected marginal increase in either revenue stream.

In the West Lake Corridor scenario, commuter rail related economic activity produces a total of $10.38M in annual State income tax revenue, and $16.68M in annual $16.68M in State sales tax revenue by 2038 for a total of $27M. Over the 20-year period from 20019 to 2038, these activities produce a total of $180M in state sales tax and $107M in state income tax.

The WLC+Double Tracking scenario includes significantly more investment dollars than the West Lake Corridor only scenario, and produces a corresponding increase in fiscal impact to taxing units. The Double Tracking scenario assumes widespread redevelopment along the existing South Shore route in response to faster commute times to Chicago and the implementation of a comprehensive transit oriented economic development strategy. It also incorporates the transportation-related benefits of faster commuting throughput on the South Shore.

This scenario results in an additional $54M in State sales and income tax revenues annually by 2038. In aggregate, between 2018 and 2038, this scenario produces $318M in State sales tax and $197M in State income tax.

LOCAL INCOME AND PROPERTY TAX BENEFIT

The RDA's commuter rail investment will provide benefits to local governmental units as well as the state. Local government in Indiana is funded by two primary revenue sources – income taxes and property taxes. Indiana counties have the option of imposing several variations of the local income tax. Both Lake and Porter counties have enacted a local income tax – Lake County at a rate of 1.5% and Porter County at a rate of 0.5%. The tax base for the local income tax is the same as for the State income tax, so the local income tax gains from the commuter rail investment are proportional to the increases in State income tax revenue. In the West Lake Corridor scenario, the economic activity generated is projected to produce $6.75M in annual local option income tax by 2038, and a combined total of $61M between 2018 and 2038.

Local Government Unit / Station Area Municipality	20 Year Total Prop. Tax (Millions)
West Lake Corridor	
HAMMOND GATEWAY	$64.8
HAMMOND SOUTH	27.0
MUNSTER RIDGE ROAD	61.7
MUNSTER/DYER	53.8
Subtotal	**$207.3**
South Shore Double Track	
GARY METRO	$70.2
GARY MILLER	65.2
PORTAGE/OGDEN DUNES	35.6
EAST CHICAGO	56.6
Subtotal	**$227.7**
Total	**$435.0**

Figure 6.3

Station area development is projected to generate $435M in property tax revenue over a 20 year time period. Some added value could be captured to fund either rail system investment, or community development projects. No new legislation would be required to enable property tax capture.

The successful execution of transit oriented development strategies around rail stations will also produce fiscal impacts in the form of property tax revenue for local taxing units. In Indiana, property taxes are limited to a percentage of a property's market value: 1% of market value for owner-occupied (homestead) residential property, 2% for non-homestead residential, and 3% for non-residential property. The station area planning process shows the potential for extensive commercial and multi-family residential development adjacent to rail stations on both the proposed West Lake Corridor and the existing South Shore. State law allows municipalities to capture a portion of the increase in assessed value from new investment and reinvest it into the community (tax increment financing). The level of investment projected around commuter rail stations will produce significant property tax revenues as development comes online. Over 20 years, station area development is projected to generate $207M for the West Lake Corridor station areas, and $227M for stations along the South Shore.

The redevelopment of station areas should also promote increases in value of existing sites and structures, and in areas not directly involved in transit oriented development. This ancillary impact has not been quantified for this analysis and is above and beyond the impacts stated herein.

"Land is more valuable when located near high-quality public transit infrastructure. Recent APTA research shows that, during the Great Recession, properties near public transit were more financially stable than properties located further away. Areas near public transit outperformed their regions as a whole by 41.6 percent."

(PTA, Value Capture for Public Transportation Projects: Examples, August 2015.

RETURN ON INVESTMENT

The Indiana General Assembly in the 2015 State Budget legislation, appropriated $6 million per year for the biennium, (State Fiscal Years, 2015-16 and 2016-17), for construction or debt service on commuter rail projects in Northwest Indiana. To qualify to receive the funds, and to receive future appropriations, the RDA must show the State a return on investment that is at least equal to 2 times the state's appropriation in the 20th year after the first grant is made.

The construction of the West Lake Corridor project is to be paid for by both the federal government through the FTA's New Starts program and State and Local funding. The federal funds will be issued as part of a "Full Funding Grant Agreement" which will provide 50% of the construction cost of the project as demonstrated in Figure 21. The balance of the estimated $615.5 million project cost will be covered by the RDA, with grants from the State of Indiana and pledges of local CEDIT revenues. The RDA is expected to issue bonds with a 30-year term, through the Indiana Finance Authority and will utilize the State and local pledges along with its own source funds to pay debt service on the bonds.

Preliminary Project Timetable

RDA Comprehensive Strategic Planning Process
Timeline for RDA Procedural Steps; Including NICTD and Local Municipalities Procedural Responsibilities

Procedural Step	Start	Finish
Draft EIS to FTA & Request to enter Project Development	-	Aug-16
Complete Public Review and Hearing on Draft EIS	Oct-16	Nov-16
Preliminary Engineering	Sep-16	Jul-17
Request to Enter FTA New Starts Process	Aug-17	Feb-18
Full Funding Grant Agreement from FTA	Nov-19	Nov-19
Construction on West Lake begins	Apr-20	Apr-22
West Lake operations begin	Apr-22	-

Figure 6.4

It is likely that the RDA will need to issue bonds sometime in late 2017 or 2018 as NICTD receives approval on its federal grant. It follows that the time period for the RDA to show an ROI for the State, is at the end of the 20 years, or in 2038. Since the projected annual State appropriation is $6 million per year, the statutorily defined ROI calculation is the State of Indiana's projected sales and income tax revenues to be collected in 2038, ($26.2 million) divided by the grant amount of $6 million. Figure 22 demonstrates that the State's ROI result from its investment into the West Lake project to be 4.4 times the funds expended.

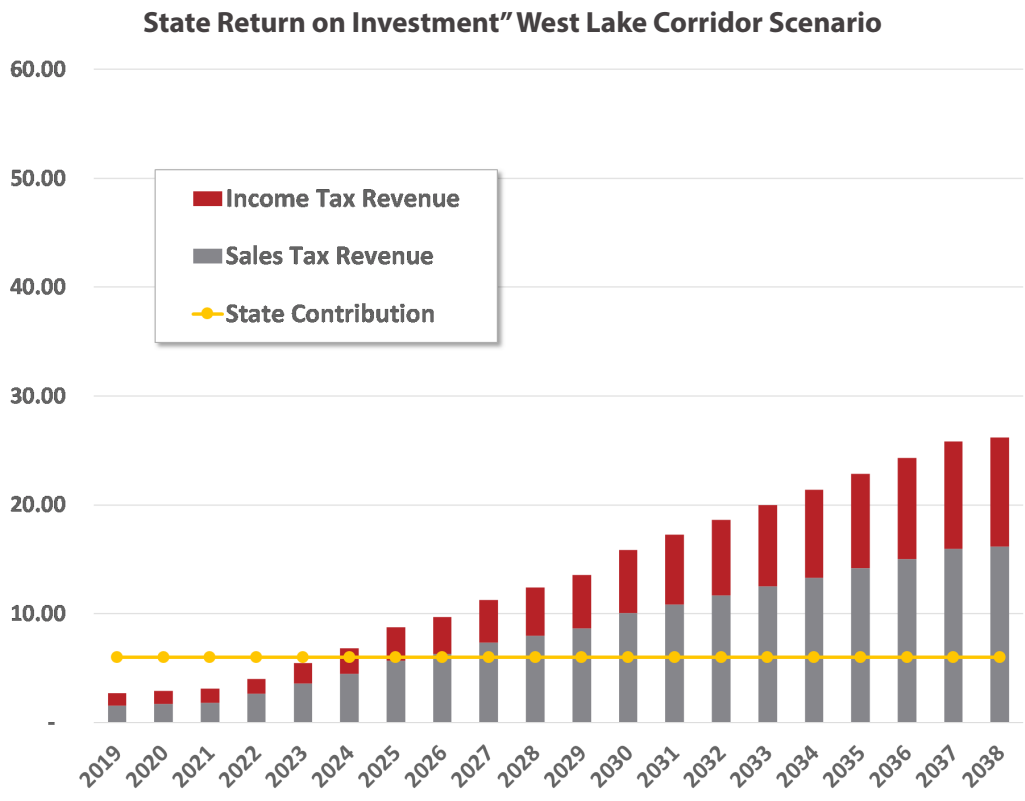


Figure 6.5

HEA 1001-2015 requires that the RDA demonstrate a return on investment of at least twice the State's annual contribution ($6M) by the 20th year of the project. By 2038, the RDA investments generate an estimated $26.2M in State Sales and Income Tax revenue, a 4x return on the State's investment.

The RDA Comprehensive Strategic Plan also contemplates the completion (to the Michigan City stations) of the double-tracking project along the current South Shore line. This portion of the commuter rail plan is not currently funded; however, the economic and fiscal impact of double-tracking has been evaluated as part of this report. The cost of double-tracking, assuming that 50% is paid by the Federal Transit Administration through its Core Capacity program, will be the annual debt service on approximately $105 million, or an estimated $6.7 million annually. Figure 23 shows this dual scenario of the fiscal impact of accomplishing both West Lake and double-tracking and the expected ROI for both. In this case, although the source of the double-tracking funds is unknown, the calculation is the State sales and income tax revenue received in CY 2038, ($52.9 million), divided by the total public cost of $12.7 million, resulting in an ROI of 4.2 times the amount invested.

West Lake Corridor Sources and Uses

Sources	Total Amt [Mill's $'s]	PV [Amt in Mill's of 2017 $'s]
FTA New Starts Grant	$ 307.8	$ 307.8
RDA "Own Source Funding"	305.9	153.9
Lake County units' CEDIT	112.0	61.6
State of Indiana	180.0	92.3
Total Sources	**905.7**	**615.5**
Uses		
Guideway, Track Elements	140.6	140.6
Stations, Stops, Terminals	52.0	52.0
Support Facilities	52.0	52.0
Sitework, Special Conditions	84.0	84.0
Rail Systems	48.2	48.2
Real Estate, ROW	29.5	29.5
Rail Cars	34.5	34.5
Professional Services	133.9	133.9
Contingency	40.8	40.8
Subtotal	**615.5**	**615.5**
Debt Service on Bonds	290.2	-
Total Uses	**$ 905.7**	**$ 615.5**

Note: The RDA is expected to issue bonds for the project with a 30 year term.

