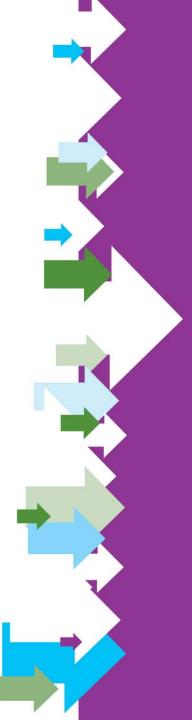


Washtenaw County Transit Master Plan A Proposal to the Citizens of Washtenaw County

Volume 1 A Transit Vision for Washtenaw County



Draft for Public Review



During the TMP Outreach Program

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Jesse Bernstein, Chair Sue McCormick, Treasurer Charles Griffith, Board Secretary Anya Dale Roger Kerson David Nacht Rich Robben

Welcome

We are delighted to present the Transit Master Plan on behalf of TheRide and are excited by the opportunity it provides to move the transit discussion forward here in Washtenaw County.

It is critical that we act now to ensure that our community flourishes in future, to protect our quality of life and beautiful environment, to make certain that we retain our intellectual capital and youth, and to keep attracting the best minds and investors to our County. Transit will continue to be a key driver for land use development over the next thirty years and this Plan will help us shape our community around community pride and local opportunities.

In 2009 we carried out a survey of Washtenaw County residents which showed that 72% consider providing public transit services in the County to be extremely or very important. This helped us identify the need for expansion of public transportation services countywide and led to TheRide's Board of Directors adopting a new mission and vision to articulate the Authority's future direction:

The Mission Statement

It is the mission of the Ann Arbor Transportation Authority to provide useful, reliable, safe, environmentally responsible and cost-effective public transportation options for the benefit of the Greater Ann Arbor Community.

The Vision Statement

The Ann Arbor Transportation Authority shall be the public transportation provider for Washtenaw County. Our customers shall see AATA's expanded services as the preferred option for traveling to destinations within the county, as well as to and from the county. AATA will offer appropriate modes of transportation with the most efficient use of resources. These services shall enhance the quality of life for Washtenaw County stakeholders while promoting the economy, safeguarding the environment, and strengthening communities.

We are confident that you will be as excited as we are upon reading the Plan and will be excited to work with us to realise our County's potential. The Plan is just the start of the process and we hope you will support us to implement, monitor and refine the Plan over the next thirty years.





Jesse Bernstein (Board Chair) and Michael Ford (CEO) TheRide, Ann Arbor Transportation Authority

Thank you

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Thank you

State and Federal Legislature

TheRide appreciates the opportunity to brief the following members of the State and Federal Legislature (and/or their staff): US Senator Debbie Stabenow, US Senator Carl Levin, US Congressman John Dingell, US Congressman Tim Walberg, State Senator Rick Olsen, State Senator Rebekah Warren, State Rep. Jeff Irwin, State Rep. Mark Ouimet, State Rep. David Rutledge.

Moving You Forward Leadership Group

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Washtenaw County in Context

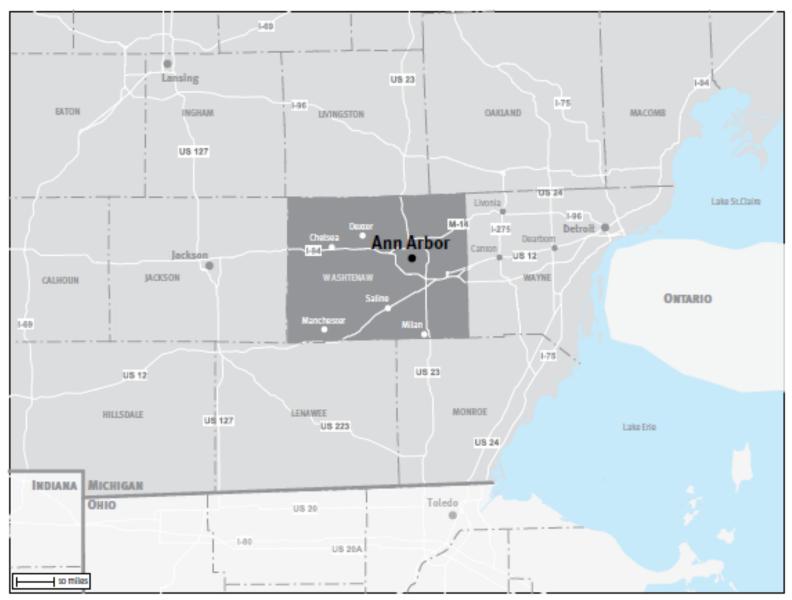


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Walkable communities in Washtenaw County

Chapter 1: Introduction

What is the Transit Master Plan?

The Moving You Forward Transit Master Plan for Washtenaw County is a new long range plan which sets out a transit vision for the whole County for the next 30 years.

The Plan is the culmination of 9 months of work identifying the challenges and needs and developing options and scenarios to address them.

The Plan provides a robust, feasible and integrated package of transit investments and services, designed to make transit a real transportation choice for everyone in Washtenaw County.

Why do we need the Transit Master Plan?

Today there are a number of transit providers in Washtenaw County providing essential services within their communities; however, the coverage of services both geographically and temporally is inconsistent across the County and many residents and employees do not have transit options available to them.

The County faces serious challenges over the next thirty years: tackling poverty and congestion and meeting the needs of the aging population, while attracting and retaining young people and supporting growth in the regional economy.

Current forecasts indicate that the County will experience dispersed growth in population but greater growth in employment that will be geographically concentrated in the cities and villages. This poses serious land use, environmental and social issues that need to be tackled now.





Introduction





Smart Growth Locally

In many areas of the County, local authorities and organizations have already mobilized to tackle urban sprawl, the subdivision of rural property and the loss of agricultural land. The aims of the local smart growth are to protect the quality of life in Washtenaw County and create livable communities with a focus on high quality, higher-density, mixed-use neighborhoods. Communities that are designed with a greater emphasis on walking, cycling, transit use and "complete streets" will enable residents and visitors to become less reliant on the private car, providing for a more sustainable future.

This Plan fully supports smart growth locally and will provide the transit foundations to guide and support sustainable land use development over the next thirty years.

Smart Growth Globally

The global economic crisis and increasing concerns about energy security and rising gas prices have further highlighted the need for local communities to be able to become **both** more sustainable and self sufficient, and also more competitive globally.

This Plan sets out a transit network that will help attract investment; while also enhancing quality of life and providing cost effective and environmentally sustainable access to jobs, services and recreation.

Putting the Passenger First

TheRide has made bold steps in recent years to modernize its planning system. By putting the passenger first, TheRide is developing services and facilities that make life and using transit easier for the passenger. This mind set is and will be applied in all aspects of the transit network.

Introduction

Learning from others

Masterplanning delivers Light Rail Transit and Redevelopment

Dublin, Ireland

In 1995, the Dublin Transportation Initiative (DTI) established a new approach to planning in the city to enable and encourage future economic development, focusing on investment in transit, multimodal integration and implementing travel demand management. In consultation with stakeholders, the DTI developed a master plan and recommended the development of a three-line Light Rail Transit network at the core of an enhanced, integrated transit network but also to support the achievement of wider land use and social cohesion objectives in the City. Two of the three lines have so far been delivered and have helped realize redevelopment and higher density, sustainable development.



Improvements in: How this option improves Washtenaw County: Effects of all your choices: Local and Countrwide Cor lew Commuter Express vew Transit Hubs + Pinckney Regional Connectivity Downtown Environments Urban Bus Service Conton to Dearb High-demand Transit Corridors Ann Arbon WASHTENAW ? help **O** reset

🔺 Washtenaw County Transit Master Plan Game



Outreach – online and at summer events

Introduction

Developing the Transit Master Plan

TheRide began developing the Transit Master Plan early in 2010 and set out a three phase planning process supported by an extensive program of community outreach.

Each of the phases of outreach has involved formal and informal meetings with members of the public and stakeholder groups and organizations, many of which have been jointly hosted by Partners for Transit. In addition, a Leadership Group (made up of community and business leaders) and a Technical Committee (made up of local planners and operators) have met in each phase to provide input in to the process. TheRide has also created the MovingYouForward website and regular newsletters to update members of the community.

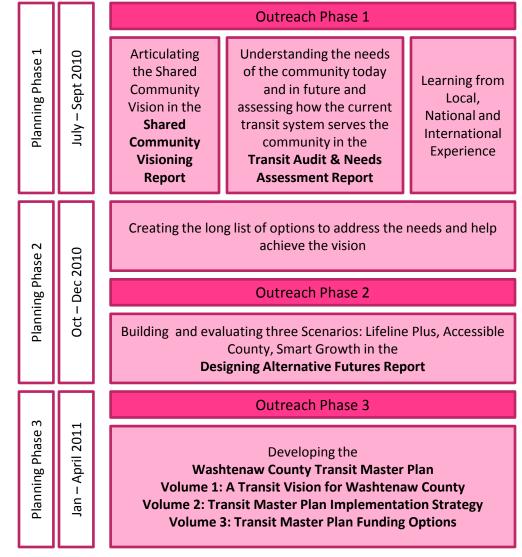
During Phase 1 the team sought the views of members of the public by attending seven events across the County, surveying almost a thousand people (in person and online), and meeting with eleven community organizations.

In Phase 2 opinions were gathered in twenty public meetings held across the County and the Transit Master Plan Game provided the public with an opportunity to learn about some of the transit options being considered and tell us about their needs and preferences.

Most recently, in Phase 3, a further twenty public meetings were held across Washtenaw and a survey allowed members of the public to pick from and comment on the three alternative scenarios.

In additional to the formal outreach process, the team have held and attended additional meetings and presentations throughout the planning process to inform people and gather their views.





Chapter 2: Transit Today

Modern low floor buses with hybrid technology operating between Ann Arbor and Ypsilanti on Route 4A



Transit Today

Working Together

Today there are three public transit operators in Washtenaw County (TheRide, the West-Washtenaw Area Value Express (WAVE) and the People's Express), a large number of social, community, health, education orientated providers and many private operators. Supporting these there are a number of organizations which provide information, education or other transit related services within the County.

Many of these operators and providers already work together, sharing information and/or resources; but there is further opportunity to integrate resources and services.

TheRide Working Efficiently

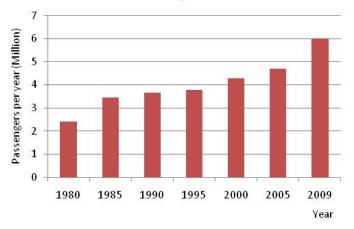
When TheRide introduced fixed-route bus services to Ann Arbor thirty years ago it carried 2.4 million passengers in its first year. Following network expansion and improvements to services, TheRide carried over 6 million passengers in 2009 as shown in the graph on the right.

The Ride recently commissioned an organizational audit (2010) which found that:

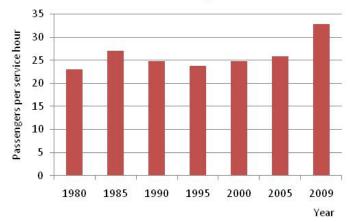
- AATA had experienced annual cost increases of 1.2% compared to peer average of 4.3%;
- Riders per service-hour climbed from 22.8 in 2003 to 31.2 in 2008, surpassing the peer group average (the graph on the right shows the 2009 figure to be 32.8); and
- Cost-per-ride decreased from \$4.23 in 2003 to \$3.18 in 2008, for an average annual decrease of 5.5%.

Overall, the audit presented a positive picture of TheRide's operations.

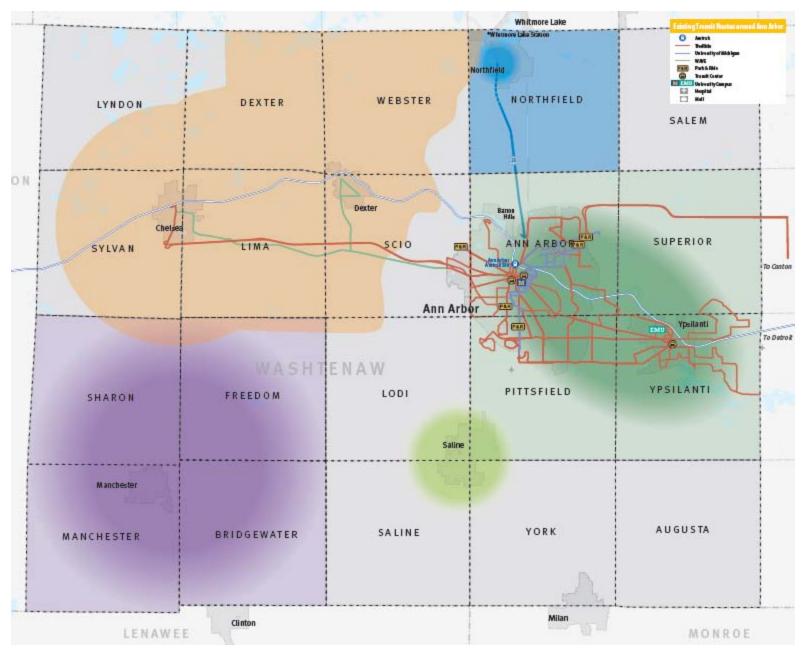
Fixed Route Ridership







Transit Today in Washtenaw County



Transit Today

What's provided?