Figure 6.6

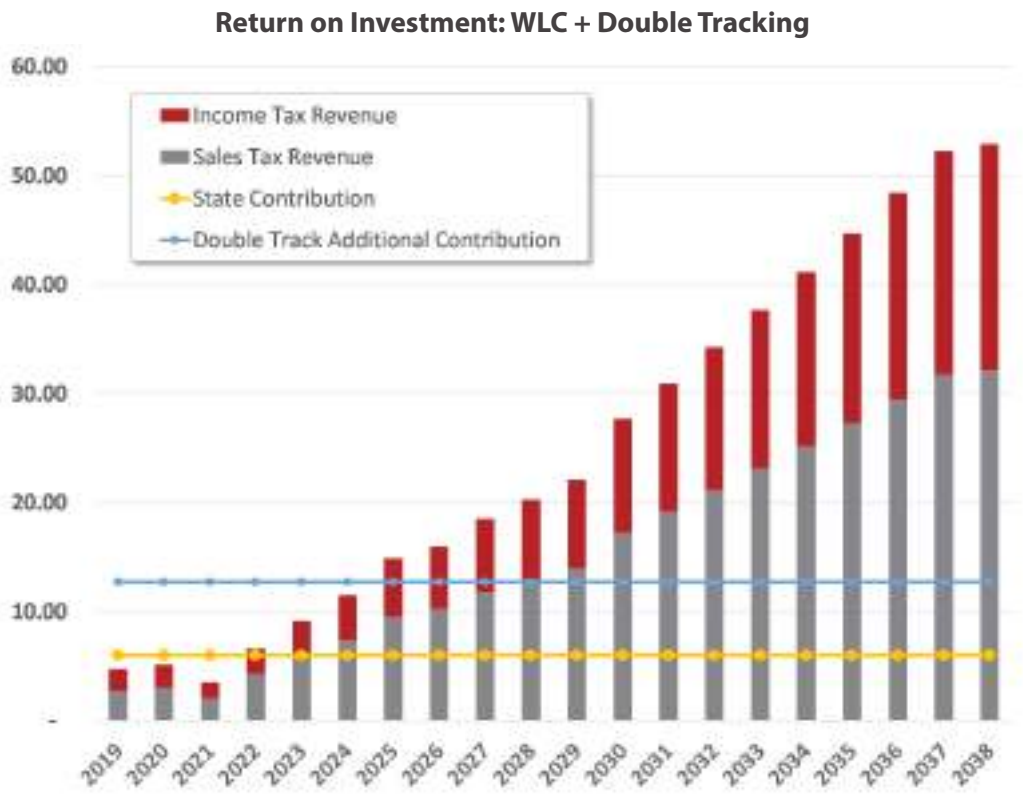


Figure 6.7

The West Lake Corridor plus Double Tracking scenario will require an additional $6.75M in annual funding, though funding sources have not yet been identified. This scenario produces an estimated $52.9M in State Sales and Income Tax revenue annually, an 4x return on investment on the State's current committment of $6M annually, plus the remaining public sector dollars required.

VALUE CAPTURE

Transportation investments incentivize surrounding commercial, retail, and residential real estate development. In particular, commuter rail, because of its permanence, its long-term fixed guideway nature, is effective in attracting development. Proponents of TOD have coined a term for utilizing the economic and fiscal benefits resulting from this transit incentivized growth – "value capture". It refers to the mechanisms used to appropriate the transit induced wealth and income to further support financing transit or economic investments.

Most value capture mechanisms apply to either some form of property wealth or to some form of sales or transaction activity. While many analysts may not have the patience to perceive the distinction, value capture is an attempt to tap into the increased tax base – either property or personal income – rather than raising tax rates. The theory, and it is borne out in many examples around the country, is that transit makes certain "geographies" more appealing. As a result, people want to live there, and will express that preference in a willingness to pay more for a house, condo, apartment, etc. than they would for the same kind of amenity located farther away from transit. Similarly, transit attracts economic activity, businesses want to locate close to transit, and as a result, more income is spent in these geographies with relatively close access to transit. For this reason, many regions in the U.S. allow for some portion of a state or local sales tax to be used to capture a percentage of the increased activity and use that revenue for supporting transit infrastructure, or to invest in other related economic development projects.

Land Use	Transit Premium Range
Single-Family	2% - 32%
Condominium	2% - 18%
Apartment	0% - 45%
Office	9% - 120%
Retail	1% - 167%

The Indiana General Assembly instructed the RDA to model the outcomes of its Comprehensive Strategic Plan to determine whether the return on the State's investment would meet the statutory test. As a result, the State specifically required a measurement of the "value" or revenues generated should the RDA be allowed to go forward and pursue its strategy of "connectivity." As the preceding analytics have demonstrated, even with no increase in tax rates – either on property wealth or personal income – there will be substantial additional tax base created through the RDA's planned transit and transit related investments. This increase, approximately one-third in property tax base, and two-thirds in sales and income tax base, totals $1.0 billion in added wealth. To capture a portion of this for the support of transit infrastructure requires no tax increase, simply the enacting of the appropriate value capture mechanisms. This section identifies the methodologies used across the nation to capture the fiscal outcomes and utilize, in part, those revenues for supporting the transit infrastructure.

Project Costs

The most straightforward methods for capturing the fiscal results of transit are focused on its impact on property values. The following value capture methods rely on the increase in real estate demand or assessed value near transit and therefore are attractive to private investors.

1. TIF – Tax increment financing, the capture of new investment within a defined district, TIF district is practiced across the US as a method to further spur transit development. Chicago has recently enacted a TIF district along a significant portion of its METRA electric line.

2. Impact Fees - These fees, applied to parcels within a defined geography around a station constitute a revenue stream useful to support the transit district itself, or the development entity – like an RDA – which is engaging in providing the seed capital to enable the initial stages of development.

3. Air Rights - In some jurisdictions where denser development is contemplated, the transit entity or the development organization is enabled to sell or lease the "air rights" over property the entity owns. This allows private developers to utilize proximity to stations to enhance the value of the private sector investments on these parcels and at the same time provide a revenue stream to support further transit development.

Although other value capture mechanisms are often utilized in property wealth situations, those above require no rate increases with revenue driven only by the increased tax base.

Sales Tax Mechanisms

Because transit incentivizes and enhances economic activity along its corridors and within its regions, many states or localities enable some portion of the sales tax revenue spun-off by this economic growth to be redirected toward transit or to further economic development. In 2013, the Commonwealth of Virginia increased its sales tax and dedicated a portion to transit. By 2018, the amount of sales tax revenue going to transit, resulting from this rate increase, is expected to be $56 million per year. Austin, Texas uses a local sales tax to support its Capital Metro transit system. In the district's 2016 budget, sales tax revenue was expected to provide $217.1 million, or 60.8% of its annual revenues.

Indiana's sales tax has always been considered a "State only" source of fiscal support. While many states have local option sales taxes, Indiana has allocated to local units the income tax for local option usage and "fenced off" the sales tax as the State's main source of revenue. While this fiscal strategy is a rational response to the pressures to "piece meal away" the State's revenue base, some recognition of the significant benefit for the State, ($310 million over 20 years), resulting from the transportation related investments proposed in the RDA's Comprehensive Strategic Plan could be warranted. One possible avenue would be to dedicate a portion of the sales tax revenue outcome from these transit investments – perhaps capped at a fixed amount – for a period of the debt service required to construct the rail lines. This is in keeping with prior legislation which provided a very small percentage of the sales tax rate be dedicated for transit around the State. In this instance, a defined rate or dollar amount might be dedicated for the 30-year period of the bonds.

Additionally, other transaction taxes – which might be thought of as subsets to the general sales tax – are used to tap a portion of the economic activity generated by the transit investment. These other transaction taxes include: hotel occupancy taxes, food and beverage taxes, and gas taxes.

Income Tax Mechanisms

In Indiana, the income tax, while primarily a State revenue source, has been designed to be shared between the State and local units through county based adoption mechanisms. The State has recently made local option income tax structures more flexible, in an attempt to encourage those units to assume responsibility for their own fiscal needs. Currently, 15 local governmental units in Lake County have pledged significant amounts of local option income tax revenues to the West Lake Corridor transit development – though the total amount is not final as some of the units are still making decisions.

Because under Indiana law, income tax is more easily tied to a particular place – a sub state geography – it is more adaptable for capturing for transit for long term support and economic development. One method of recognizing the fiscal benefits of the RDA's "Connectivity Strategy" to the State, as well as local units, would be to dedicate a matching amount of State income tax revenue, to pledged local income tax revenue in order to complete the financing of the South Shore Line's Double-Tracking project.

Aggregate Fiscal Impact of Commuter Rail Investments

Benefitting	20 Yrs [$ in M's]
State of Indiana	
Sales Tax	$ 310.0
Income Tax	192.0
Subtotal State of Indiana	502.0
Lake County	
Property Tax	399.3
Income Tax	52.5
Subtotal Lake County	451.8
Porter County	
Property Tax	35.6
Income Tax	9.0
	44.6
Total for Project	**$ 998.4**

Figure 6.8

The commuter rail investments generate significant fiscal returns to the State of Indiana and local units. Both Lake and Porter Counties would receive substantial amounts of both property and income tax revenue, even under current law.

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APPENDIX 'A'

Conservative Assumptions in Economic Impact Modeling

APPENDIX A:
CONSERVATIVE ASSUMPTIONS IN ECONOMIC IMPACT MODELING

The economic impact analysis completed for this project incorporated several conservative assumptions to ensure that the estimated economic outcomes were reasonable in magnitude. These assumptions are described below:

1. The station area plans prepared for this analysis consist of three development phases. The first phase, short term, encompasses parcels adjacent to or near the commuter rail stations. The second phase, mid-term, includes properties that are primed for development (vacant, government owned, etc.) and that are within close walking range of the rail station. The third phase, long-term, includes the remainder of properties likely to see development within a ½ mile radius of the rail station. The estimated development cost for the first two development phases totals $2.3B for all eight stations included in the analysis. The total estimated cost for the Phase III investments totals $2.8B, which is more than double the cost for Phase I and Phase II. For the economic modeling, only the Phase I (short-term) and Phase II (mid-term) investments in the station area plans were modeled. The Phase III investments – some of which are likely to take place during the analysis period – were not incorporated into the economic modeling.

2. One of the prime benefits of investing in Northwest Indiana commuter rail is the generation of commuter income as more individuals are able to commute to Chicago. This is a major component of the economic impact analysis conducted for this project. To be conservative, only the wage premium that employees earn by working in Chicago instead of a similar job in Indiana was modeled as an economic impact. In reality, the Northwest Indiana employment base is not large enough to support all of its resident workers. Without commuter rail, some workers would not be able to reach jobs in Chicago, and would either be un/under-employed in Northwest Indiana or displace jobs already housed there. The commuter wage premium modeled for the West Lake + Double Tracking scenario is $78.5M annually. If the full amount of increased commuter wages earned in Chicago by Northwest Indiana residents were considered, the total would reach $264M annually, an increase of more than 3 times, and result in a 12% increase in the projected employment impact of Northwest Indiana commuter rail investments.

3. To estimate the long-term employment impact of the station area development, standard metrics were used to approximate the number of employees per 100 square feet of commercial space. The ratios used, based on national data were 600 square feet per employee for commercial office, and 1,000 square feet per employee per retail. Because actual employment can vary significantly with respect to commercial facilities, a conservative assumption was introduced to moderate the resulting economic impacts. The standard metrics of square feet per worker were discounted by 30% to account for factors such as lower than expected building occupancy or employment density.

4. Generally, when businesses move or increase their revenues, there is a transfer of economic activity within an economy. For example, when a new restaurant opens, not all of its sales can be counted as "net new" economic activity. Because consumers within the region have limited disposable income, some of the spending at the new restaurant will be at the expense of spending at other businesses within region. However, there are instances with a business relocation or expansion does provide "net new" impacts. If a national manufacturer moves from Illinois to Indiana, the resulting impacts are likely new to the region, because there is little to no competition with other firms within the region. In economic impact analysis, all station area employment impacts were modeled as "firm employment" impacts not "industry employment" impacts. The firm employment variable assumes local competition and that the addition of employees at TOD locations displaces (to some extent) workers at other locations within the region. This is especially the case for the retail and hospitality industries. The decision to model all station area as "firm employment" reduces the station area employment impacts by approximately 49%.

5. The economic benefit of avoided or reduced parking costs is modeled as an economic impact of commuter rail investment. A conservative parking cost estimate of $20 per day is used. Market rate parking in downtown Chicago is actually much higher than that and can reach $50 per day. The more conservative estimate is used to: 1) account for the possibility that NICTD will offer paid parking in the future, and 2) allow for the fact that some commuters receive sub-market rate employer paid parking.