The map opposite shows the fixed route, inter-urban and door-todoor transit providers in the County, as detailed below.

TheRide provides a fixed route bus network in and around the cities of Ypsilanti and Ann Arbor. The network in Ann Arbor is complemented by the **University of Michigan** fixed route network. As TheRide is currently part-funded by a property tax in the City of Ann Arbor, the city has the greatest network coverage (geographically and temporally). Additional services such as those in Ypsilanti and the connecting townships are operated under Purchase Of Service Agreements (POSA) and often means that services are limited and TheRide can not always choose to enhance them. TheRide also offers a door-to-door service (dial-a-ride) for ADA eligible residents in the core urbanized area and two commuter bus services to other local communities (Chelsea and Canton).

The **WAVE** operates an inter-urban bus between Chelsea, Dexter and the edge of Ann Arbor, a community circulator within the City of Chelsea, and a door-to-door service within 5 miles of Chelsea and in the Dexter School District.

The **People's Express** operates door-to-door services in Northfield Township and in the City of Saline. A semi-flexible service is also provided between Whitmore Lake and Ann Arbor.

The **Manchester Area Senior Services** is a seniors club which provides a limited service for seniors in and near Manchester and particularly provides access to a lunch club.

AMTRAK's Wolverine service operates from Chicago to Detroit and Pontiac serving Ann Arbor in Washtenaw County.

There are also a number of private coach services operating in the County, including the Michigan Flyer, Greyhound and Mega Bus.



The WAVE inter-urban bus between Chelsea, Dexter and the edge of Ann Arbor



The Wolverine AMTRAK service from Chicago to Detroit and Pontiac calling at Ann Arbor

Chapter 3: Rising to the challenges



Overview

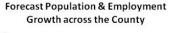
TheRide's discussions with the public and research on the needs of the community today and in future and how the current transit system serves the community has enabled the identification of six key needs:

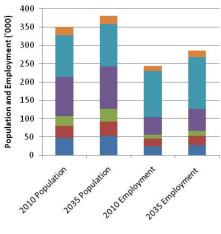
- Transit Dependents Insufficient access to lifeline destinations
- Congestion Increasing road congestion
- Regional Economy Lack of transit connectivity throughout the County
- Aging Population Increasing mobility needs due to an aging population
- Choice Riders Transit currently has limited appeal to choice riders
- **Youth** Attracting young people to Washtenaw County and public transit The key needs are the most significant challenges facing Washtenaw County that transit can help address.

Transit Dependents - Insufficient access to lifeline destinations

Definition: A transit dependent person has no alternative to using public transit on a daily basis. Limited access to vital destinations, such as grocery stores and medical facilities, can have serious health and social implications on individuals and the community as a whole, as can access to employment and educational opportunities.

Accessibility of lifeline destinations within the City of Ann Arbor, which contains approximately a third of Washtenaw County residents, is fairly robust. However, the 61% of County residents that live outside Ann Arbor and Ypsilanti have no fixed-route service providing access to grocery stores, medical offices, and other essential destinations. Demand-responsive service is available in many of the outer cities and villages, but is generally limited to certain groups, and offers service to a limited set of destinations. The majority of the 6% of County residents that live in the City of Ypsilanti have service to most lifeline destinations during weekdays, but very limited service at night and on weekends. If transit access to key destinations continues to be limited, it is likely that the existing income gaps between different parts of the County will widen, as areas with limited access will continue to be seen as undesirable places to live and work.





Northwest
 Northeast
 Southeast
 Ann Arbor
 Ypsilanti

Rising to the challenges

Congestion - Increasing road congestion

As the demand for travel across Washtenaw County increases, roads in the area are expected to become significantly more congested, increasing travel times for all road users. Unchecked increases in congestion will also drive dispersed development, particularly of employment locations, and have a negative impact on economic efficiency. Figures 3.1 and 3.2 show the forecast change in congestion between 2010 and 2035. The Washtenaw Area Transportation Study (WATS) classifies roads with a volume to capacity ratio of more than 0.8 as congested. Those roads shown in orange and red are those which will be highly congested and operating above capacity in the morning peak hours.

Regional Economy - Lack of transit connectivity throughout the County

Currently, the transit connections between the cities and villages of Ann Arbor, Ypsilanti, Chelsea, Dexter, Manchester, Saline, and Milan are very limited or non-existent. Improved connectivity will allow outer cities and villages to strengthen economic ties with each other and with Ann Arbor and Ypsilanti and make it easier for these locations to market themselves as 'destinations.' This will support the development of the regional economy. On the other hand, if connectivity does not improve, many residents of the outer cities and villages will remain isolated from other activity centers in the County.

Aging Population - Increasing mobility needs due to an aging population

As the population ages and seniors become more dispersed throughout the region, there will be an increasing need for transportation options for this market segment, in order to maintain individuals' current standards of living. As drivers age, vision loss, hearing loss, reduced reaction times, as well as more serious conditions such as dementia frequently detract from the ability to safely drive a car. According to the National Institute on Aging, more than 600,000 American seniors stop driving every year; at this point, these seniors are completely dependent on others for their transportation needs. To the extent that public transit is viewed as a reliable means of transportation, it can play a major role in allowing seniors to maintain a sense of independence and social connections with others.

In Ann Arbor, population is expected to increase by 1.1% between 2010 and 2035, while the forecast employment growth is 13.3% (SEMCOG, 2008). This indicates that an increasing number of people will be traveling in and around the County for work.

According to the 2009 AATA Onboard Survey, 39% of transit riders valued transit service outside of Ann Arbor-Ypsilanti as "very important" or "of some importance."

9% of Washtenaw County's population is currently aged 65 or above. By 2035, seniors 65 and above are expected to make up approximately 23% of the population (SEMCOG, 2008).

Figure 3.1 Forecast 2010 Washtenaw County Congestion

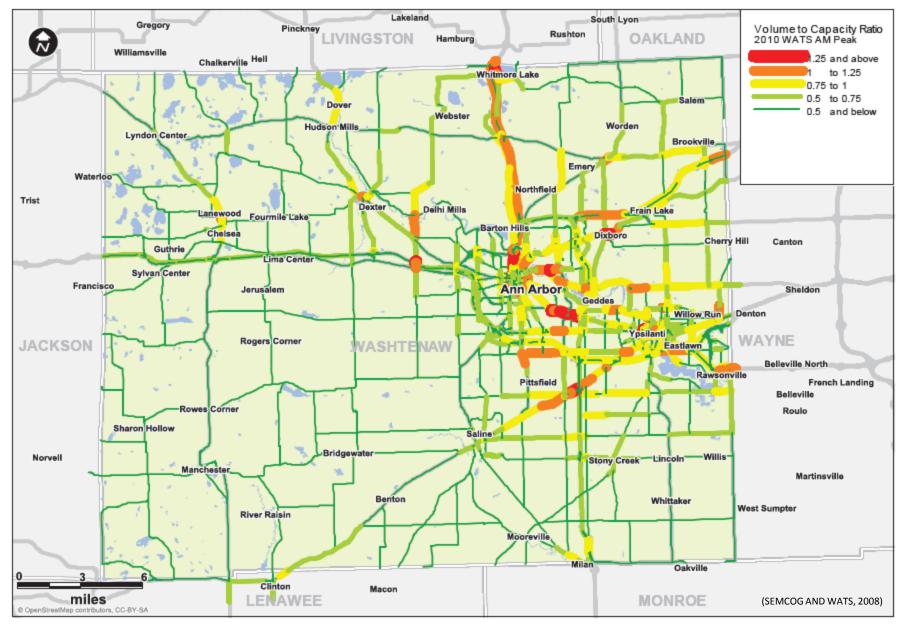
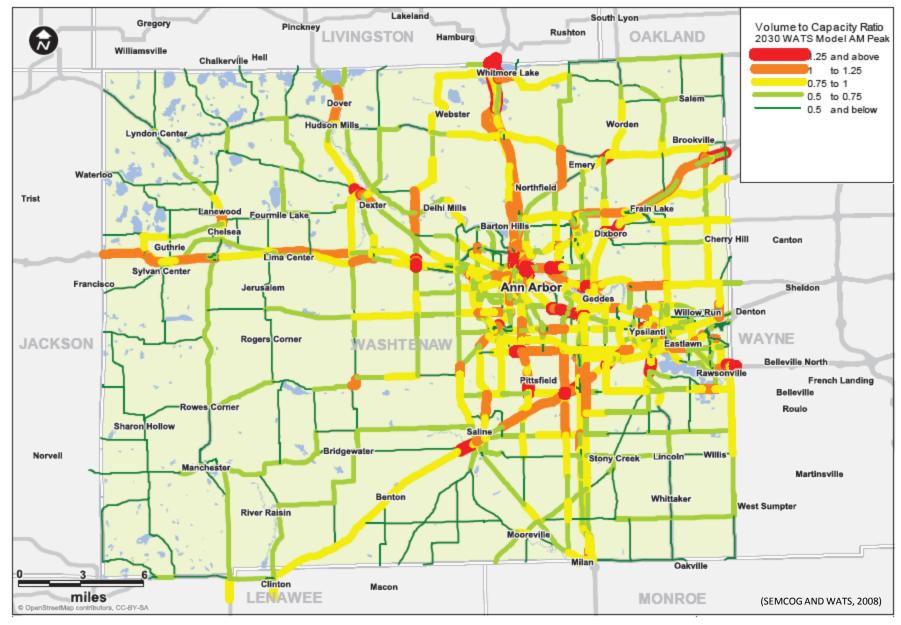


Figure 3.2 Forecast 2035 Washtenaw County Congestion



Rising to the challenges

According to the 2009 AATA Onboard Survey, 37% of TheRide riders own or have access to a car but choose to ride the bus. As TheRide looks to increase its share of these choice riders, it will need to make improvements in these areas to make transit more competitive with private auto.

Washtenaw Area Transportation Study (WATS) conducted a Youth Mobility survey in 2006 which explored the primary modes of travel for middle and high school youth across the County. The survey showed that 63% of students either drive themselves or are driven by a parent or friend, while only 6% use transit or a bike.

Choice Riders - Transit currently has limited appeal to choice riders

Definition: A Choice Rider is a person who has access to a private vehicle but chooses to use public transit.

TheRide has already begun tackling perceptions of transit and making changes to the network to attract choice riders, for example, by:

- Providing express services,
- Creating Park & Ride opportunities for the urban bus network, and
- Working with the Ann Arbor Downtown Development Authority and getDowntown to promote transit with the go!pass and the Commuter Challenge.

There is, however, more that needs to be done to attract people away from their cars. Improving travel times and bus service frequencies and making information more accessible will be central to addressing this issue.

Youth - Attracting young people to Washtenaw County and public transit

The cultural change required to help achieve Washtenaw's goals and address its needs must start with young people. Ensuring that young people have mobility options, and understand them, will mean that they benefit from greater independence and access to local opportunities and the County benefits by retaining a diverse population.

Many young people and young families are increasingly placing value on having a more sustainable lifestyle. Walkable, bikable and transit oriented communities can provide the type of lifestyle desired and support other attractive opportunities in the arts, jobs, education, retail and recreation.

The table opposite shows a Strengths, Weaknesses, Opportunities and Challenges (SWOC) analysis of transit and the County undertaken to inform many of the challenges discussed above and identify other related issues.

Rising to the challenges

SWOC Analysis of Transit and the County

Countywide/Regional analysis of wider issues

Transit analysis

Strengths	Weaknesses
 High quality of life Strong universities and medical facilities Progressive attitudes 	 Low density development on the urban fringes and in the rural areas Less diverse economies outside Ann Arbor
 Good existing coverage within Ann Arbor Recent ridership growth Recent performance improvement relative to peers Fleet / facilities TheRide's forward thinking attitude 	 Limited service in Ypsilanti Many areas of the County and some major trip generators are unserved Low service frequency on many routes Winter weather can deter choice riders
Opportunities	Challenges
 Improving coordination of major planning efforts across jurisdictions Contributing to quality of life through transportation choice Encouraging higher-density development 	 Uncertain economic conditions Aging population Increasing congestion Lengthening commutes Mitigating environmental impacts of growth Nearly all population growth expected to take place in outside the core urban area of Ann Arbor and Ypsilanti
 Providing integrated transportation solutions Steering land use development and supporting transit-oriented / sustainable development Marketing services as a viable transportation choice Educating students (college and K-12) on benefits of transit Increasing commuter share Adding key service outside of the County e.g. airport service and other connectors Finding unique funding sources Strengthening the hub and spoke urban bus network Preferential treatment of transit (e.g. signal priority, bus lanes) Attracting more choice riders through means such as improved information quality 	 Maintaining and improving coordination with other transit operators Adapting the network structure to meet the changing transportation needs of Washtenaw County residents Expanding to County level while maintaining sufficient service in the urban area Providing transit for an increasingly dispersed region Providing service to areas of new population and employment growth Providing service to an increasing number of commuters from outside Ann Arbor High turnover of population and riders Finding the funding

Chapter 4: Achieving our wider goals

Transportation helps us achieve our wider goals

Developing transportation does not just help us travel from 'A' to 'B', but is proven to enable other activities and help us achieve other community goals. In Phase 1, TheRide asked the community members about their aspirations and needs for the future and about what they value or would value in the community and further afield. This phase of outreach, along with a detailed review of over 50 planning documents for Washtenaw County, enabled the development of six 'Goals'.

The seventh Goal has been derived from a key theme running throughout the planning process – the need for transportation to shape and drive land use development. For this reason it is considered in further detail in this chapter.

All seven Goals are shown in the table below.

The Goals

Support economic growth in Washtenaw County

Promote livability in Washtenaw County

Improve access for all

Facilitate a healthier community

Protect the environment

Improve safety and security for all

Promote efficient land use and development patterns

"I think it made a huge difference to many of the people I know in terms of maintaining their places of employment – the bus gets them there and it gets them there on time. Ronnie Peterson, Washtenaw County Commissioner

"I've seen the value of transportation for seniors. We have an enormous population of seniors in Chelsea." Ann Feeney, Former Mayor of Chelsea

"I'm passionate about public transportation for the basic reason that it gets people where they need to be – to school, to work or going out and having a good time on the weekend" John Hieftje, Mayor of Ann Arbor

"When people become more aware of all the positive aspects they can utilise this service which will save them money, time, and provide a higher quality of life for them." William McFarlane, Superior Township Supervisor

I am passionate about public transportation because it's a huge driver for jobs and employment in the future of this community" Albert M. Berriz, CEO of McKinley

"We are able to be a one car family because of the transit options here in Washtenaw County" Rebecca Lopez Kriss, Graduate Student, University of Michigan

Achieving our wider goals

Transportation and Land Use

Integrating the planning of transportation and land use can deliver **key benefits** to our community by supporting **Smart Growth** (as described in the introduction), including:

- Providing accessible housing in a variety of forms and price ranges and creating opportunities for affordable housing;
- Provide alternative **lifestyles** and communities for those without private cars;
- Bringing together retail, business, leisure and homes so that people can work, shop and play locally;
- Creating identifiable, walkable and bikable neighborhoods;
- Highlighting transportation alternatives and increasing transit ridership;
- Decreasing auto dependency and exhaust emissions;
- Creating more street activity and **safer** neighborhoods;
- Stimulating the **redevelopment** of brownfield sites and disadvantaged areas;
- **Revitalizing** commercial corridors and older communities; and
- Increasing **property values** of vacant and underused land.



Attractive, walkable communities supporting local businesses Main Street, Ann Arbor

Achieving our wider goals

How TOD could transform a corridor like Washtenaw Avenue

People often talk about...

Transit Oriented Development (TOD) - What's that?

TOD is a type of neighborhood that is becoming more and more popular in the USA. Compact neighborhoods are built around transit hubs or stations to maximize access to opportunities and services for all. They are built with a mix of different land uses (e.g. retail, residential, commercial and recreational) to help create local communities. Plus, higher density development means that these neighborhoods are walkable and bikeable. TOD allows development to be focused in areas that can best accommodate it, while protecting other areas from urban sprawl or out of town development.

TOD can be developed with any type of public transportation but tends to be more successful when associated with significant investments in permanent infrastructure such as Bus Rapid Transit (BRT) or Light Rail Transit (LRT).

The images on the right show how a strip mall can be developed into an attractive walkable community over time using TOD principles to support smart growth.

Light Rail Transit (LRT) - What's that?

LRT is distinguished from "heavy" or mainline rail by carrying only passengers and typically by making shorter journeys. The investment in infrastructure is also usually lower cost than would be found for a heavy rail system.

Bus Rapid Transit (BRT) - What's that?

BRT refers to a high quality bus corridor designed to simulate light rail or streetcars. The corridors will typically include: off-road or segregated stretches to speed up travel times; signal or junction priorities for the buses; and include transit stations rather than traditional bus stops. BRT is often integrated with smartcard or cashless ticketing systems and real time information.



Chapter 5: Discussing Alternative Futures



Transit supports our existing walkable communities. Middle Street, Chelsea

Discussing Alternative Futures

Overview

In January 2011, TheRide presented three 'alternative futures' to the community to gauge public opinion on the extent of transit required and the impact of transit on the community as a whole.

The three scenarios were developed around the 'concepts' detailed below and included a range of options which were evaluated in terms of cost efficiency, delivery of the goals and addressing the needs. Each scenario was presented with its costs and benefits to help people compare them.

Lifeline Plus

To improve and create lifeline services. This Scenario: improves lifeline services where they exist today; provides essential door-to-door connections for seniors and people with disabilities across the County where they do not exist today; and ensures that our most vulnerable populations can remain independent with access to fresh food, employment and educational opportunities, health care and recreational facilities. Lifeline Plus would deliver \$2.6 of benefits for every \$1 spent on services.

Accessible County

To implement services across the County. This Scenario: builds on the Lifeline Plus Scenario to provide a basic level of transit service for all County residents; and establishes transit as an integral part of the County transportation system, making the County a more attractive place for residents to live and for employers to locate. Accessible County would deliver \$2.6 of benefits for every \$1 spent on services.

Smart Growth

To invest in transit across the County to stimulate economic growth and focus land development in areas that can best accommodate growth. This Scenario: adds to the Accessible County Scenario, with investment in high capacity transit and regional rail to guide land use development; stimulates job creation and economic growth; focuses development in areas that can best accommodate growth; preserves green space; and stems growing traffic congestion. Smart Growth would deliver over \$3 of benefits for every \$1 spent on services.

Discussing Alternative Futures

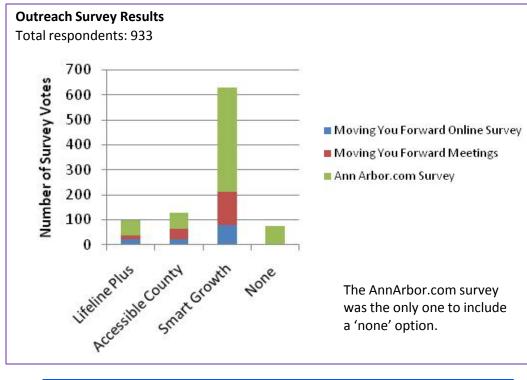
Feedback from the Community

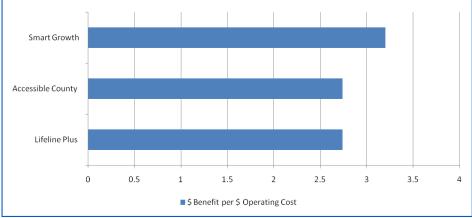
TheRide received a good response to the public surveys and 68% of respondents supported the Smart Growth Scenario. 933 people responded to the online surveys or provided feedback during a public meeting.

In response to public feedback, as well as extensive analysis of the costs and benefits of each scenario included in the Designing Alternative Futures report, TheRide's board approved a resolution to move ahead with the implementation of the Smart Growth Scenario as the Transit Master Plan.

Public input in January / February 2011 (Phase 3) including:

- 20 public meetings across the County;
- Workshops with the Moving You Forward Leadership Group and Technical Advisory Team; and
- Surveys at meetings and online.





Chapter 6: Introducing the Transit Master Plan

Overview

The Transit Master Plan has been developed from the Smart Growth Scenario with input from members of the public and TheRide's Board. While the Plan should be considered in its entirety to fully realize the benefits associated with the synergies between the different strategies, it is also important to understand what the strategies involve.

The Concept:

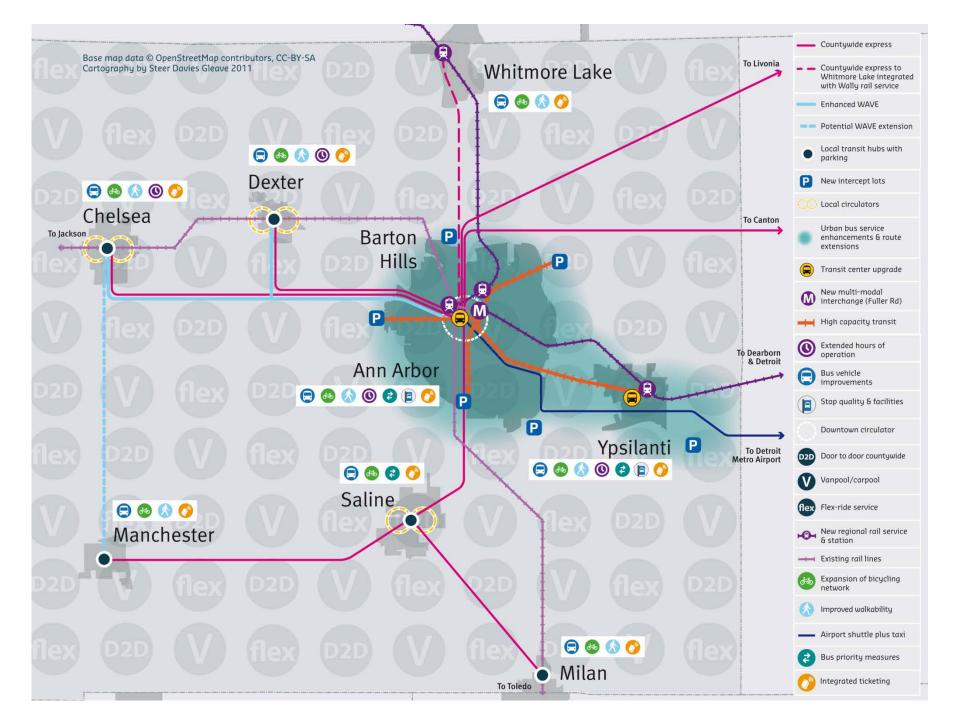
To invest in transit across the County to stimulate economic growth and focus land development in areas that can best accommodate growth.

The Plan will help address the needs and meet the goals as identified in Chapters 4 and 5. In particular it will:

- Provide attractive, safe and affordable transit options for all residents of Washtenaw County to promote liveability;
- Help Washtenaw County retain and attract young people who desire an urban lifestyle without the expense of car ownership;
- Provide independence for the growing population of seniors and enable many to 'age in place;'
- Stimulate job creation and economic growth across the County;
- Promote healthier lifestyles using transit, walking and biking;
- Provide much needed service to areas that have little or no service at present;
- Focus development in areas that can best accommodate growth;
- Preserve green space;
- Reduce our reliance on foreign oil; and
- Stem growing traffic congestion.