6. The ridership modeling performed by AECOM (as part of the STOPS modeling) is based on the NIRPC 2040 socioeconomic forecast, which does not include the demographic and density responses that will likely occur through TOD as a response to double tracking. Assuming the station-area development occurs as described in the station area plans, the density of population will contribute to more commuter rail ridership. Additionally, the STOPS modeling incorporates parking constraints (no assumption for structured parking) that is unlikely to hold, as commuter rail ridership increases in the future.

7. To avoid double-counting, the economic impact modeling assumes that state dollars spent in Northwest Indiana are offset by a reduction in state spending throughout the rest of Indiana. The alternative disbursement of these dollars, in the absence of the West Lake Corridor project, is unknown. It is likely that these dollars would be spent across the entire State or in other ways that create less economic activity than in the West Lake Corridor investments.

APPENDIX ‘B’

General Assembly Redirection of RDA Focus

APPENDIX B:
GENERAL ASSEMBLY REDIRECTION OF RDA FOCUS

As originally created by passage of P.L. 214-2005 (IC 36-7.5), the Northwest Indiana Regional Development Authority was authorized and empowered to implement a wide range of economic development projects. Upon passage of P.L. 192-2015 the RDA mission was narrowed to focus on the following:

1. Assist a commuter transportation district, an airport authority, the Lake Michigan Marina and Shoreline Development Commission, a regional transportation authority and a regional bus authority in coordinating regional transportation and economic development efforts.
2. Fund bus services (including fixed route services and flexible or demand response services and projects related to bus services and bus terminals, stations, or facilities.
3. Implementation of the Marquette Plan

During the 2016 legislative session, the RDA enabling legislation was again amended by PL 204-2016 which allowed the RDA to study and evaluate "destination based economic development projects" that have:

1. An identified market:
2. Identified funding sources and those funding sources include at least fifty percent (50%) from non-governmental sources; and
3. A demonstrable short and long term local and regional economic impact, as verified by an independent economic analysis which must be submitted to the state budget committee at least thirty (30) days before review is requested.

The 2015 amendments to the RDA enabling legislation require the RDA to submit to the state budget committee for review and comment any proposal to fund an economic development project. The state budget committee is required to review any proposal received and may request that the RDA appear at a public meeting of the state budget committee concerning the proposal.

The Northwest Indiana Regional Development Authority funding from the State of Indiana was modified in 2015 by provisions contained in section 265 and 266 of the annual "budget bill". Those sections established a grant program to provide state matching grants for construction projects extending East Chicago, South Shore and South Bend Railroad. To participate in the grant program, the RDA is required to prepare an update to the Comprehensive Strategic Development Plan required by the RDA original enabling legislation. The update must include detailed information concerning:

1. The proposed projects to be undertaken by the Development Authority to extend East Chicago, South Shore and South Bend Railroad utilizing the state matching grants.
2. The commitments being made by the RDA and political subdivisions in exchange for receiving the matching grants.
3. For each identified project in the Comprehensive Strategic Development plan the following:
    - The location of each project
    - The timeline and budget, including milestones that the Development Authority commits to achieving by the time specified.
    - The expected return on investment
    - Any projected or expected federal or local matching funds.

To receive a matching grant, the RDA must adopt an authorizing resolution and submit the updated Comprehensive Strategic Development Plan along with a grant application to the Indiana Finance Authority for approval after review by the state budget committee. This matching grant program is funded by a six million dollar annual appropriation from the state, beginning in SFY 2016.

A grant may not be approved unless the Indiana Finance Authority finds:

1. The RDA has committed to matching the biannual appropriation provided from the state general fund.
2. The RDA can demonstrate an annual return on investment that within 20 years after the first grant is made for the project, is at least twice the annualized amount of the grant requested. The return on investment must be measured by the annual amount

of incremental state fiscal year increases to state gross retail and use taxes and state income taxes that are projected to be collected as a direct result of any project. Projections to determine the return on investments must be provided in detail by the RDA and shall be evaluated by the Office of Management and Budget.

If the Indiana Finance Authority approves and makes a grant, the RDA must in July of each year through 2045 submit an annual progress report to the Indiana Finance Authority. Importantly, if the Indiana Finance Authority approves and makes a grant to the RDA, the General Assembly covenants that it will not repeal or amend any provisions of the new legislation so as to adversely affect owners of outstanding bond, or payments of any lease rental and will not in any way impair the rights of owners of bonds of the Development Authority.

APPENDIX 'C'

Station Area Planning Calculations and Methodology

APPENDIX C:
STATION AREA PLANNING CALCULATIONS AND METHODOLOGY

In order to generate development square footage and associated development costs the planning team utilized the following methodology and historical data.

1. Each station area was planned and phased per the documents included in Chapter 4 of this document.

2. Using the land use plans as a base, adjacent parcels with the same phasing and place time were joined using GIS and the total square footage/ acreage was documented.

3. Each group of joined parcels was examined to determine the approximate buildable acreage. Sites were assigned a developable percentage based on the total amount of land that could be used for site development (buildings + parking + roads + site amenities). In urban settings we assumed that between 80%-90% of the site could be used for development.

   Greenfield sites, or areas where little to no development has taken place were assigned percentages between 60%-70%.

4. Using the information found in Chapter 4, each set of properties was assigned a development breakdown that aligned with the place type development mix. From there an estimated development square footage for commercial, office, residential, institutional, light industrial, open space and neighborhood revitalization could be determined.

5. We then assigned coverage percentages for each property to identify the portions of the site that would be developed as building vs. site amenities (roads, parking and open spaces).

6. Using the information found in Chapter 4 the estimated building height was applied. This information was applied based on location to the transit station, and adjacent development. For areas that included structured parking, the overall building height was discounted in some instances to accommodate parking on the first floor.

7. In order to determine the overall residential density for both market rate and affordable housing areas, the design team assumed that the size of a traditional residential unit ranges from 1,500SF to 4,000 SF. The range accommodate residential amenities, common space and infrastructure such as hallways, stairs etc.

8. In order to determine site and building costs, the design team used a paid subscription to Design Cost Data. Design Cost Data is the cost estimating magazine for design and construction, and is the largest provider of historical construction cost for the purpose of preliminary cost estimating and cost modeling in America. Established in 1958, DCD is unique among publications servicing the construction marketplace as architects, specifiers, builders, and developers use DCD and the actual construction costs it publishes as benchmarks for preliminary cost estimating.

   DCD subscribers can access over 1,500 actual projects, as seen in DCD, in the DCD Archives™ for early construction budgets, cost modeling, estimate validation and more. Subscribers select a similar project to the one they are building and retarget to their new bid date and location. A new cost model is created reflecting an updated square foot cost.

   For each placetype a series of archived projects were identified through the DCD files. Using the samples selected a blended costs was created for both buildings and site infrastructure costs.

- In addition to building a site development costs, road way infrastructure was analyzed for each station area. The streetscape standards outlined in Chapter 4 were applied to the roads leading into and out of each station area. The estimated costs for each road project were included in the station area planning cost calculations.

Year: 2016

Location: Gary, Indiana

DCD Cost Data: Building Development Costs

Use Classification	Cost Examples	Average Site Area	Site Costs/Acre	Building Costs/ Acre (10% Contingency)
Center Mixed Use	5	128.18	$128	$141
Center Recreation and Open Space	0			
Center Residential	4	134.70	$135	$148
Flex Mixed Use	2	112.84	$113	$124
Flex Residential	5	111.28	$111	$122
Neighborhood Commercial	4	216.03	$216	$238
Neighborhood Mixed Use	2	93.34	$93	$103
Neighborhood Open Space	0			
Office - Flex	3	191.81	$192	$211
Regional Campus	4	122.95	$123	$135
Traditional Neighborhood Development	0	---	$216	$238

Year: 2016

Location: Gary, Indiana

DCD Cost Data: Site Development Costs

Use Classification	Cost Examples	Average Site Area	Site Costs/Acre	Site Costs/Acre (10% Contingency)
Center Mixed Use	5	1.21	$2,693,765	$2,963,141
Center Recreation and Open Space	0	---	$1,916,640	$2,108,304
Center Residential	4	3.21	$1,041,715	$1,145,887
Flex Mixed Use	2	0.31	$2,084,990	$2,293,489
Flex Residential	5	2.99	$280,692	$308,761
Neighborhood Commercial	4	1.01	$417,981	$459,779
Neighborhood Mixed Use	2	1.83	$215,924	$237,516
Neighborhood Open Space	0	---	$1,089,000	$1,197,900
Office - Flex	4	3.11	$386,612	$425,274
Regional Campus	4	10.24	$1,341,727	$1,475,900
Traditional Neighborhood Development	0		$280,692	$308,761


LEGEND
Proposed Station Location
CSX Railroad
Proposed West Lake Extension
South Shore Rail
Urban Streetscape
Suburban Streetscape
Pedestrian Streetscape
Landscape Corridor
Major Intersection Improvement
Minor Intersection Improvement


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Proposed Station Location
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Urban Streetscape
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Minor Intersection Improvement


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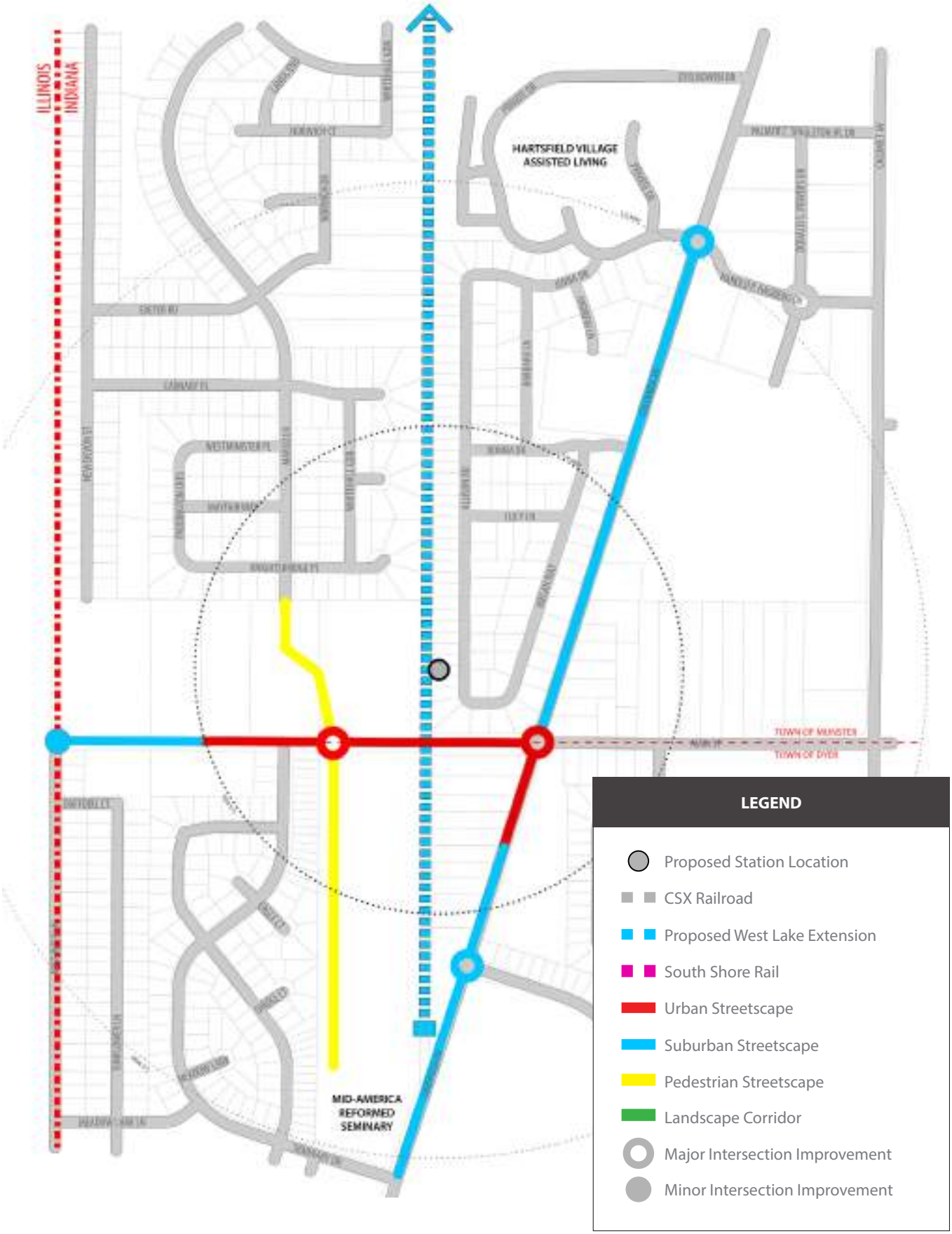
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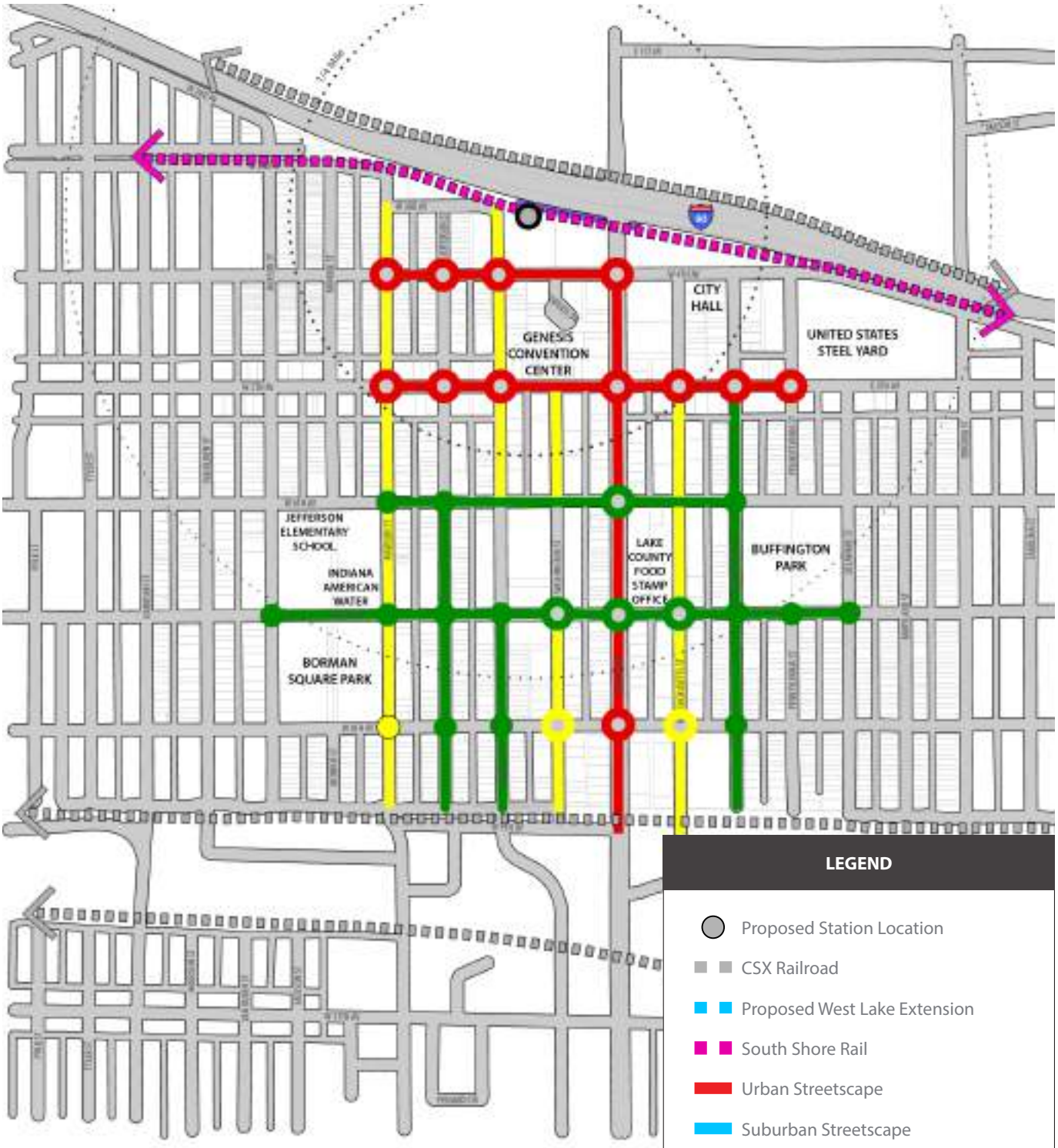
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BORMAN SQUARE PARK
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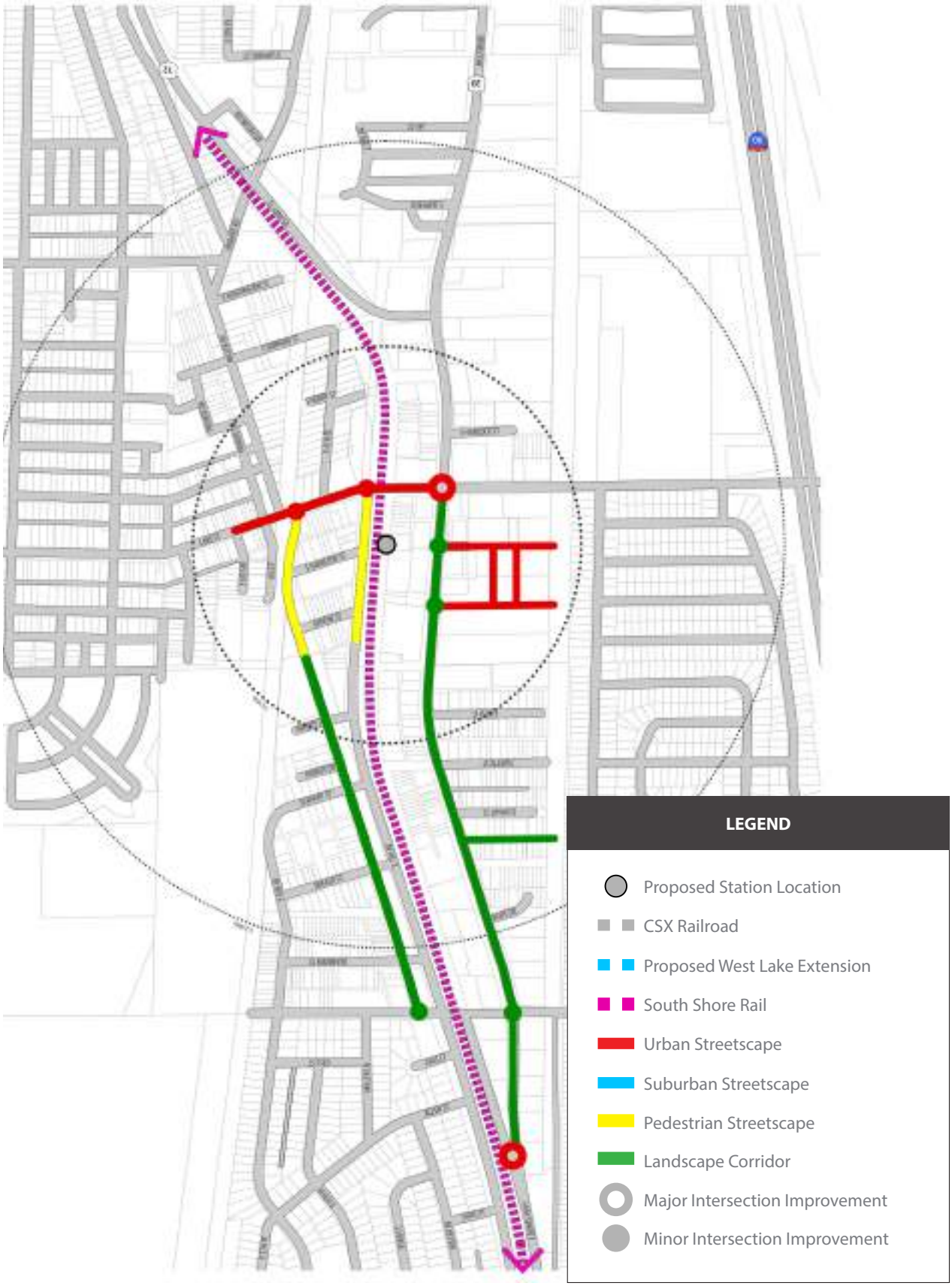
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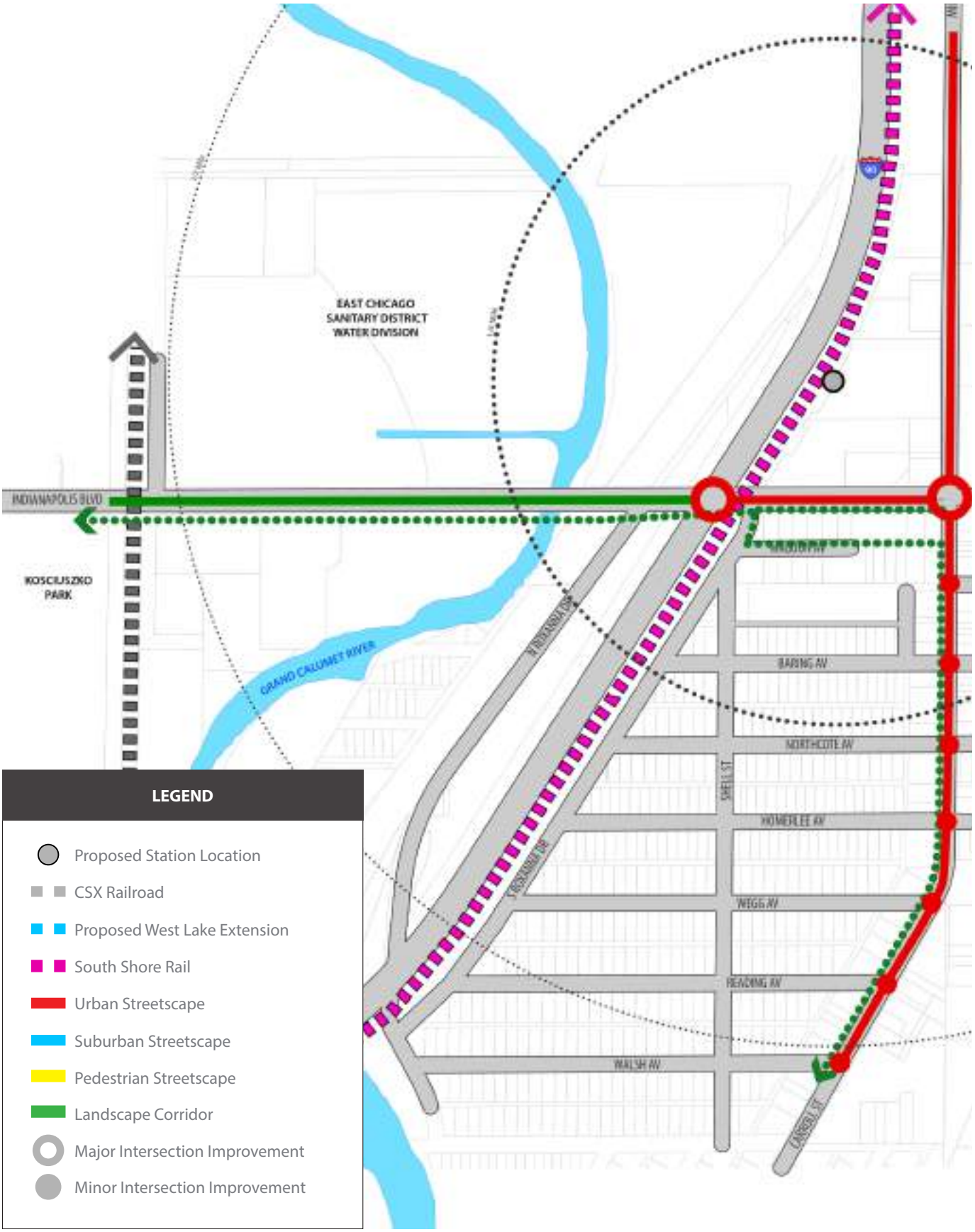
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HOMEWOOD AV
WEGG AV
HEWDING AV
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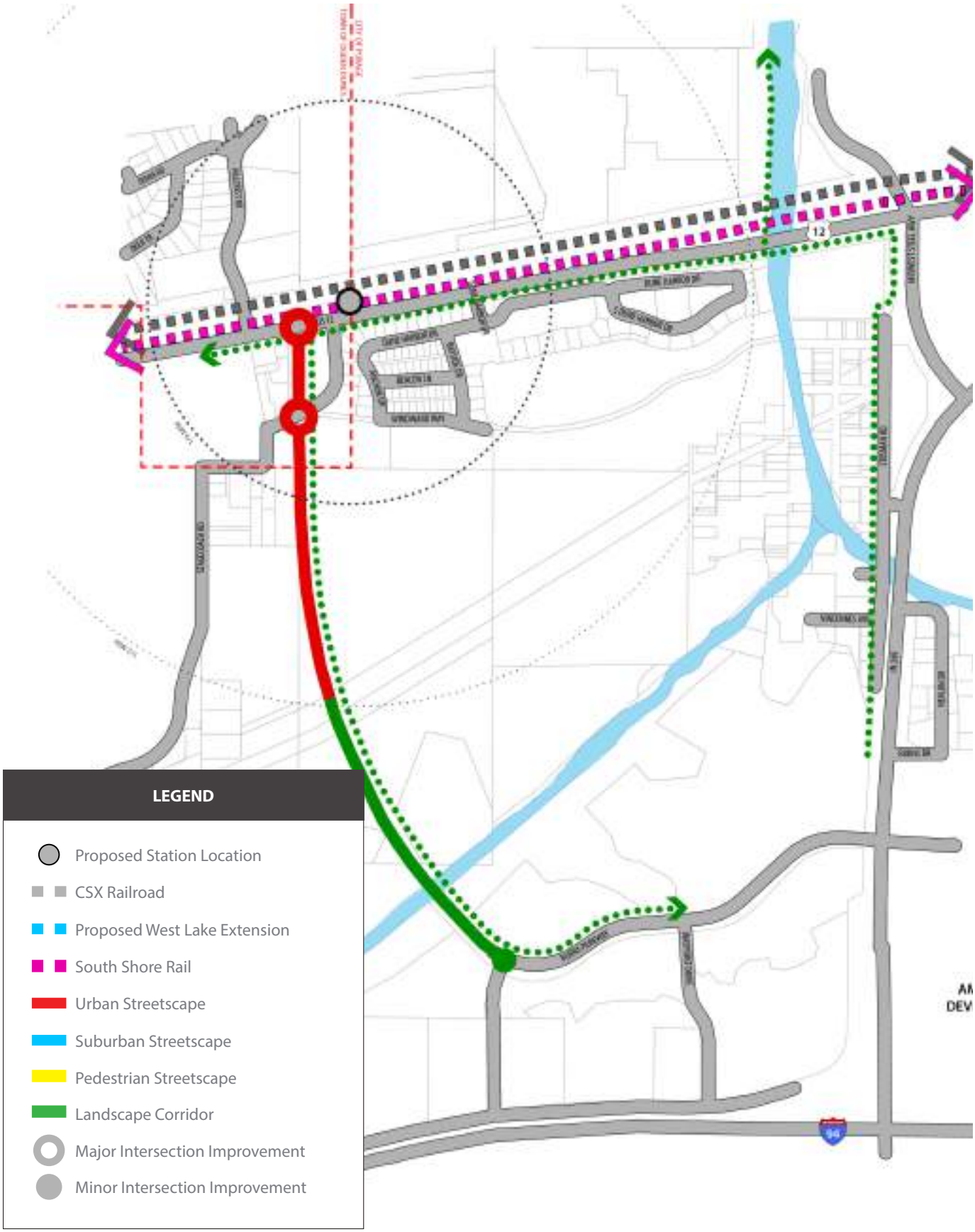
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APPENDIX 'D'