This chapter provides more detail about the strategies of the Transit Master Plan:

τ	Pidli.	
d	Strategy 1:	Essential Services Countywide
i		Door-to-Door Countywide
ergies		Flex-Ride Services
	Strategy 2:	Countywide Connections
		Enhanced WAVE Service
		Countywide Express Services
		Local Community Circulators
omic	Strategy 3:	Urban Bus Network Improvements
est		Urban Bus Network Enhancements
		Downtown Circulator
s as		Bus Priority Measures
	Strategy 4:	High Capacity Transit
ons	Strategy 5:	Regional Connections
		Airport Shuttle and Taxi
		Car / Vanpooling
		Regional Commuter Rail
	Strategy 6:	Making Connections
		 Transit Center Upgrades / New Multi-Modal Interchange
of		Local Transit Hubs
		Park & Ride Intercept Lots
the		 Stop Quality and Facility Enhancements
	Strategy 7:	Integrating Transit into the Community
nd		Walkability
		Biking
tle	Strategy 8:	Integrated Systems - Ticketing
	Strategy 9:	Integrated Systems – Information
		 Mobility Management or Travel Planning
		Travel Training
		Information
		Marketing
	Strategy 10:	Vehicle Enhancements



Inside the Transit Master Plan Strategy 1: Essential Services Countywide

Concept

The Countywide Door-to-Door and Flex-Ride services will provide doorto-door or door-to-transit services to ensure that everyone in Washtenaw County can access the available services and opportunities and has access to the transit network.

Both services could be run together under one brand, however, the services offered and the associated fares paid would depend both on the type of trip and whether the passenger has Americans with Disabilities Act (ADA) eligibility.

Using one brand would optimise the efficient use of vehicles and operating systems, and would put the passenger first with a simple 'one-stop-shop' source of information and booking.

The 'fleet' would be drawn from the public and private operators across the county and zones would be used to allocate resources efficiently, ensure comprehensive geographic coverage and provide coverage across the day and week.

The booking system should be designed to encourage ride sharing and passengers may be incentivised to book early or be flexible by time

Definitions

Door-to-Door Countywide

These are ADA services for all seniors and people with disabilities operating in all areas of the County and with extended hours of operation.

Flex-Ride Service

The provision of new services open to all residents and visitors to Washtenaw County, operating in all areas of the County, will provide flexible (dial-a-ride) access to the fixed route bus network or to destinations that are not served by transit. The fare for this service will be greater than for a fixed route bus service.

Americans with Disabilities Act

The Americans with Disabilities Act of 1990 (ADA) prohibits discrimination and ensures equal opportunity and access for persons with disabilities. The Federal Transit Administration is responsible for civil rights compliance and monitoring and sets out what essential services must be provided.

Inside the Transit Master Plan Essential Services Countywide



Learning from others

RegioTaxi, Netherlands

Across the Netherlands a subsidized shared-ride taxi scheme has been operated since 2000 and has proved very popular, especially in rural areas.

Around half of the users are members of the general public who pay 50-60% of the cost, equivalent to 3-4 times the normal public transport fare (but around half a standard taxi ride). Defined eligible persons are entitled to a higher level of subsidy and pay only the standard public transport fare.

Users and book trips up to 30 minutes before the requested departure time (60 minutes in some instances), with actual departure expected to be within +/- 10-15 minutes of the required time. Planning and dispatching trips within such a short period before the requested departure times is very challenging, and delays of up an hour are possible, but the service aims for a 95% on time service level. Services are provided under contract, typically with a 3-5 year term. In 2005, around 23% of taxi revenues were estimated to come from RegioTaxi contracts.

There's a lot to see and do in Washtenaw County... If you can get there! The Manchester Riverfolk Festival

Inside the Transit Master Plan Strategy 2: Countywide Connections

Concept

Countywide Connections will build on the existing fixed-route and interurban services in the County to provide a transit network that connects all of Washtenaw's cities and villages and supports local transit trips in the larger communities.

Integrating services provided by different operators

It is expected that the WAVE service and the Chelsea Community Ride (Local Community Circulator) will continue to operate as they do today, but with longer operating hours, integrated information, ticketing and vehicle enhancements. This strategy provides the longer operating hours and is complemented by strategies 8, 9 and 10 in particular.

The Countywide Express Services will be the responsibility of TheRide and may be operated from existing facilities. However, TheRide may consider tendering these services and/or further investigate opportunities to share facilities with other organizations to ensure the efficient use of local resources.

The new Local Community Circulators in Saline and Dexter will be progressed by TheRide, however, it may be appropriate for these to be operated by local organizations with support from TheRide or be delivered through contracts. As above, TheRide may look to share local facilities with other organizations to ensure the efficient use of local resources.

Definitions

Enhanced WAVE Service

The frequency on the WAVE interurban bus (Chelsea – Dexter – Ann Arbor) will be increased to hourly. The WAVE service will also benefit from extended hours of operation across the day and week.

Countywide Express Services

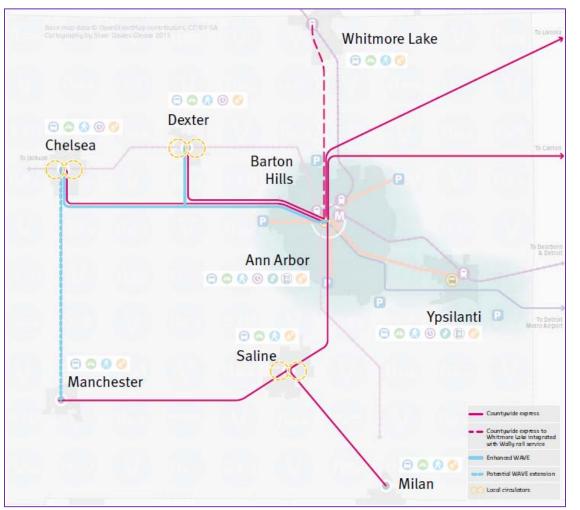
New express bus/coach services will be introduced between the cities and villages in the County. The express buses will only stop in a few key locations to make sure that they offer competitive journey times to the private car. The different services will have a frequency of 2-8 services per day, depending on the level of demand. This is building on the A2 Express services currently operating to Chelsea and Canton.

As shown on the map opposite, the following routes are included: Chelsea – Ann Arbor (as per the A2 Express); Canton – Ann Arbor (as per the A2 Express); Dexter – Ann Arbor; Saline – Ann Arbor; Manchester – Saline – Ann Arbor; Milan – Saline – Ann Arbor; Whitmore Lake – Ann Arbor; and Livonia – Ann Arbor. The connection to Whitmore Lake is shown as a dotted line because this service will be provided before WALLY is introduced. When WALLY is introduced the buses may provide interpeak service to complement WALLY or may be utilized on other express routes.

Local Community Circulators in Chelsea, Saline and Dexter

The Local Community Circulators will be small local buses which operate all day in a loop around the urbanized area connecting key destinations, some residential areas and the transit hub. These services will be modeled on the Chelsea Community Ride service (which will have longer operating hours in future). These will provide local access and access to the Countywide Express Services.

Inside the Transit Master Plan Countywide Connections



Learning from others

Express buses and bus priority on the Kent Fastrack bus network, UK

Fastrack express buses are an alternative to private cars and are already making a real difference in Kent Thameside. The express buses run on road, on segregated tracks or on reserved highway lanes. Fastrack priority lanes and services will ultimately connect nearly all of the major existing and new developments in Dartford and Gravesham.



Source: Fastrack

Countywide Connections

Inside the Transit Master Plan Strategy 3: Urban Bus Network Enhancements

Concept

The enhancements to the urban bus network will build on the TheRide's fixed route network in the urbanized area in and around Ann Arbor and Ypsilanti to provide greater geographic and temporal coverage to serve transit dependent people and attract more young people, seniors and choice riders.

If it ain't broke...

The 'hub and spoke' core of the urban bus network is an efficient and effective way of serving the community and works well on the radial urban road network. This structure will remained unchanged and the new enhancements will be integrated with it. Integrated ticketing, information, transit centers and vehicle enhancements are discussed later in this chapter.

The Plan proposes enhancements over the thirty year period, but the map illustrates how the urban bus network could look in the core urbanized area in 5 to 10 years. A technical note on the proposed routes is included in Appendix A but the services will be subject to further review and public scrutiny.

Definitions

Urban Bus Network Enhancements

Frequencies will be increased on routes across the urban bus network to provide a comprehensive and attractive service for local residents. Core routes will have 5 to 10 minute frequencies in the peak periods and most other routes will have a 20 minute frequency in the peak. This is compared to the current peak service frequencies of 15 minutes on the core network and 30 or 60 minutes on all other routes.

The urban bus network will also benefit from extended hours of operation across the day and the week with core routes operating from 6 am to 11 pm Monday to Saturday and 7 am to 9 pm on Sunday and the majority of routes operating 7 days a week.

The services in Ypsilanti will be redesigned to provide shorter two-way connections and the network will be expanded to provide more of the urban population with access to transit.

Downtown Circulator

A downtown service in Ann Arbor will be introduced connect key destinations in the city center; this service may be similar to the Link service which was discontinued in 2009 due to a lack of financial support.

Bus Priority Measures

Giving buses priority at intersections or on busy corridors will help improve travel times and reliability. These measures are known as bus priority and may include priority at signaled intersections and/or bus-only/high-occupancy vehicle lanes.

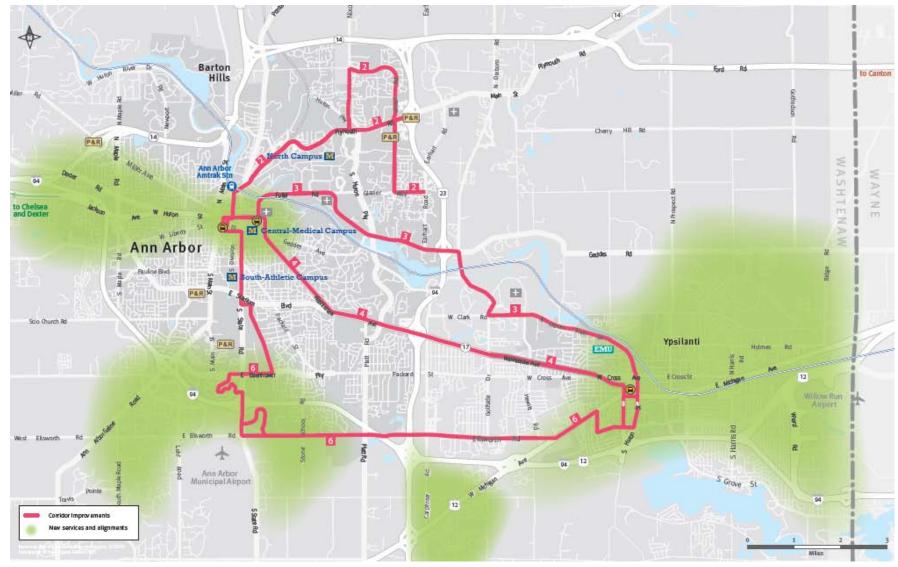
Learning from others Investing in Bus Priority Measures in Minnesota

The Minnesota Department of Transportation has collaborated with key stakeholders, local authorities and transit operators to initiate transit related enhancements within the Metro area. These enhancements include bus-only shoulders which provide buses with an opportunity to avoid being delayed by traffic congestion on busy corridors.



Inside the Transit Master Plan Urban Bus Network Enhancements

Short to Medium Term Bus Network Concept



DRAFT TMP - APRIL 8TH 2011

Inside the Transit Master Plan Strategy 4: High Capacity Transit

Concept

High frequency services will be introduced along specific corridors, using a new type of vehicle – for example, bus rapid transit (BRT), street cars, trams or light rail. The High Capacity Transit Corridors will be:

- North South Ann Arbor (as per The Ann Arbor Connector)
 Plymouth Road Downtown Ann Arbor and Central Campus Briarwood
- Ann Arbor Ypsilanti (as per Reimagining Washtenaw Avenue)
 Jackson Road / Wagner Road Downtown Ann Arbor Downtown Ypsilanti via
 Washtenaw Avenue

These corridors are shown on the map opposite.

Promote and focus investment

The high capacity transit corridors will promote investment along the corridors, focus land use development where it can best be accommodated, promote economic development, support the development of TOD neighborhoods and increase property values. They will also improve journey times and attract choice riders.

Building on strong foundations

There routes are mainly based on the ongoing studies 'Reimagining Washtenaw Avenue' and the 'Ann Arbor Connector Feasibility Study.'

The new transit services would replace some of the existing urban bus network and other local services may be redesigned to ensure that all transit services are fully integrated.

Neither project has confirmed the type of vehicle that is most appropriate for the route, so for cost forecasting purposes the proposals are assumed to be bus rapid transit. Further work on these two projects may conclude that light rail or some other technology may be appropriate.