Station Area Land Use Definitions

APPENDIX D:
STATION AREA LAND USE DEFINITIONS

	Center Residential	Center Mixed Use	Center Recreation	Flex Mixed Use	Flex Residential	Neighborhood Commercial	Neighborhood Mixed Use	Neighborhood Recreation	Neighborhood Revitalization	Office Flex	Regional Campus	Traditional Neighborhood Development
Assisted Living					S							
Civic Institutional		S	S	S		S		S		S	P	
Commercial: Neighborhood	P	P		P		P	P					P
Commercial: Local				P		P	P				P	
Detached Residential					P				P			P
Duplex		P			P				P			P
Green		S	P		S							S
High Rise Apartments												
Hotel											P	
Light Industry										P		
Live Work Unit	P	P					P					
Low Rise Apartments					P							
Mid Rise Apartments	P	P										
High Rise Apartments	P	P										
Multi-plex: Small					P		P		P			P
Multi-plex: Large	P	P			P				P			P
Open Space			P					P	S			
Park			P		S			P	S			S
Parking Facility, Public or Private	P	P					P				S	
Personal Services	P	P		P		P	P				P	P
Plaza	S	S	P		S		S					
Pocket Park	S	S				S	S		S			
Pocket Plaza	S	S				S	S					
Professional Office		P		P		P	P			P	P	
Recreational Facility: Indoor											S	
Recreational Facility: Outdoor											S	
Regional Office		P									P	
Research and Development				P						P		
Rowhouse					P				P			P
Stacked Flats	P	P			P		P					P
Square	S	S	P				S					S
Transitional Office				P		P	P			P		

P: Typical primary land use within placetype. *S: Typical secondary land use within placetype.*

Assisted Living

An institution, residence or facility that provides accommodation and personal assistance to more than three residents who are dependent on the services of others by reason of age and physical or mental impairment, but that is not licensed to provide skilled nursing care.

Civic Institutional

Civic uses include public buildings and institutions owned and operated by governmental or other public agencies, not including parks and open space. This classification includes public schools, public cemeteries, government offices and other governmental activities. Public assembly uses may be operated by private organizations serving a public purpose, such as hospitals, profit or non-profit facilities providing continuous patient care, religious centers/activities, private schools, private cemeteries, utilities, private educational facilities and other similar uses. Intensity of development will be dependent upon use and location.

Commercial: Neighborhood

Stores and shops and personal service businesses in concentrations with gross leasable areas of up to 50,000 square feet on smaller sites of less than five acres intended to serve surrounding neighborhoods within a radius of one to three miles. Such uses are generally located in stand-alone buildings or in small commercial centers and may include beauty salons, convenience stores, drug stores, restaurants, small clothing stores, small grocery stores and specialty shops.

Commercial: Local

Stores and shops and personal service businesses in concentrations with gross leasable areas of 50,000 to 200,000 square feet on sites of five to twenty acres that provide services to an area within a radius of three to five miles, as well as automotive traffic generated from major highways. This category may include Grocery stores, automotive services, building supply, general retail, motels, restaurants and related uses.

Detached residential

Primary structures (other than a mobile home) intended for occupancy by a single family, located on a separate lot or parcel from any other structures intended for the same use, and not sharing any common structural elements with any other structure intended for occupation by another family.

Duplex

A single building that contains two dwelling units, each of which has direct access to the outside or a common hallway leading outside.

Green

Greens are intended to provide informal, medium scale active or passive recreation for neighborhood residents within walking distance.

High Rise Apartments

High Rise Apartments are intended to accommodate large-scale, multiple-unit forms of residential development. Apartment buildings, in general, are defined by their common entrances and internal staircases and/or elevators. The preferred locations for this designation are lands adjacent to major employment centers, shopping areas, major public open space, transportation routes, and where high density development will not adversely affect surrounding land uses.

Hotel

A facility with six or more guest rooms or suites designed for transient habitation, where access to individual units is predominantly through a common lobby that may provide additional services, such as conference and meeting rooms, restaurants, bars or recreation facilities available to guests or to the general public.

Light Industry

Research facilities, as well as places of assembly, fabrication, warehousing or processing of goods and materials using processes that ordinarily do not create fumes, glare, odors, noise, smoke or health or safety hazards outside of the building in which the process takes place.

Live Work Unit

An integrated housing unit and working space, occupied and utilized by a single household in a structure that has been designed or structurally modified to accommodate joint residential occupancy and work activity, and which includes: complete kitchen space and sanitary facilities in compliance with the Building Code; and working space reserved for and regularly used by one or more occupants of the unit.

Low Rise Apartments

Low-rise apartments are buildings that have 1-3 stories and accommodate multiple unit forms of residential development. Apartment buildings in general are defined by their common entrances and internal staircases and/or elevators – although it is rare to see elevators in low-rises.

Mid Rise Apartments

Mid Rise Apartments are intended to accommodate multiple unit residential developments in building 3-5 stories in height. Apartment buildings in general are defined by their common entrances and internal staircases and/or elevators.

Multi-plex: Small

The Multi-plex: Small Building Type is a medium structure that consists of 3–6 side-by-side and/or stacked dwelling units, typically with one shared entry or individual entries along the front. This use type has the appearance of a medium-sized family home and is appropriately scaled to fit sparingly within primarily single-family neighborhoods or into medium-density neighborhoods.

Multi-plex: Large

The Multi-plex: Large Building Type is a medium-to large-sized structure that consists of 7–18 side-by-side and/or stacked dwelling units, typically with one shared entry. This use type is appropriately scaled to fit within medium-density neighborhoods or sparingly within large lot predominantly single-family neighborhoods.

Open Space

Land used for public or privately owned parks and recreational uses, or lands that are to be preserved in a natural state. This classification may include portions of private lands that have been identified for open space preservation as part of future development projects, but not necessarily targeted for public dedication or acquisition.

Park

Parks are intended to provide informal active and passive larger-scale recreational amenities to city residents and visitors. Parks have natural plantings and can be created around existing natural features such as water bodies or tree stands. Facilities which include community centers, playing fields, courts, gymnasiums, swimming pools, wave pools, spray grounds, picnic facilities, golf courses and country clubs, zoos and botanical gardens, as well as related food concessions. Parks can be used to define edges of neighborhoods and districts.

Parking Facility, Public or Private

Parking lots or structures operated by the City or a private entity, providing parking either for free or for a fee. Does not include towing impound and storage facilities.

Personal Services

Establishments that provide non-medical services to individuals as a primary use. Examples of these uses include: barber and beauty shops, clothing rental, dry cleaning pick-up stores with limited equipment, home electronics and small appliance repair, laundromats (self-service laundries), locksmiths, nail salons, pet grooming with no boarding, shoe repair shops, tailors, tanning salons. These uses may also include accessory retail sales of products related to the services provided.

Plaza

Plazas are intended to provide formal open space of medium scale to serve as a gathering place for civic, social, and commercial purposes. Plazas are usually located in areas where land uses are more diverse and there is potential for a greater level of pedestrian activity. The plaza may contain a greater amount of impervious coverage than any other open space type. Special features, such as fountains and public art installations, are encouraged.

Pocket Park

Pocket parks are intended to provide small scale, primarily landscaped active or passive recreation and gathering spaces for neighborhood residents within walking distance. The design and programming of pocket parks should respond to the needs of residents in the immediate vicinity.

Pocket Plaza

Pocket plazas are intended to provide a formal open space of relatively small scale to serve as an impromptu gathering place for civic, social, and commercial purposes. The pocket plaza is designed as a well-defined area of refuge separate from the public sidewalk. These areas contain a greater amount of impervious coverage than other open space types. Seating areas are required and special features, such as fountains and public art installations, are encouraged.

Professional office

Any building or structure primarily used to conduct business, where no sales of stock-in-trade, manufacturing or warehousing occur. Professional Offices may include attorney offices, daycare centers, group medical practices, office suites for individual businesses, real estate offices, sales offices and telemarketing centers.

Recreational Facility, Indoor

An establishment providing indoor amusement and entertainment services for a fee or admission charge, including: Bowling alleys, coin-operated amusement arcades, electronic game arcades (video games, pinball, etc.), ice skating and roller skating, pool and billiard rooms as primary uses. Any establishment with four or more electronic games or amusement devices (e.g., pool or billiard tables, pinball machines, etc.) or a premises where 50 percent or more of the floor area is occupied by electronic games or amusement devices is considered a commercial recreation facility. Three or fewer machines or devices are not considered a use separate from the primary use of the site.

Recreational Facility, Outdoor

A facility for outdoor recreational activities where a fee is charged for use. Examples include: amusement and theme parks; camping and picnicking areas; go-cart tracks; golf driving ranges; miniature golf courses; and water slides. May also include commercial facilities customarily associated with the above outdoor commercial recreational uses, including bars and restaurants, video game arcades, etc. Does not include golf courses and country clubs.

Regional Office

Offices that accommodate major economic-base corporate employers, with a broad regional influence, and which may include corporate headquarters and structures with suites for a variety of professional or service offices.

Research and Development

An establishment primarily engaged in the research, development and controlled production of high technology electronic, industrial or scientific products or commodities for sale. This classification includes biotechnology firms and manufacturers of nontoxic computer components.

Rowhouse

A single or a multifamily residential structure that is attached to one or more residential structures, each located on separate lots and with independent access to the exterior, connected by a fire resistive common wall or abutting walls or by a garage or other structural element.

Stacked Flats

Stacked Flats are a medium- to large sized structure that consists of multiple dwelling units accessed from a courtyard or series of courtyards. Each unit may have its own individual entry, or may share a common entry. Stacked Flats may include a courtyard.

Square

Squares are intended to provide formal open space of medium scale to serve as a gathering place for civic, social, and commercial purposes. Squares are generally rectilinear and bordered on all sides by a vehicular right-of-way, which together with adjacent building façades define the space. Squares contain both hardscape areas, such as paths, fountains, gazebos, public art, and street furniture, as well as landscaping.

Transitional office

Low-intensity office uses are appropriate in locations where a change or transition in land use is occurring and a less-intensive land use is appropriate. Transitional Office structures are generally 2,000 square feet or less and may be in stand-alone buildings or converted residential structures. They may include businesses such as family dentist's or doctor's offices, funeral homes, insurance offices, personal services, real estate offices or similar uses. These uses typically have limited parking-lot sizes, building sizes and hours of operation.

APPENDIX ‘E’

Community Readiness and Implementation Steps

APPENDIX D:
COMMUNITY READINESS AND IMPLEMENTATION STEPS

Over the last several years, the communities of Northwest Indiana have collectively begun to re-imagine themselves. Existing rail stations along the South Shore line and the communities that fall along the West Lake alignment have experienced varied and sporadic development activity in the past. The development that has occurred has not fit the traditional character of TOD development, and in some instances has failed to materialize at all. This may not be surprising once one begins to examine the wide array of stations and proposed sites all of which have different market conditions, infrastructure needs and existing land use patterns. Since the Northwest Indiana existing and proposed stations do not fit into a one-size fits all category, this plan sets out to establish a stronger understanding of the variables currently impacting station areas and to formulate an updated TOD action plan.

Using the characteristics of TOD identified above, the project team did an analysis of each community's policy, land use patterns, walkability and infrastructure to identify initial hurdles to transit oriented development. A community's readiness for TOD is not a static process. Instead each community should view themselves on a TOD continuum, and as new policies and planning tools are put in place, the community's readiness factor continues to grow. Currently, the communities along both the South Shore and proposed West Lake corridors are in the early stages of TOD readiness and need to strategize and use their existing strengths to catalyze development.

Hammond Gateway and South Hammond

In order to implement TOD at the Hammond Gateway Station and the South Hammond Station, the City must consider the existing uses, connectivity, and infrastructure, and how it all came to fruition. A TOD will provide, and require, a particular set of standards that the City may not have accounted for.

The vicinity of the Hammond Gateway station currently has some elements that set the stage for a successful TOD. However, the Hammond zoning ordinances should be evaluated and amended to allow specifically for dense, mixed use development with shared parking and pedestrian scaled streets; features highly prevalent in TOD. The South Hammond Station TOD will see a limited increase in intensity and change in land uses, however, existing roadway capacity should be evaluated and residential zoning to allow for a variety of detached residential and low rise units. A new zone allowing four to five story buildings with retail and office on the bottom floors, wide sidewalks, street parking, and flush street walls are some of the elements that create an urban environment residents and businesses are looking for. Requirements for residential development should also account for providing sufficient affordable housing, allowing a variety of incomes to live in the TOD area.

Transportation and recreation spaces are significant amenities that make TOD desirable and successful. Connectivity is of utmost importance in promoting health through walkable and bikeable streets. Because of this, Hammond should evaluate the city's transportation network as well as requirements by developers to encourage implementing infrastructure that accommodates safe and efficient multimodal transportation. With the influx of residents and transit riders, the bus system should also be evaluated to determine the impacts a larger station and increased ridership will have on the system and how routes may improve efficiency. After live and work, recreational features complete the circle of one's daily life. The quality of life aspect "play" is a fundamental part to incorporate throughout the TOD area and therefore, spaces to recreate should be required in new and existing zones that become a part of the areas most impacted by the TOD.

Munster Ridge Rd. & Munster/Dyer Main St.

With two stations along the West Lake Corridor in Munster, the City must bridge the gap between the proposed development scenario and the processes and policies needed to implement TOD. This will include an analysis of existing conditions and thorough study of what ordinances need to be added or adjusted to accommodate TOD. Munster's proposed development scenarios include land uses with higher density, pedestrian friendly infrastructure, recreational spaces, and a much greater number and variety of both affordable and market rate housing units.

A common feature of TODs is tall, densely populated

areas with a mix of uses. Large multifamily complexes will have many stories of residential with bottom floor retail. The current ordinance only allows for up to four stories in the highest density districts, as well as no residential in zoning districts with commercial uses, so should be adjusted to allow for taller, mixed use buildings, or a new zone created specifically with typical mixed use standards.

To establish the density common in a TOD, parking standards should be more regulated to encourage construction of shared parking structures among surrounding uses. Structures, as opposed to surface lots, create greater land use efficiency and promote an environment free of sprawl directly catering to pedestrians. Where parking structures may not be feasible, regulations requiring surface lots to be located in the rear as well as on street parking spaces should be implemented.

Recreational spaces and infrastructure are a large part of what makes TOD successful. Ordinances currently lack regulations requiring park space in urban areas and consistent infrastructure like accessible pocket parks, wide sidewalks, multiuse paths, and bike lanes.

In Dyer, the Town's ordinances are generally more flexible and conducive to TOD in the near future. Planned Unit Developments are permitted with a particular set of standards, including allowing residential and commercial uses in the same building, but may need to be supplemented with encouraging parking structures, and requiring developers to implement pedestrian friendly infrastructure such as sidewalks, street trees, and bike lanes. The Town will also need to allow for higher density residential buildings up to five stories.

Because the West Lake Corridor terminates at Main Street, the boundary between Munster and Dyer, full cooperation and agreeance from both towns during the planning process and development process is expected, regardless of where physical development is located.

Gary Miller and Metro Stations

While the Gary Metro and Gary Miller Stations have a very different context and the physical readiness for implementing TOD at each station will be at different levels, the regulations set forth by the City of Gary via zoning ordinances and past plans will need to be assessed for suitability of TOD. There are many factors that the South Shore stations in Gary will need to incorporate to create successful TOD that energize the surrounding areas and attract new residents and businesses.

At the Gary Metro Station, the vicinity of the station is the core of downtown. Already a physically dense area, developments proposed in this scenario can take advantage of existing buildings that may only require retrofitting and revitalization. Current zoning and plans developed by the City support mixed use buildings and open spaces/plazas in commercial districts, making the Gary Metro station a prime candidate for a thriving, pedestrian friendly environment. However, to further promote a strong TOD, regulating development to create a smooth street wall by building to wider sidewalks, adding bike lanes, streetscape improvements, and overall aesthetic appeal should become a priority and further discussed in plans and ordinances. Regarding housing, the City should ensure an appropriate number of both affordable and market rate housing units are available.

The Gary Miller Station is in a very different context but is currently zoned similarly to the Metro Station. Much of what has been proposed in the TOD development scenario has been reflected in what is already being planned and implemented based on goals and recommendations in the Lakefront District Revitalization Strategy. This includes a dense core of mixed use buildings with retail, office, and residential uses at the station, shared parking structures, more dense housing along U.S. 20 and N/S side streets, and commercial uses between the tracks and U.S. 20. This plan also addresses connectivity in implementing complete streets along U.S., but more thorough connectivity throughout the vicinity should be considered and will need to be thoroughly managed through development and redevelopment requirements.

Portage/Ogden Dunes Station

At the Portage/Ogden Dunes Station, TOD will be implemented with minimal density and uses. The City of Portage has been ambitious in planning for TOD with development and connectivity concepts for the

station as well as the half mile vicinity.

The area planned for TOD is currently zoned marina waterway. This zone has a strict set of standards and uses that should be revaluated for TOD best practices. A considerable amount of land is planned for low density mixed use retail and housing, but is not supported by current zoning. With single and multi-family residential units already by the marina, the platted land is ready for a continued variety of housing to be constructed.

The City ordinances should also call out more specific parking requirements such as supporting parking structures and on-street parking instead of surface lots that is typical of TOD, for the most efficient use of land and enough spaces to support the station, retail and offices, and residences.

Connectivity in Portage has already been implemented with expansions of trails planned to connect Ameriplex and the Riverwalk. Other pedestrian friendly elements like wide and safe sidewalks, streetscape improvements, and bike lanes should be accommodated and standard for new development requirements, including new corridors.

East Chicago

In East Chicago, the current station will receive many upgrades to develop higher density uses, community amenities, and a more vivid character. But first, the City must allow for TOD to be implemented by reviewing and possibly amending zoning ordinances.