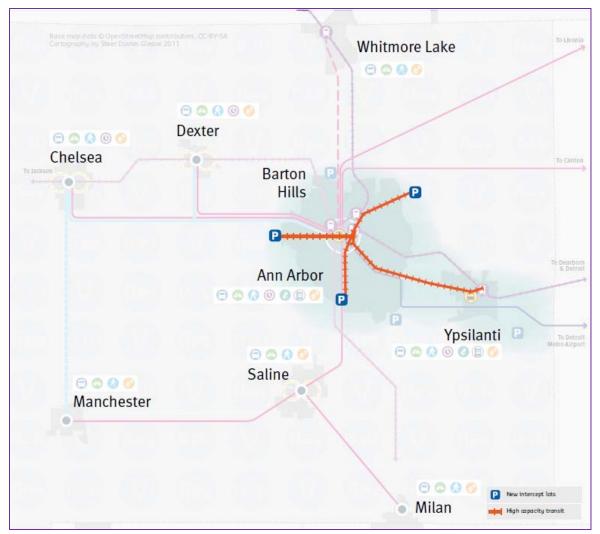
Learning from others Bus Rapid Transit in Eugene, Oregon



Streetcars in Portland, Oregon



Inside the Transit Master Plan High Capacity Transit



In Focus: High Capacity Transit and Land Use

All forms of transit influence land use development, but high capacity transit corridors have a stronger impact than other modes and support Transit Oriented Development (TOD). TOD is mixed-use (residential and commercial) land use development designed to maximize access to opportunities and services for residents, employees and visitors by enhancing access to public transit and creating accessible, walkable, bikable communities.

TOD thrives when supportive land use policies are coupled with high quality transit infrastructure. The investment in transit increases land values along the corridor and helps attract investment.

High Capacity Transit Corridors

Inside the Transit Master Plan Strategy 5: Regional Connections

Concept

The regional connections will help stimulate economic growth locally and across the region by connecting communities and will attract choice riders, reducing congestion and helping to protect the environment. The regional connections will also help to make Washtenaw County an attractive place to live and help attract and retain young people.

Working with Others

TheRide is working with current transit providers to investigate the opportunity for expanding the airport shuttle service. The integrated taxi connection would be operated under contract to TheRide or the shuttle provider.

TheRide is expected to take over the car/vanpooling (Michivan) program from the Michigan Department of Transportation in 2011.

Currently South East Michigan Council of Governments (SEMCOG) is leading the development of the East-West Line service but it is expected that another organization will be contracted to operate services. TheRide is leading the North-South Line "WALLY" study and working with a large group of stakeholders, including Livingston County and the Michigan Department of Transportation (MDOT), to develop the rail line. It is expected that the service will be operated by a railroad operator contracting to TheRide and/or MDOT.

Definitions Airport Shuttle and Taxi

A new hourly express bus service will be introduced between downtown Ann Arbor and Detroit Metropolitan Airport with optional integrated ticketing for a taxi service. The taxi would pick up or drop off shuttle riders to create virtually door-todoor connections between the airport and their origin or destination. The proposed airport shuttle route is shown in the map opposite.

Car / Vanpooling

Car / vanpooling already exists in Washtenaw County but the majority of use is connected with the University of Michigan. The proposals will support the wider use of car/vanpools for commuting trips and support community led (as well as employer led) programs.

Regional Commuter Rail

Commuter Rail is designed for regular journeys that are too short for intercity rail services but too long to be attractive bus journeys and provide people travelling in to city centers to work with an alternative to the private car. Commuter Rail services can be operated on main line railroad tracks like freight or intercity services. These train services provide connections between communities, both within and outside of the County.

Initially these services will be provided in the peak hours to support commuter trips and relieve road congestion, however, they may be expanded to all day services in the longer term. The rail connections are:

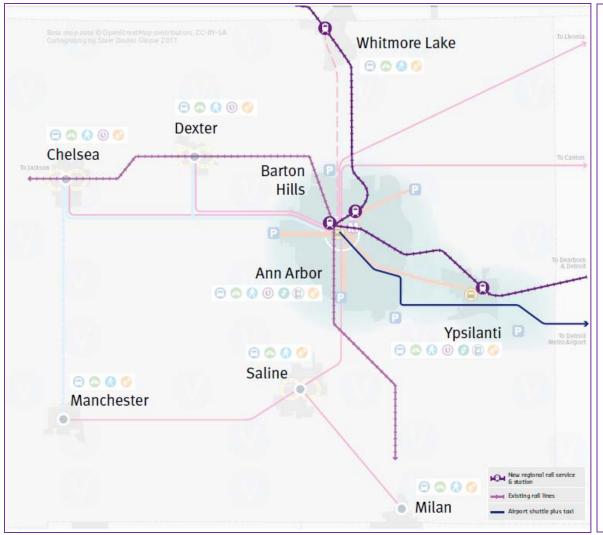
- The East-West Line (Ann Arbor Ypsilanti Dearborn Detroit)
- The North South Line / WALLY (Ann Arbor Whitmore Lake Hamburg Township and Howell

These proposals use existing rail lines.

Once the proposed connections are in place, connections to Chelsea, Jackson, Milan and Toledo may become viable and will be considered at this stage. The connections to Chelsea and Jackson may be reviewed earlier if the train overnight layover and repair facility is located in Jackson County.

The proposed connections and other existing rail lines are shown in the map opposite. \$38\$

Inside the Transit Master Plan Regional Connections



Learning from others

Flygbussarna - 'Buss Taxi' in Stockholm and other Swedish cities

On buying a ticket (by phone, online or onboard) you can choose to pay a low, fixed additional fee to make your journey virtually door-to-door.

If you are heading to the airport Flygbussarna will make sure that a taxi picks you up at home (or other place of origin) and takes you to your nearest Flygbussarna stop in time for the bus.

If you are coming from the airport, you can also request that a taxi meets you at the Flygbussarna stop and takes you to your final destination.



Source: Flygbussarna

Regional Connections

Inside the Transit Master Plan Strategy 6: Making Connections

Concept

Improving waiting areas and creating attractive, safe and convenient access points to the transit network will help change public perceptions about transit and greatly improve passengers' experiences of using transit. This will be of benefit to all user groups and help attract choice riders. The transit centers and hubs will also help shape land use development by creating focus points for Transit Oriented Development. TheRide will work with local authorities and other stakeholders to help identify and build new transit facilities or improve existing amenities.



Modern shelters and seating in Montpellier, France

Definitions

Transit Center Upgrades / New Multi-Modal Interchange

Investing in the infrastructure of transit centers to provide safe, attractive access to transit. The upgraded centers (in Ann Arbor and Ypsilanti) will provide space for more services and where possible access for other modes and retail opportunities. The Fuller Road Multi-Modal Interchange is proposed to function as a station for the East-West Rail service, the Ann Arbor Connector, Amtrak and possibly High Speed Rail.

Local Transit Hubs in Chelsea, Dexter, Whitmore Lake, Saline, Manchester and Milan

Local transit hubs will help provide a focal point for transit in each community, support the implementation of transit oriented development and provide an attractive place to access or transfer to transit. The hubs will be designed in consultation with local communities to be places where people want to go whether or not they are using transit and include parking for bikes and cars, safe and attractive spaces to wait and spaces for transit, drop off and taxis.

Park & Ride Intercept Lots

As well as providing parking at local transit hubs (as detailed above) new intercept Park & Ride lots will be introduced on the edge of the core urbanized area.

Stop Quality and Facility Enhancements

Investment in bus stops: providing information, seating and shelter at more stops and realtime information at busy stops

Inside the Transit Master Plan Making Connections

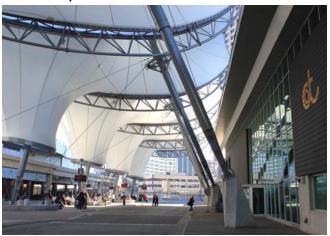
Learning from others Bus Shelter

San Francisco

New, modern bus shelters are being introduced in San Francisco. Their polycarbonate roof is made of 40% postconsumer recycled waste and contains photovoltaic cells that store power by day to illuminate it at night and also feed power back into the grid. The steel frame is 75% recycled material. These shelters even contain integrated WiFi hot spots. The unique shelters have been custom designed for the city and 1,100 will be installed by 2013.



Rosa Parks, Detroit



BRT stop in Nantes, France



Inside the Transit Master Plan Strategy 7: Integrating Transit into the Community

Concept

That's not transit!

Although walking and biking are not transit, it is essential to consider them as part of the transit network to help achieve our goals of creating a liveable, accessible and healthier community.

These measures can enhance and protect the local environment and make our transportation network safer too.

TheRide will work with communities across the County to coordinate existing walking and biking projects with transit services and facilities and propose new projects.

There's little point living near a bus stop if you can't get to it

Definitions Walkability

Creating sidewalks will improve walkability and provide safe, level access to transit services.

Biking

More bike lanes, stands and biking facilities to support and encourage biking in and around local communities, both as a way to access transit and as a healthy mode of transportation.

Learning from others

Chicago is setting the pace in biking

More than 60% of trips in Chicago are three miles or less and the popularity of biking is increasing. To support the increase in trips Chicago's new Mayor Rahm Emanuel is set to dramatically increase the number of bike lanes added each year (from 8 miles per year to 25). The plans also involve making Chicago a pioneer of the creation and expansion of protected bike lanes.

Like Ann Arbor, the city already provides bike racks on buses and bike stands near stops. Chicago's regional commuter rail trains also allow bikes on board.



Inside the Transit Master Plan Integrating Transit into the Community

Learning from others

Boulder, Colorado - Attractive sidewalks and pedestrian spaces where people want to be



Toronto, Ontario – Pedestrianizing Kensington Market area on Sundays to encourage walking, biking and community activities



Inside the Transit Master Plan Strategy 8: Integrated Systems - Ticketing

Concept

A Countywide integrated ticketing system is integral to the Putting the Passenger First agenda.

Integrated ticketing systems can:

- Dramatically improve the passengers' experience of using the transit network as a whole,
- Enable and encourage passengers to use more of the network,
- Enhance simplicity and support the 'one network' image,
- Improve travel times by speeding up the time it takes each passenger to board,
- Improve service reliability,
- Increase the number of riders and revenues, and
- Reduce administration costs.

Definition

Integrated ticketing is a form of ticketing that is accepted on multiple services, irrespective of who operates them. It is often associated with simplified fares or smartcard systems but these are not central to the definition.

Learning from others

In **South East Queensland**, Australia, there are 18 rail, bus and ferry operators serving the region (from the Gold Coast to the Sunshine Coast and west beyond Ipswich). In mid 2004, Queensland TransLink introduced full fares and ticketing integration, improved service coordination and a range of marketing communications. The full fares and ticketing integration resulted in the implementation of a new zonal fare structure and a range of fully integrated fare products delivered through existing fare collection equipment. This had a significant impact on demand for public transport services with an increase of 9.7% in total public transportation journeys in 2004/05 with trips increasing from 123.9 million to 135.9 million. By 2009/10 patronage had grown to 181.8 million trips.

In **London**, UK, the transportation authority Transport for London found that smartcard ticketing (both with time limited tickets and prepaid cash) had a positive impact on bus boarding times and overall travel times, as well as reducing administration costs and fraud and improving passenger satisfaction.

In the **Tyne and Wear** region of the UK, Nexus, the regional transportation authority has recently launched the Pop smartcard. The new smartcard can carry season tickets as well as money for passengers to pay as they ride.



Inside the Transit Master Plan Strategy 9: Integrated Systems – Information

Concept

Today the number of transit providers and organizations can be confusing, particularly to new users. Creating one brand and information system (using a range of media and channels) for transit helps put the passenger first by making it easier for passengers to find information and simpler for passengers to understand and use the network as a whole. Consolidating information provision would also deliver cost savings to all of the organizations providing transit in the community.

Definitions

Mobility Management or Travel Planning

The one stop shop will provide one place where potential passengers can seek information about their options and if appropriate book their trip. This organization would also help organizations, educational institutions and employers inform people traveling to their sites.

Travel Training

Travel training is an essential service that must be championed by all organizations but led by one. Today travel training is provided by a number of organizations including Ride Connect.

Information

Providing information in new formats and providing simplified integrated, multi-modal information will help to ensure that residents, employees and visitors know about all of their transit options Countywide and understand how to use them easily and safely. **Marketing**

As today, marketing will continue to be a vital element of the transit network, introducing new services or rallying community support for existing ones. Marketing will build the Countywide brand that the whole community can be proud of. 'My community, my transit' initiatives will help promote local initiatives, working with arts, cultural, social and educational organizations.

Learning from others

Smart Phone Applications in Dundee, UK



Dundee in the UK has implemented a 'Public Transport Information System' achieving a step change in travel information provision. Features include:

- Innovative internet journey planning web site (<u>www.dundeetravelinfo.com</u>) and journey planning terminals at 13 locations in and around Dundee;
- WAP mobile phone journey planning and SMS bus information specified for real time information;
- Information 'wedges' (see above) incorporating electronic departure information, paper information and journey planning terminal on approaches to the main city centre bus hub;
- Large electronic information boards at the main Hospital and Dundee Bus Station;
- Real time information at individual stands in the city centre and at the Hospital; and
- High quality graphic information displays, including 'overground' style city bus map and spider diagrams at bus stands.

Dundee experienced 6% year on year patronage growth following the implementation of their public transportation information system.

Inside the Transit Master Plan Strategy 10: Vehicle Improvements

Concept

Keeping pace with improvements in vehicles can help build a successful transit brand and introducing more attractive, comfortable, safer, accessible, efficient and environmentally friendly vehicles can draw choice riders, youth, people with disabilities and seniors. New technologies such as WiFi and electronic screens can also help make transit journeys more enjoyable or more productive. Improving the bus fleets' environmental performance is critical for a number of reasons: improving the image of transit, protecting or improving the local and global environment, and making the community less vulnerable to oil cost or supply issues.

Learning from others

Trent Barton in the East Midlands, UK, is using attractive modern buses branded according to the services they operate.

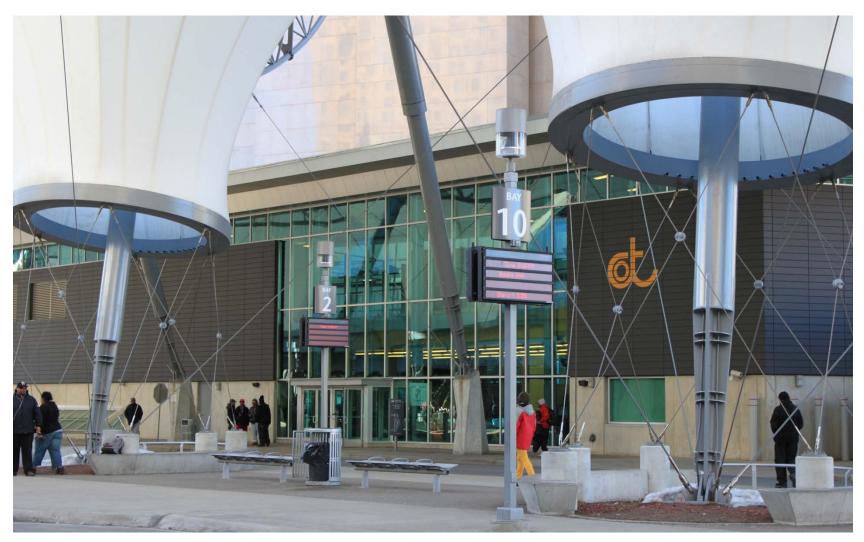
The "Calverton Connection" is marketed as "the really stylish way to travel" and the "Mickleover" is the "posh" bus. Both services are operated with vehicles that have comfortable leather seats; quiet, environmentally friendly engines; air conditioning and frequent headways.



In 2007, Nottingham City Transport (UK) became the first company in the UK to introduce ethanol powered "Eco" buses. The ethanol powered buses are painted in a special "Ecolink" livery which uses flowers and leaves along the side of the bus to symbolise that the bus is "green". Marketing materials use the slogan "Go Green" and explain that the vehicles reduce CO₂ emissions by around 30 tonnes. The ethanol buses are equipped with:

- A colour LCD destination display,
- An LCD screen onboard which allows advertisements and /or CCTV footage to be played,
- A GPS locating system which allows for real time estimated times of arrival to be displayed at electronic bus stop timetable displays (an example of which is shown opposite) and also allows for the next stop to be displayed on the buses onboard electronic display.

Inside the Transit Master Plan Vehicle Improvements



Real time information display boards in Detroit

Chapter 7: Highlighting the Impact

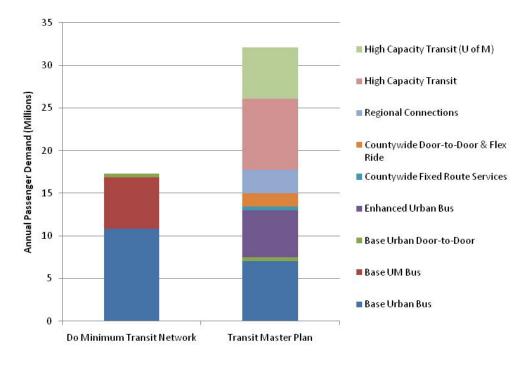
Introduction

This chapter sets out the benefits and costs of implementing the Plan. For information on funding the Plan, please refer the associated Transit Master Plan Funding Report.

Dramatically Increasing the Number of Transit Trips

Implementation of the Plan will have a significant impact on the numbers of people using transit in Washtenaw County. The chart below shows how demand for transit will roughly double compared with retaining the existing transit network.

Annual Passenger Demand in 2040 (Millions)



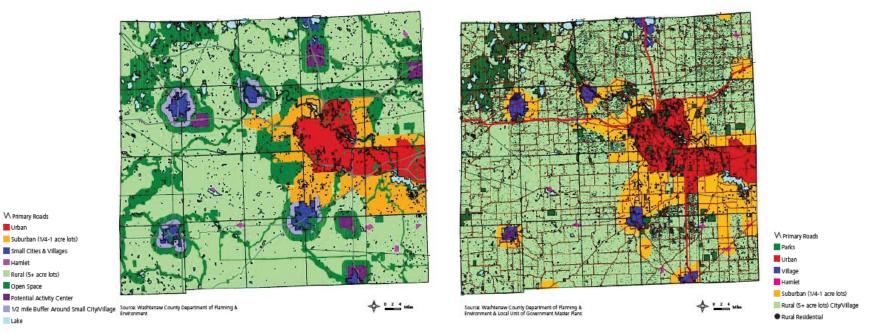
Supporting Smart Growth

Investment in public transit across the County will help focus land use development in those areas that can best accommodate it. This means:

- Building on brown-field sites rather than subdividing and developing agricultural land;
- Preserving green and rural areas;
- Protecting the rural character of smaller settlements and their residents' sense of community; and
- Creating walkable, bikeable, transit oriented developments with mixed land use and higher densities where appropriate.

This efficient compact development pattern is not just easier to serve with transit; it is easier to serve with most of the other major infrastructure elements – sewer, water, gas, electric, etc. This results in a major benefit in terms of the cost of providing and maintaining the non-transit infrastructure, a benefit that is not quantified in the estimate of benefits.

Washtenaw County with and without Action to Limit Sprawl



The two maps show two alternative views of the future depending on the future of land use and transportation planning.

On the left, strong land use and transportation plans help designate rural areas, rural settlements, suburban areas and urban areas to ensure that development occurs in the most appropriate locations and the character of our County is not lost.

On the right, growth is unrestricted, development is not necessarily located in appropriate areas, communities of all sizes are surrounded by sprawling development, and development infiltrates rural areas.

Delivering Benefits

Many of the benefits of investment in transit are difficult or impossible to translate into benefit in \$, however, the tables on the next page provide some details of those benefits that are traditionally monetized.

Tables 7.1 and 7.2 highlight the benefits delivered by the Transit Master Plan.

By 2040, the Plan is estimated to double the proportion of people who use transit in the peak in the core urban area and increase the proportion of rural transit users over 18 times.

It is also estimated to: deliver 1,830 new jobs (conservative estimate); take 5.4 million cars off the County's roads in the peak period each year; reduce the number of serious road accidents each year by 111; and cut carbon monoxide (CO), nitrogen oxide (NOx) and volatile organic compound (VOC) emissions.

Learning from Others

Property Values - One of the areas that has not been monetized is the impact of transit investments on property values.

Studies over two decades (Cervero et al, 2004) show average housing value premiums associated with being near a station (usually expressed as being within ¼ to ½ mile of a station) are:

- 6.4% in Philadelphia
- 6.7% in Boston,
- 10.6% in Portland,
- 17% in San Diego,
- 20% in Chicago,
- 24% in Dallas, and
- 45% in Santa Clara County.

In Massachusetts an analysis of the data shows that the median price of single-family homes nearly doubled in 19 communities after MBTA (Commuter Rail) was introduced. In Brockton, for example, which gained three commuter rail stops, had one of the greatest increases in median family-home price from \$71,503 in 1995 to \$194,000 in 2002 up **171%**.

A study of the DART system in Dallas compared differences in land values of comparable properties near and not near light rail stations. The average change in land values from 1997 to 2001 for retail and residential properties near DART stops was **25%** and **32%** respectively, compared with changes of 12% and 20% for areas without light rail.

Tables 7.1 and 7.2 Local Community Benefits – Impacts and Monetized Benefits

Local Community Impact (2040)	Impact	Local Community Benefits (2040)	Value (\$ Millions)
Urban Transit Mode Share (peak period) 2010 Base = 6.2%	12.2%	Value of new, local jobs created	58.5
Rural Transit Mode Share (peak period) 2010 Base = 0.3%	5.5%	Road decongestion benefit to existing road users (from people switching to transit and biking)	26.2
Car Trips Taken Off the Road (Annual peak period)	5.4M	Accessibility and livability benefits to existing and new riders, people with disabilities, rural communities,	96.0
Transit Trips (annual) 2010 Base = 12.2m	32.2M	students and seniors Accident saving benefits from reduction in car miles	5.0
Additional New Jobs Created	1830	traveled Reduced emissions benefit from reduction in car	2.3
Reduction in Number of Serious Road Accidents	-111	miles traveled	
(Annual)	i)	Health benefits from increased walking and biking (in part associated with transit use)	4.4
Senior Population within 10 minutes Walk of Fixed Route Transit 2010 Base = 66%	94%	Total additional community benefits	192.0
Reduction in Emissions (annual tons CO, NOx, VOC)	-701	Base community benefit	83.0
		Total community benefit	275.0

Operational Expenditure

The annual operating cost associated with implementing the Plan is \$101.3 million by 2040, although the costs of operation within Washtenaw County (i.e. due to expected sharing of commuter rail costs) is \$85.8 million. The NET operating cost of the Plan elements can be calculated by removing the "Base Urban Door-to-Door" and "Base Urban Bus" costs, projected to be about \$25 M by the year 2040, yielding a net operating cost of \$76.3 M with non-Washtenaw shares included, and \$60.8 with non-Washtenaw share excluded. Note that these figures include the full cost of operating the High Capacity Transit Systems. A significant proportion of the operational costs are associated with the regional connections and the provision of Countywide Door-to-Door and Flex-Ride. The three graphs below show the annual operating expenditure (both total and Washtenaw County's share), the annual operating expenditure by mode, and the historical breakdown of operating funding sources.

120.0 100.0 High Capacity Transit 100.0 90.0 Operating Cost (\$ million) DIRECTLY GENERATED 80.0 Regional Connections 9.6% 80.0 Operating Cost (\$ million) 70.0 60.0 Countywide Door-to-Door FEDERAL 60.0 50.0 38.9% 40.0 Countywide Fixed Route Services 40.0 20.0 STATE Enhanced Urban Bus 30.0 0.0 20.0 Base Urban Door-to-Door 2010 2015 2025 2040 LOCAL 10.0 37.0% Base Urban Bus 0.0 Total cost Washtenaw's share Washtenaw's Operating Cost by Mode

Annual Operating Expenditure by

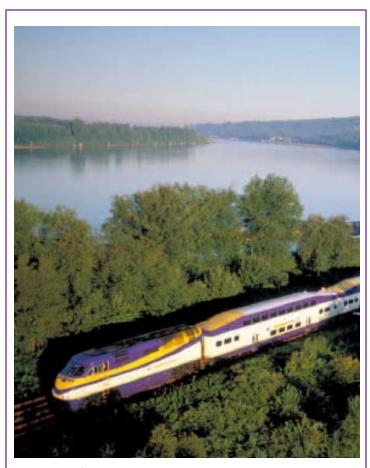
Mode 2040

Annual Total Operating Expenditure and Washtenaw's Share



Historical Breakdown of Operating

Funding Sources

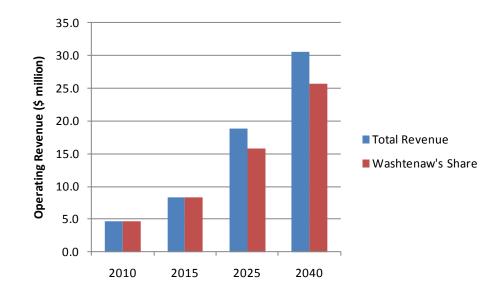


Learning from others Commuter Rail, Vancouver, Canada

Operating Revenue

Operating revenues from the fare box are expected to total \$31m per annum in 2040 in Washtenaw County as shown in the graph below.