Currently, ordinances for building types are flexible, such as allowing residential units to be located above retail in commercial districts, usual in TOD, but need supplemental standards that guide other elements outside of buildings. This would include park space, connectivity infrastructure, corridor improvements, etc.

With a large, regional recreational space being planned along the river, the city should evaluate how amenities like this will be planned, constructed, and maintained. A well thought out and regulated park space will be more likely to attract both local people and visitors to the area.

Connectivity standards that accommodate both vehicular and non-vehicular travelers need to be established that create safe and efficient routes to all destinations in and outside the TOD. The traveling experience for everybody should be both safe and exciting, so streetscape materials and landscaping should have more specific requirements detailed in the City's ordinances.

As a tool to monitor the success of the action items contained in this plan, each community's readiness for TOD should be updated at any time to provide a current snapshot of the state of TOD in NW Indiana. Since each station location on the continuum is fluid, recommendations such as a new station area plan, a specific infrastructure investment, or the approval of an assessment district may result in a change in station scoring, essentially moving the station along in the continuum. As the recommendations in this strategic plan are implemented over the coming years, RDA staff, or community leaders can revise the analysis as necessary to maintain a strong understanding of the current level of TOD success. When the Comprehensive Strategic Plan is updated in the future, this analysis will provide the opportunity to examine what action items have had the greatest success in implementing TOD and how to improve each community's strategic approach to TOD in the future.

LOCAL TOD COMMUNITIES

STEPS AND STRATEGIES

A strategic approach to implementing TOD in Northwest Indiana includes both short and long-term actions that span multiple City departments and regional organizations. In order to catalyze development at the stations with the best opportunities for development in the next 5 years, the various municipalities need to identify City-wide TOD policies and specific action recommendations at the department level, finding realistic financing strategies to fund necessary planning, infrastructure, and marketing activities. This section identifies recommendations that cut across the TOD implementing agencies and require a coordinated effort to implement city-led investments that remove barriers to station area development.

1. ADMINISTRATION

A. Establish a local TOD Action Team

Short Term

Each municipality along the commuter rail line, or wishing to provide connections to the commuter rail line should work to establish a TOD Action Team comprised of a point person from each of the departments/offices most responsible for development around stations: Community Planning and Development, Department of Public Works, Department of Finance, Parks and Recreation Department, and the Office of Economic Development, with a focus on reducing internal conflicts and promoting strategies and programs that encourage successful TOD.

Local TOD Action Teams should meet on a monthly basis or as needed to address development and infrastructure projects in station areas and provide support to an appointed TOD steward.

In addition to regular monthly meetings, the local TOD action teams should come together on a semi-annual basis to participate in a regional TOD Action team work session and progress meeting.

B. Appoint a TOD Steward

Short Term

Each municipality along the commuter rail line, or wishing to provide connections to the commuter rail line should appoint a senior level staff person to act as a champion for TOD related policies and projects. The position should have the authority to coordinate and direct city departmental activities related to station/TOD development and investment.

This position should lead the initiatives of the local TOD Action Team and will work to develop and strengthen partnerships and relationships with municipal departments and outside public and private partners. As this position becomes more defined, the roles of the position should strive to include additional specialized assistance to both property owners and potential developers. As each municipality's station area developed the TOD Steward position should be expanded to a small team of TOD professionals with specific expertise in TOD planning, infrastructure and financing strategies.

C. Explore local and regional partnerships to plan for and implement TOD best practices

Ongoing

As various municipal departments and agencies work to coordinate efforts to implement TOD, additional opportunities may arise to identify strategic actions that remove barriers to development at stations. Examples of opportunities to partner with (on-going or upcoming) initiatives include:

- NIRPC Living Centers Initiative
- NIRPC Creating Livable Communities
- City of Valparaiso Transit Oriented Development Master Plan and Zoning Overlay
- Transit Feasibility Study, City of Hobart, Indiana
- Transit Feasibility Study, City of Portage, Indiana
- Marquette Action Plan
- South Shore Bikes on Trains Pilot Program

D. Prepare and implement ongoing community presentations

Ongoing

As TOD station area planning progresses, a variety of public engagement tools and strategies will be utilized to engage local residents and businesses. It will be important, that as each station area continues with its redevelopment that residents and businesses are provided a forum to learn about the changes and provide feedback and input. After all, successful redevelopment happens when you have the City or Town leaders, the residents of an area and businesses all supporting development and redevelopment of the area. Some of the recommendations and projects will require support from the public and a partnership with them. It is recommended that the municipality continue to have ongoing dialogues with the community through informative presentations and outreach open house sessions to build community support, create buy in and build momentum for the recommendations in this plan.

In order to facilitate these presentations, it is recommended that each municipality prepare a canned presentation including the history or the area, the planning process, the existing assets of the area, development recommendations and identified next steps. Speaking points should also be developed to accompany the presentation. Once completed, this presentation can be used by the local TOD stewards, municipal staff, community leaders and community advocates to continue spreading the story of transient oriented development, redevelopment and positive change to the adjacent neighborhoods. This presentation can be accompanied by additional communication tools such as brochures, local and regional websites and dedicated social media outlets.

2. PLANNING

A. Implement a community led land use plan that supports a variety of uses and guides future infill, revitalization and development efforts around each rail station

Short Term

The Comprehensive Strategic Plan Update provides a broad, regional examination of station area land use, economic development and transportation upgrades. Due to the nature of this plan, community specific values, goals and needs have not been addressed in a site specific manner. It is recommended that each community undertake a planning process to inventory the community needs, values and goals related to future development around the rail station. This planning process should be tailored to each community, and should include a series of meetings and discussions with local residents, business owners, organizations and municipal leadership. The process should strive to build consensus on future land uses, development aesthetics and necessary infrastructure improvements.

A future land use plan is a long-range conceptual plan illustrating preferred land uses that support the vision, goals, and principles for economic development set forth in this document. This plan is an integral tool for economic development. The plan, and its supporting definitions and guidelines are a result of a series of analytical and detailed analysis and conversations held with community residents and stakeholders throughout the planning process. Factors that informed the community land use plan include zoning, property owners, parcel size, topography, transportation and access, utility availability, environmental constraints, proposed land uses (from Comprehensive Plan) other plans, working group input, stakeholder input, and public input. This plan is not a zoning map, but should be used as a basis for future zoning changes, or policy documents. This plan, like any comprehensive land use planning map, is simply a tool to suggest, prepare for, and manage development opportunities as they may arise within the study area.

Using the regional market assessment and market demand analysis outcomes (Strategy XX) as a guide, each community should work to determine applicable future land use categories, definitions, development design guidelines and parcel specific applications within a half mile radius of each transit station. Included with the plan should be a set of projections that identify anticipated capacity shortfalls for both vehicular corridors and utility infrastructure. The plans should also include a specific set of implementation strategies so that the planning for transit oriented development can continue and evolve.

When complete, each community's future land use plan should be referenced and thoroughly reviewed to consider the location and type of new development within the station area. While a comprehensive, regional process would provide efficiencies and consistency to the planning process, each community can undertake this land use planning process independently. If approaching the process on an independent bases, it is recommended that regular updates be presented to adjacent communities so that inconsistencies in future development needs can be addressed prior to formal policies and regulations are developed.

Each community's future land use plan should be updated every five years, as the goals and vision of the community changes, or when substantial changes to the development pattern in the area occur.

B. Update the community zoning ordinance to create new zoning classifications and overlays to better guide development around each rail station

Short Term

Design policies regarding building materials, colors, landscaping, size, height, streetscape, awnings, signage, and facades should all be considered for any new or modified developments. As more development around each station area begin to meet newly created design standards, the overall visual appearance of each community will begin to transform. Design policies could be created in multiple ways. New design details could be amended into the existing city or town zoning ordinance or new overlay districts with separate standards could be created. An overlay would be a new ordinance with separate standards placed upon an existing area. In many communities, overlays are a great way to maintain the existing policies while further developing more standards to meet a more specific vision for a particular area.

It is recommended that each municipality utilize the public planning process identified to develop the design standards and policies specific to each station area. Each community will need to explore the varying types of regulating policies to determine the preferred type of zoning/ development regulation tool. While the type of regulation tool may vary depending on municipality, the tools should be creative, flexible and reflect the needs of a changing market. By providing a framework of standards that allow for creativity in design and application, future development can respond to the varying economic demand in a variety of ways.

Following the completion of the preferred regulation tool, it is recommend that each municipality adopt and enforce the new design standards to all new and modifying developments in the station area by establishing a special development review process. The development review process should utilize local code enforcement departments and should be clear and efficient to aid in development timelines.

C. Participate in a property inventory, analysis and prioritization for the development area surrounding each rail station

Mid Term

Each municipality is focusing on developing, redeveloping and revitalizing up to a half mile radius around each commuter rail station. In order to help facilitate development and redevelopment in these area it is recommended that each municipality conduct a more detailed inventory of each property within the area of focus. The intent of this recommendation is to identify and document the condition and ownership of all parcels within a half mile of each commuter rail station.

A property database should be created for this area that is linked with both local and regional GIS databases and parcel information. This property database would allow local municipalities to track the changes in the area as well as to help prioritize where scarce resources should be focused to create redevelopment and development opportunities around each commuter rail station. The database should include a variety of characteristics that include specific parcel attributes (e.g. distance to parks, distance to rail, access to interstates, property acreage, ownership, assessed value, zoning, future land use, etc.) and identify opportunities for various types of future development. All this information would not need to be manually collected but could be a merger of several attributes including information from local Planning and Economic Development departments, the County Assessor's office, and regional NIRPC, RDA or NICTD databases.

Because the development area around each commuter rail station varies, each municipality will need to develop a strategy for the implementation of this recommendation. As identified earlier in the document, there are several key areas that have been highlighted for economic redevelopment, neighborhood based retail infilled with residential, or for tourism based uses. Municipalities should focus on their individual station areas and collaborate and share information to create a regional database.

D. Implement a community thoroughfare plan that accounts for the future travel demands around each rail station

Mid Term

Having a high quality transportation network that accommodates a diverse mix of transportation methods is vital to the success of transit oriented development. The streets surrounding transit stations need to support multiple transportation modes — automobiles, buses, pedestrians and bicyclists, taxis — and provide for the safety of all users. The design of intersections and crossings, sidewalks and transit stops should consider the safety of the young, the elderly, and the mobility impaired. Each community's transportation network is unique and therefore each community will need to plan for upgrades in their own way. It is recommended that each community work to upgrade their existing thoroughfare, or transportation masterplans to account for increased vehicular trips to and from the transit stations, and to proactively plan for the incorporation of bicycle, pedestrians and local transit facilities. Each community should review the following:

Vehicular Routes:
Pursuing high quality roads will not only reduce damage done to cars from potholes and uneven surfaces, but it will also significantly improve safety, access, and the public realm's aesthetic appeal. The community's thoroughfare plan should outline priority areas for future street projects, such as corridor upgrades and intersection improvements. These projects should be selected based on information provided by the public and from an extensive road transportation analysis. Pursuing transportation projects identified in the thoroughfare plan will not only improve safety, access, and aesthetic appeal of the community's transportation system, but it will also enable the town to effectively plan for changes in street capacity. For roadway segments that do predict a level of service decrease, proactive planning can take place to address future needs in terms of

corridor right of way, utility relocation and funding requirements.

Pedestrian Planning:
Pedestrian facilities are also a major component of any transportation network. Pedestrian infrastructure, such as sidewalks and multi-use trails, are vital amenities in transit oriented neighborhoods. Studies show that the walkability of the streets surrounding a station has a significant impact on whether people will choose to walk and ride transit, and the placement of transit station facilities should not get in the way of walkability and placemaking. Each community should inventory and analyze the pedestrian infrastructure within each station area by identifying the condition of existing facilities, the locations of problem areas, and the character and perception of the area the facilities are in.