Total Revenue and Washtenaw's Share



Capital Expenditure

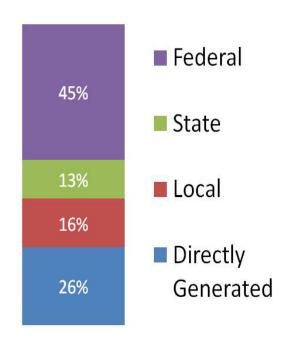
Over the thirty year period, implementing the Plan will cost \$489 million in 2010 dollars to build. Of this total cost figure \$186 million is associated with estimated private or out-of-County spending associated with the four rail and high capacity systems. It is expected that the two high capacity corridors will attract substantial private funding or sponsorship and that the rail systems would be shared between the Counties served.

\$20 million of costs has been identified for walking and biking measures and while TheRide do not typically build bike paths or sidewalks it will work with other authorities to develop these projects and help identify funding sources.

A breakdown of the capital expenditure by transit mode is provided on the next page and opposite a historical breakdown of capital funding sources is shown, based on twenty years of data from the American Public Transit Association.

The associated Funding Options Report details the public and private opportunities for funding the Transit Master Plan's required capital expenditure. The Funding Options Report is underway and is going through a separate review process.

Historical Breakdown of Capital Funding Sources



Capital Costs - Thirty Year Life of the Plan		Costs by Time Period (\$ millions)				
		First 5 Years	Year 6 - Year 15	Year 16- Year 30	30-Year Period (\$ millions)	Annualized (\$M/year)
A.	For Comparison: Existing Level of Service On-Going Vehicle Replacement Bus, Demand Responsive, and Related	29.70	36.20	43.90	109.80	3.66
	Enhanced Urban Bus	10.40	10.80	9.00	30.20	1.01
	Countywide Fixed Route Services Countywide Door-to-Door	8.00	8.30	3.00	19.30 0.00	0.64 -
	Additional Bus Storage / Maintenance Facilities	2.00		2.00	4.00	0.13
	Airport Shuttle	0.60	0.60	0.60	1.80	0.06
В.	Subtotal Rail and High Capacity Systems	21.00	19.70	14.60	55.30	1.84
	Ann Arbor Connector	3.50	82.40	28.60	114.50	3.82
	Washtenaw Avenue Corridor Ann Arbor to Detroit Commuter Rail	5.00 8.30	121.00 80.00	42.00 10.90	168.00 99.20	5.60 3.31
	North-South Commuter Rail	4.30	25.40	2.30	32.00	1.07
C.	Subtotal Facilities and Services Provided by Others	21.10	308.80	83.80	413.70	13.79
	Walking	3.75	11.25		15.00	0.50
	Biking	1.25	3.75		5.00	0.17
D. E.	Subtotal Gross Costs - Total Plan (including renewals) Offsets - Costs Borne by Others	5.00 47.10	15.00 343.50	0.00 98.40	20.00 489.00	0.67 16.30
	Regional Rail - Wayne Co share*	5.81	56.00	7.63	69.44	2.31
	Regional Rail - Livingston Co share*	3.01	17.78	1.61	22.40	0.75
	AA Connector - 33% private / TIF contribution**	1.17	27.47	9.53	38.17	1.27
	Washtenaw Ave - 33% private / TIF contribution**	1.67	40.33	14.00	56.00	1.87
	Subtotal	11.65	141.58	32.77	186.01	6.20
F.	Net Estimated Plan Costs (D - C - E)	30.45	186.92	65.63	282.99	9.43

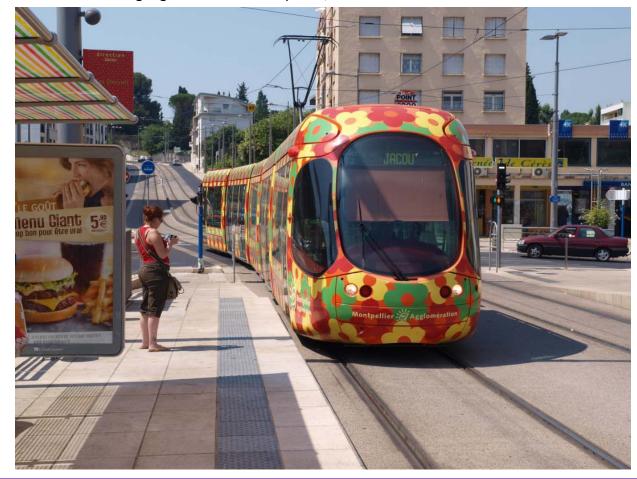
*These are assumed shares for Livingston and Wayne Counties, based on proportion of the route length in each county

**These are assumed levels of private and/ or TIF contributions; no commitments have been made; assumed private contributions were estimated based on two midwestern projects: the Detroit Woodward Ave Light Rail line and Chicago's Millennium Park, where private participation is 28% and 43% respectively.

There's a strong case for transit investment in Washtenaw County, for every \$1 spent over \$3 benefits are generated within the community over the thirty year period.

Learning from others

Streetcar delivering regeneration in Montpellier, France



Chapter 8: Realizing Our Potential



Transit helps protect our County, environment and quality of life Gallup Park, Washtenaw County

Realizing Our Potential



Conclusions and Next Steps

The Transit Master Plan sets an ambitious vision for an improved transit network connecting all of Washtenaw County. It also clearly highlights the need to link transportation and land use planning to ensure that we can achieve our goals for the future and address the needs in our community.

It is critical that we move transit forward in the County now to shape the next thirty years.

Funding

Additional funding is required to implement the Plan and this is discussed in detail in Volume 3: Transit Master Plan Funding Options which will be published at a later date.

Implementation and Monitoring

Implementation is the next step, however, it is important to remember that the Plan and implementation will be monitored and updated regularly to support the continuous planning cycle – plan, implement, monitor, adjust. This is discussed in more detail in Volume 2: The Transit Master Plan Implementation Strategy.

Working together

TheRide cannot do this alone. Many, many people and organizations have already had their say but we welcome your thoughts and proposals as we move forward.

Implementing the Plan will require input from all our stakeholders as well as strategic alliances with local authorities, institutions, public/private and not-for-profit operators, and other organizations. By working together we can ensure that our transit network is planned, implemented and provided efficiently and that we put the passenger first.

Transit supports local businesses and walkable communities, Nickels Arcade, Ann Arbor

Transit Master Plan Appendix A Urban Bus Network Enhancements



Section 1: Introduction

Context

This note provides a details of the proposed short-medium term bus network enhancements associated with the Washtenaw County Transit Master Plan. These plans are conceptual and will be subject to refinement and public scrutiny.

This note only provides conceptual plans for the urban bus network enhancements because TheRide had already developed preliminary plans in this area. TheRide will support communities in other areas of the County to develop detailed plans for other services and proposals in future.

Needs

Preliminary plans by TheRide Service Development Department, the Transit Audit and Needs Assessment and comments from members of the public have helped identify a number of areas where the bus network should be enhanced to help address the community's needs, summarized as follows:

- West of Ann Arbor simplification of the network and extension of coverage beyond the city limits
- Ypsilanti services in terms of coverage, length of ride and operating hours and days
- Extensions / enhanced service to the East Medical Center, Whittaker Road Library, Willow Run Airport, EMU, St. Joseph Mercy Hospital, and other urban/suburban areas within the surrounding townships
- Increased service frequency on key corridors
- Reduction in one way loop services

Service Planning Guidelines

The following points aim to provide clarity to the service planning process:

- Changes to the network should seek to limit, as far as possible, negative impacts on existing passengers
- Changes to the network should typically help to reduce travel times for the majority of passengers
- New or adapted services should be as far as possible simple to understand
- New or adapted services should be fair recognizing the needs of local people from all sections of the community

Structure of this Report

This report consists of five sections including this introduction; the following four sections are:

- 2: Changes to the west of Ann Arbor area;
- 3: Changes to the Ypsilanti area network;
- 4: New services;
- 5: Key corridor upgrades; and
- 6: Summary.

Section 2: West of Ann Arbor Area

Overview

To create more attractive services but minimize passenger disruption the routes will be simplified and two-way operation will be introduced on virtually all sections. Figures A1 and A2 show the changes to the network proposed.

Route 8

Route 8 will continue to serve Main Street and Pauline Boulevard in both directions, but from the intersection of Pauline Boulevard and Stadium Boulevard, the route will operate in one direction (clockwise) along Pauline Boulevard, Maple Road and Stadium Boulevard.

Route Removals

Routes 9, 12A, 12B, 15 and 18 will be removed and replaced with six new routes. These are described in the following paragraphs.

Route 9

The new route 9 will run from the Blake Transit Center along Liberty Street and the northern part of Scio Ridge in both directions.

Route 10

The new route 9 will operate in both directions along Jackson Avenue/Huron Street between Zeeb Road and downtown.

Route 11

The new route 11 will operate in both directions between the Blake Transit Center and the intersection of Dexter Road and the M-14, along Huron Street and Dexter Road. At present there is no opportunity to turn a bus at the intersection of Dexter Road and the M-14, if no suitable location is found the bus may extend south to Jackson Avenue to turn around.

Route 12

The new route 12 will operate in both directions along Miller Avenue between the Blake Transit Center and the Miller Avenue Park & Ride (at the intersection with the M-14).

Route 15

The new route 15 will operate in both directions from the Blake Transit Center to Skyline High School along South Main, Madison, 7th Street, Stadium Boulevard and Maple Road.

Route 17

The new route 17 will operate in both directions from the Blake Transit Center to east of the intersection of Oak Valley Drive and Ann Arbor-Saline Road. The route will serve Main Street, Scio Church Road and Oak Valley Drive.

Impacts

The routes in the west of Ann Arbor area will be greatly simplified and easier for passengers to understand. Also most services will operate 7 days a week and therefore become a more attractive and viable option for local residents. Virtually all the stretches of road that are currently served will be served with the new arrangements and travel times from virtually all areas will be similar or better than at present.

The arrangement also provides service to Jackson Avenue further beyond the limits of the city of Ann Arbor to the intersection with Zeeb Road and provides much needed service to Scio Ridge Road.

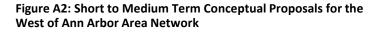
Section 2: West of Ann Arbor Area

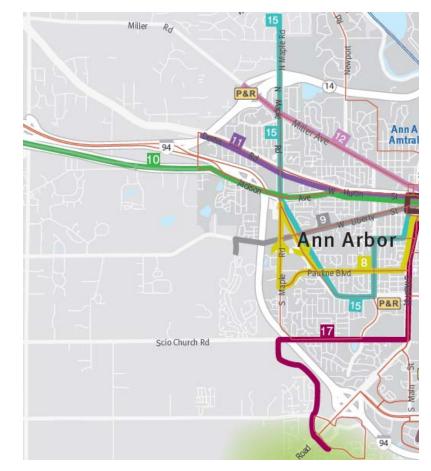
Figure A1: West of Ann Arbor Area Network Today



Features:

- Four services with large loops (routes 12A, 12B, 9 and 15)
- Two services with small loops (routes 18 and 8)





Features:

- Five two-way linear services (routes 9, 10, 11, 12, 15, 17)
- One services with a small loop (route 8)

Section 3: Ypsilanti Area Changes to the Ypsilanti Area Network

Overview

To create more attractive services with shorter running times but also to minimize passenger disruption the three loop services (routes 10, 11 and 20) will be cut up to create more, services with greater geographical coverage and more stretches of two-way operation (routes 41, 42, 43, 44, 45, 46 and 49). These will be complemented by changes to routes 33 and 6 (to create 47, 48 and 6). The proposals are shown in Figures A3 and A4 and are described in the following paragraphs.

Route 10

- Route 10 is replaced by routes **41**, **42** and **43**.
- Route 41 will create a new larger route to provide access to passengers living in south Superior Township and serve the eastern edge of the route 10 (by American Legion Memorial Park).
- Route 42 will serve most of route 10, but will operate one way until the intersection of Forest Avenue and Ford Boulevard (not serving the stretch of Cross Street between Prospect Road and Michigan Avenue) and will turn back towards Ypsilanti downtown at the intersection of Clark Road and Wiard Boulevard.
- Route 43 will serve Michigan Avenue from downtown to Ridge Road with a small turn around loop on Holmes Road. This will provide quick, two-way access from downtown to the Kroger store.

Impacts

- Network coverage in the north east of Ypsilanti will be greatly enhanced and the proposed services will operate seven days a week, providing much needed access to opportunities for local residents.
- This area is expected to experience high demand as it has high population densities, high proportions of households with no cars, and a relatively high proportion of households living below the poverty line.
- 36% of route 10 boardings occur at the Ypsilanti Transit Center and these people are likely to benefit from two routes with two-way operation.
- However, this figure is less than 50% suggesting there is a significant proportion of people who are using the bus to make connections along the route and these people could be disadvantaged by the cut. The number of new routes and the overlapping sections of these should minimize the impact.
- Route 10 experiences a small peak in boardings in the center of the route on MacArthur Boulevard and many of these passengers should benefit from the shorter loop service.

Section 3: Ypsilanti Area

Figure A3: Ypsilanti Area Network Today



Figure A4: Short to Medium Term Conceptual Proposals for the Ypsilanti Area Network



Features

- Four loops terminating downtown with one-way operation (10, 20, 11, 33)
- Four largely linear services operating to Ann Arbor (3, 4, 5, 6), two with loops at the Ypsilanti end (3, 6)

Features

- Nine new routes in the Ypsilanti area with greater geographical coverage and more stretches of two-way operation (routes 41, 42, 43, 44, 45, 46, 47, 48, 49)
- Full two-direction service on route 6

Section 3: Ypsilanti Area Changes to the Ypsilanti Area Network

Route 20

- Route 20 is replaced by routes 44, 45 and 49.
- Route 44 will replace much of the northern section of route 20, serving Ecorse Road and out to Willow Run airport. The service may be curtailed at Wiard Road on weekends depending on the needs of airport employees and visitors. It also replaces part of the eastern section of route 11.
- Route 45 will provide a new connection along Grove Road between I94 and Harry Street and will replace the southeastern stretch of route 20, serving Grove Road. It also replaces part of the eastern section of route 11.
- Route 49 will introduce a new north-south connection between the residential areas between Ford Lake and 194, Willow Run High School and the shopping destinations: Gault Village, Sunrise Shopping Center and Kroger.

Impacts

- Network coverage in the south east of Ypsilanti will be greatly enhanced and the proposed services will operate seven days a week, providing much needed access to opportunities for local residents.
- Connectivity between key retail, employment and educational facilities will be improved, with some connections not involving a transfer downtown.
- This area is expected to experience high demand as it has high population densities, a high proportion of households with no cars, and a high proportion of households living below the poverty line.
- 38% of route 20 boardings occur at the Ypsilanti Transit Center and these people are likely to benefit from two routes with two-way operation.
- However, this figure is less than 50% suggesting there is a significant proportion of people who are using the bus to make connections along the route and these people could be disadvantaged by the cut. The number of new routes and the overlapping sections of these should minimize any potential impact.

Section 3: Ypsilanti Area Changes to the Ypsilanti Area Network

Route 11

- The stretches of route 11 that are not replaced by the 44 and 45 (as described) are largely replaced by a redesign of route **6**, and the introduction of route **47**. Route **46** will provide a new connection in this area to serve the target area around the Ypsilanti District Library on Whittaker Road, Ypsilanti Township Civic Center and Point Creek Shopping Center.
- Route 6 will be re routed into downtown Ypsilanti with two way operation along Michigan Avenue and no service on Congress Street. This change is not expected to have any material effect on running times.
- Route 46 will provide a new connection south along Huron Street and serve the Ypsilanti Township Civic Center, the residential areas between Textile Road and Ford Lake and the Whittaker Road Library.
- Route 47 will operate along Congress Road and Hewitt Road before turning back with a small loop on Michigan Avenue.

Impacts

- Network coverage in the south and south west of Ypsilanti will be greatly enhanced and the proposed services will operate seven days a week, providing much needed access to opportunities for local residents.
- This area is expected to experience high demand as it has high population densities and a high proportion of households with no cars, and a high proportion of households living below the poverty line.
- 37% of route 11 boardings occur at the Ypsilanti Transit Center and these people are likely to benefit from two routes with two-way operation.
- However, this figure is less than 50% suggesting there is a significant proportion of people who are using the bus to make connections along the route and these people could be disadvantaged by the cut. The number of new routes and the overlapping sections of these should minimize any potential impact. There is one section along Jefferson that is no longer served, but daily boardings are low in this section.

Route 33 – The EMU Shuttle

Route 33 will be replaced by route 48. Route 48 is similar to 33 but instead of operating along Hamilton Street, the eastern edge of the loop is shifted west on to Ballard Street / College Place and Forest Avenue. In addition the service will be extended to the Hewitt Road / Rynearson Stadium area for Park & Ride purposes. The removal of the western connection to Fletcher Elementary School is already proposed to occur in August 2011.

Impacts

 The travel times associated with the revised route will be quicker and the Park & Ride facility will provide an attractive option for EMU students who travel longer distances.

Section 4: New Services

The Link

- A new downtown circulator service in Ann Arbor is proposed. This service will resemble The Link service which was discontinued in 2009.
- The new service will connect Main Street, Liberty Street, State Street and Central Campus. Proposals include 7 day operation, with 3 services per hour.

Figure A5: Short to Medium Term Conceptual Proposals for The Link Service

Ann Arbor Amtrak Stn UIL Central link

New Flexible Services

There are two areas to the south of Ann Arbor identified in Figure A6 with green shading. It is not currently possible to serve these areas with an effective standard bus service so flexible services are proposed to provide a connection from these areas to the nearby bus services.

Figure A6: Short to Medium Term Conceptual Proposals for Flexible Services



Section 5: Key Corridor Upgrades

Five busy routes have been selected to be develop as flagship corridors. These are identified below and are shown on Figure A6.

These corridors will have seven day, high frequency services and provide a focus for bus priority initiatives such as signal priority or priority lanes.

As well as being some of the busiest routes on the network, these services also reflect sections of the proposed High Capacity Transit Corridors (as identified in the Transit Master Plan and progressed by the Re-Imagining Washtenaw Avenue and the Ann Arbor Connector Studies) and will help TheRide build further demand and focus development in these areas. As a consequence, parts of these routes may be withdrawn or restructured when the High Capacity Transit proposals are implemented.

- Route 2 has been selected because:
 - it is already a busy route;
 - it operates part of the Connector corridor; and
 - it serves key university destinations and two of the existing Park & Ride sites.
- Route 3 has been selected because:
 - it is a fairly busy route;
 - with the 4 and 6 it provides coverage across the routes between Ann Arbor and Ypsilanti; and
 - it serves key destinations including St. Joseph Mercy Hospital and Washtenaw Community College.
- Route 4 has been selected because:
 - it is already a busy route;
 - it is the most direct connection between Ann Arbor and Ypsilanti;
 - it serves key destinations along Washtenaw Avenue; and
 - it operates part of the Washtenaw Avenue corridor.
- Route 5 has been selected because:
 - it is already a busy route;
 - it serves large residential populations along the route; and
 - it can be split to provide new connections to the south.
- Route 6 has been selected because:
 - it is already a busy route; and
 - it serves key destinations including Briarwood Mall, Meijer on Carpenter Road and the Roundtree Shopping Center.

Route 5

The uplift in frequency on route 5 will provide the opportunity to split the route at the intersection of Packard Street and Carpenter Road.

The existing route 5 connection to downtown Ypsilanti will be served by two buses per hour and a further two buses per hour will serve Carpenter Road, Michigan Avenue, Munger Road and Textile Road providing access to the Roberto Clemente Student Development Center, Sam's Club and housing on Michigan Avenue. This extension is shown in Figure A6.

Section 6: Summary Proposed Total Service Map

Figure A6: Short to Medium Term Conceptual Proposals for The Whole Network

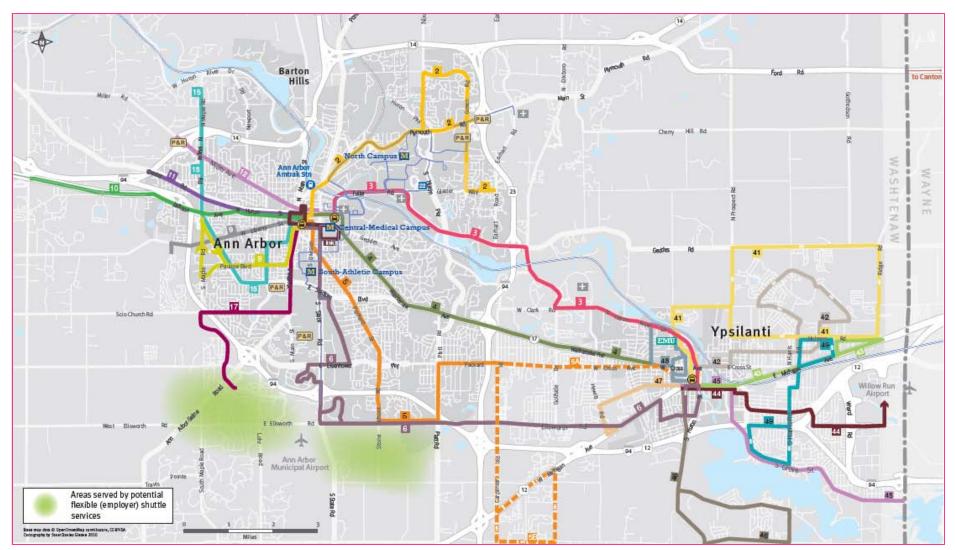


Table A1: Short to Medium Term Conceptual Proposals for Whole Network

Section 6: Summary Service Levels

In summary, this table shows the proposed frequencies of all the new or altered routes. Please note that existing routes 8, 9, 10, 11, 12A, 12B, 15, 18, 20 and 33 will no longer exist under these proposals

•Frequencies of 1.5 on the weekend allow for services to run half time with 2 buses per hour and half the time with 1 bus per hour

**PVR refers to the peak vehicle requirement, i.e. the maximum number of buses required to operate the service in the peak periods

New / Altered Route	Route	Peak frequency	Midday frequency	Evening frequency	Weekend frequency	PVR**	
West of Ann Arbor	8	4	2	2	2	2	
Area	9	4	2	2	2	2	
	10	4	2	2	2	4	
	11	4	2	2	2	2.67	
	12	4	2	2	2	2.67	
	15	2	2	2	1	2	
	17	2	2	2	1	3	
Ypsilanti Area	41	2	1	1	1	2	
	42	2	1	1	1	1.5	
	43	2	1	1	1	1	
	44	2	1	1	1	1	
	45	2	1	1	1	1.5	
	46	2	1	1	1	2	
	47	2	1	1	1	0.67	
	48	3	3	3	1	1	
	49	2	1	1	1	1	
New Services	Link	3	3	3	3	1	
Key Corridors	2	6	4	4	1.5	6	*
	3	4	2	2	1	6	
	4	8	4	4	2	12	
	5	4	2	2	2	6	
	6	4	2	2	1	8	

Section 6: Summary

To ensure that these proposals address the needs identified in the introduction (from previous work and from outreach) this table shows which routes address each issue. One issue has not been addressed and the reasons for this are given below.

Identified need	Met by routes		
West of Ann Arbor area services – in terms of simplification and coverage	Proposals for routes 8, 9, 10, 11, 12, 15, 17		
Ypsilanti area services – in terms of coverage, length of ride and operating hours and days	Proposals for routes 41, 42, 43, 44, 45, 46, 47, 48, 49, 4, 6		
Extensions / enhanced service to the East Medical Center	No proposals as this facility is already served by UM routes, if this is not deemed sufficient the 2A or 2B could be extended, scheduling permitting		
Extensions / enhanced service to the Ypsilanti District Library on Whittaker Road	Proposal for route 46		
Extensions / enhanced service to Willow Run Airport	Proposal for route 44		
Extensions / enhanced service to EMU	Proposal for route 48		
Extensions / enhanced service to St. Joseph Mercy Hospital and Washtenaw Community College	Proposal for route 3		
Extensions / enhanced service to urban / suburban areas within surrounding townships	Proposals for routes 5, 10, 46, 41		
Increased service frequency on key corridors	Proposals for routes 2, 3, 4, 5, 6		

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