Complete Streets Policy Planning:
A Complete Streets Policy Program may be explored to plan for each community's vision for complete streets and multi-modal travel accommodation. The needs of all users (motorists, pedestrians, and cyclists) should be taken into account when pursuing street improvement projects. Elements such as appropriate street lighting, pedestrian facilities, crosswalks, and landscaping ensure high quality design as well as a safe environment for all street users. Whenever possible, street projects should be coordinated with the proposed sidewalk and trail improvements to begin developing a unified multi-modal transportation system. Any resurfacing projects should be accompanied with sidewalk and ADA upgrades.

E. Implement a community led bicycle and pedestrian master planning process that supports high quality sidewalk and bicycle networks to encourage multi-modal connectivity in and around each rail station

Short Term

While non-motorized initiatives and strategic planning have begun at a regional level, it will need to become a key area of focus for the local municipalities as the demand for transit oriented demand grows. Communities will need to support and strategically incorporate non-motorized facility planning into their planning processes for community development, transportation planning and zoning codes. It is recommended that communities undertake a proactive planning process to begin to identify strategic recommendations for the following:

- Support a full bike route network that connects people to popular origins and destinations within each community
- Encourage bikeshare programs and bicycle amenities including bike racks and shower facilities within private development;
- Install infrastructure to support pedestrian and bicycle access including a full network of sidewalks on both sides of every street and pedestrian intersection improvements;
- Incorporate universal design practices for new roadway corridors that take into consideration the needs of all non-motorized users;
- Incorporate design parameters such as narrower lane widths, on street parking, curb bump outs at corners, visibility at intersections and marked crosswalks that encourage slower traffic speeds in appropriate areas.

The master planning process should be used to gain consensus on the community needs, values and goals related to bicycle and pedestrian movement. This planning process should be tailored to each community, and should include a series of meetings

and discussions with local residents, business owners, organizations and municipal leadership. The process should provide specific recommendations on facility type, routes, phasing and implementation strategies.

The bicycle and pedestrian master plan should be comprehensive and include all, or the majority of the municipality. While the process can be undertaken at the same time as the transportation master planning process described in Strategy XX, the process can also occur independently. The recommendations generated during the master planning process should be included in each community's updated, or newly developed Capital Improvements Plan as discussed in Strategy XX.

F. Develop and regularly update the community Capital Improvements Plan

Ongoing

As TOD planning and implementation progress continues within the community's, the community Capital Improvement Plans must be regularly updated to include any new needs or concerns that may arise. These Capital Improvement Plans are a major guiding document for city staff and must be accurate even in a face paced environment such as these TOD development areas.

3. ECONOMIC DEVELOPMENT

A. Utilize a variety of economic development tools to attract new businesses and expand the community's economic base

Ongoing

There are a number of economic development tools that can be used to attract new businesses and grow existing businesses within the TOD areas. Some of these tools help provide financial assistance and incentives. In places where a TIF boundary is present, this economic development financial tool should be fully understood and leveraged to aid in the TOD development. The communities should also continue to utilize all other economic development organization's tools to maintain good relationships and attract new business. Some of these strategies include:

- Review existing TIF boundaries and modify if necessary.
- Explore additional commercial and industrial target-growth areas suitable for establishing TIF districts.
- Leverage TIF funds to purchase land and improve infrastructure in sites suitable for Shovel Ready designation.
- Continue to utilize regional and statewide economic development organizations for resources to attract new businesses.

B. Assist growth and expansion of existing businesses and foster entrepreneurship to strengthen the local economy

Short Term

The existing businesses located within the TOD development areas are also important to consider. These businesses can help grow and expand the land uses and services provided in the TOD. By fostering entrepreneurship and supporting existing businesses, the communities will be able to create a strong local economy.

4. IMPLEMENTATION

A. Improve and expand existing utility infrastructure to properly serve new and existing users

Long Term

In order to grow and expand potential development within the areas, it is important to improve and expand among existing utility infrastructure within the TOD area in order to properly serve the needs and capacity of the proposed land uses. While some areas may just need improvements, other areas may not have any or all of these utilities at all and will need them installed. These utilities include:

- Sanitary Sewer
- Water
- Stormwater
- Electric
- Gas
- Fiber/High Speed Internet

B. Using adopted planning documents and capital improvement programs, proactively apply for local, state and federal funding to implement TOD infrastructure

Ongoing

Various local, state, and federal funding opportunities may arise in future years for TOD implementation. It is important to utilize the adopted plans and capital improvement programs to competitively go after some of these funding opportunities.

NORTHWEST INDIANA REGIONWIDE TRANSIT ORIENTED PLANNING

STEPS AND STRATEGIES

Crucial to the implementation of any successful regionwide transit oriented development program is the leadership of regional development organizations. Within Northwest Indiana, the RDA is by no means the only regional organization involved in this process. NIRPC is the region's MPO and therefore tasked with taking the lead in transportation and regionwide community planning. Local communities and NICTD also have responsibility to coordinate their development efforts across boundaries but within the region.

The following observations and recommendations are gleaned from best practices in community development related to transit from around the nation. Not all of these initiatives may apply in Northwest Indiana, but are intended to provoke thoughtful initiative in making the vision for transit oriented community development a reality.

1. ADMINISTRATION

A. Establish a Regional TOD Action Team with representatives from each community or jurisdiction

Short Term

The Regional TOD Action Team will be comprised of a point person from each of the communities or jurisdictions within the TOD Station areas. The Regional TOD Action Team will be a way for all contributing communities and organizations to meet on a quarterly basis and update each other on the status of their TOD developments. These representatives of this team can be from a variety of city departments and professions including:

- Department of Community Planning and Development
- Department of Public Works
- Department of Finance
- Department of Parks and Recreation
- Department of Economic Development

It is important that the Regional TOD Action Team also have representatives from other regional TOD related organizations such as the RDA and NICTD.

B. Appoint a TOD Steward

Short Term

Once the committee for the Regional TOD Action Team is established, a chairperson should be appointed to act as the champion for TOD related policies, projects, and schedules set by the TOD Action Team. This person should be knowledgeable of TOD's and the region. They should have technical expertise when it comes to financing, master planning, zoning, and approvals on a local level. This person should also have authority to coordinate directly with all represented communities and organizations and will be the point of contact for all public concerns and questions directed to the team. If needed, this chairman position can be expanded to a small executive team to help manage the structure and impact of the TOD Action Team.

C. Explore and strengthen regional partnerships to plan for and implement TOD best practices

Short Term

In order to create a TOD program throughout the entire region, it is important to create and maintain regional partnerships and relationships to keep informed and current with TOD best practices. A variety of organizations on a local, regional, and state level can be influential in the development of the TOD stations. Economic Development, planning, marketing, tourism and other

D. Prepare and make available on a public platform TOD resources at a local and regional level

Ongoing

All materials related to the status and progress of the TOD planning and implementation projects throughout the communities should always be made available on a public platform, such as city websites, so that the public can stay educated and current with the status of the TOD developments. The resources should be available on both a local and regional level to allow easy access and transparency of the vision and goals of these TOD strategies. These resources should include any approved and finalized planning documents, master plans, schedules and timelines, and any other public information as it relates to specific projects as communities begin their implementation phases.

E. Conduct community presentations

Ongoing

It is important to conduct regular community presentations to keep the public updated and informed of the planning and implementation processes. These community presentations are a great method to educating the public and gathering valuable input and data. The more informed and involved the community is throughout the process, the more well received the TOD planning and development projects will be. There are various ways of continuing ongoing community presentations. Some of these methods include:

Stakeholder meetings:
Stakeholder meetings are a great way to gather community members that are directly involved or impacted by the TOD development projects and their represented organizations. Stakeholder meetings can include groups of people related to community topics such as business owners, schools, health, infrastructure, housing, and many more. Meeting with these specialized groups of people is a great way to get clear and direct information related to a certain topic. Stakeholder meetings gather people with similar interests and expertise and allows them to openly discuss the impacts of TOD development on their topic.

Regional annual meetings with communities:
Regional annual meetings with communities and task forces is a great way to educate and update the public of the TOD status', achievements, and future plans. The venue of this annual meeting can rotate throughout the communities. The hosting community for this event can take advantage of this event to showcase their accomplishments and celebrate progress. In addition, all other attending communities can inform the group of their individual progress to keep the conversation open and current. This is a great way for TOD players to build relationships and stay up to date with one another.

F. Establish a Regional Housing Authority

Mid Term

Establishing a Regional Housing Authority will help drive the housing market within the TOD areas. This Regional Housing Authority would be the key responsible organization for attracting a diverse housing market to appropriately fit the proposed future land uses within this plan. The Regional Housing Authority would be a great tool and resource for pursuing future development and funding opportunities. The creation of this authority would ensure a progressive, competitive, and unified understanding and vision for the regional housing market, both as it relates to the region and the TOD development areas.

G. Establish a Regional Parking Strategy of Regional Parking Authority

Mid Term

Parking strategies are an important influence on the success of a TOD development. Because of this, a regional parking strategy must be established to properly and efficiently plan for parking within these planning sites. A regional parking strategy of a Regional Parking Authority must be a guide for parking within all TOD communities and will be a tool in decision making that manages parking as a valued asset, acknowledges a variety of land use patterns and context, and encourages an integrated approach to parking management with a commitment to stakeholder outreach and relationships. The Regional Parking Strategy must address five major factors when it comes to parking. These parking factors include:

- Demand
- Location
- Time
- Pricing
- Supply

A successful TOD is not focused on extensive amounts of parking and does not cater to large

surface parking lots. The Regional Parking Strategy will ensure a proper balance of supply and demand of parking for various users and land uses within the TOD development. The goal is to wisely limit parking resources and promote efficient use of parking facilities and space within the TOD area. In a TOD, density is encouraged and creative parking solutions must be used to successfully create this type of environment.

2. PLANNING

A. Conduct a regional market assessment and market demand analysis

Short Term

To fully understand the existing conditions and future opportunities for the regions TOD sites, a regional market assessment and market demand analysis is encouraged. These studies will illustrate the current market supply and demand throughout the area. In addition, these studies can be used to help guide the specific land uses and businesses that should be pursued and established within the areas to help ensure economic success.

B. Establish a Technical assistant program that would be made available to local communities

Ongoing

As communities begin to implement their TOD area plans, it is important that the RDA provides an ongoing technical assistance program to help support local communities as the need arises throughout the implementation phases. As the regional organization development authority and key supporter of TOD development within the local communities, it is the RDA's responsibility to provide local communities with the tools, resources, and knowledge they need in order to create a successful TOD development. The individual success of each communities TOD development will determine the overall success of the regions unified TOD initiative and vision. Technical assistance can be in the form of providing expertise contacts and network and answering general TOD questions as it relates to the construction and funding of the TOD development.

C. Implement and house a regional property inventory analysis and prioritization for the development area surrounding each rail station.

Short Term

Implementing a regional property inventory analysis will allow communities with TOD stations to fully understand their existing infrastructure and potential development buildings available

for reuse. This will also help communities begin to prioritize their implementation phases by providing more a more detailed idea of the cost estimates and timelines it will require to create some of these developments. The property inventory analysis will also identify property owners within the TOD site and will be useful when trying to acquire land for development. Overall, communities will need to rely on a regional property inventory analysis to create the most accurate and strategic plans possible for TOD development.