

Public Workshop

City of East Lansing Non-motorized Transportation Plan
May 27, 2009

City of East Lansing's Non-motorized Transportation Plan

Public Workshop



Hannah Community Center
819 Abbot Road, East Lansing, MI 48823
May 27, 2009 @ 7pm

The Greenway Collaborative, Inc. www.greenwaycollab.com

Project Overview

Goal:

- A Consensus Vision on How To Transform The Community To Make Walking and Bicycling an Obvious, Safe and Attractive Option

Approach:

- Utilize A Context Sensitive Solution To Match Bicycle and Pedestrian Improvements to Unique Areas In the City



The Final Action Oriented Document Will Address the Street Network, Off-Road Trails, Policies, Education and Promotion.

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Project Schedule

City of East Lansing Non-motorized Transportation Plan Schedule

Revised April 1, 2009

	April	May	June	July	August	Sept.	Oct.
1 Plan Development							1:00 PM
2 Context and Network Maps			Draft				1:00 PM
3 Trails Map				Draft			1:00 PM
4 Policies & Guidelines					Draft		1:00 PM
5 Education & Marketing Plan						Draft	1:00 PM
6 Work Sessions with City Staff							1:00 PM
7 Public Workshops							1:00 PM

Legend:

- Meeting with City Staff (6)
Wed, Apr 15 1:30-3:30 PM
Wed, May 20 1:30-3:30 PM
Wed, Jun 17 1:30-3:30 PM
Wed, Jul 1 1:30-3:30 PM
Wed, Aug 19 1:30-3:30 PM
Wed, Sep 16 1:30-3:30 PM
- Public Workshops (3)
Wed, May 27 7:00-9:00 PM
Wed, Sep 23 7:00-9:00 PM
Tue, Oct 20 7:00-9:00 PM
- Task Duration

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A Great Starting Point – 2000 Journey to Work Data

City	Pop.	% Bike	% Pedestrian	% Public Transit	% Total Non-Car
East Lansing, MI	48,704	3.1%	22%	4.38%	29.4%
Davis, CA	60,341	15%	4.81%	7.18%	27%
Bloomington, IN	68,229	2.6%	15%	3.9%	21.5%
Boulder, CO	84,510	7.4%	9.7%	8.9%	26%
Missoula, MT	58,968	5.85%	8.44%	1.57%	15.86%
Iowa City, IA	62,381	2.6%	16.0%	7.3%	25.9%
Ann Arbor, MI	114,100	2.4%	16.8%	8.9%	28.1%

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Non-Motorized Transportation Plan A Dozen Best Practices

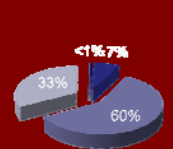


- Bicycle Facilities
- Share Use Facilities
- Pedestrian Facilities

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Four Types of Bicyclists

- Strong & Fearless
 - <1%
 - Always Biking
 - Any Road Regardless of Condition
- Enthusiased & Confident
 - 7%
 - Frequently Bike
 - Like Designated Facilities Such As Bike Lanes
- Interested but Concerned
 - 60%
 - Occasional Rider
 - Local Roads and Trails
- No Way, No How
 - 33%



Not Really This Clear Cut. There Is Movement Between the Groups.

Developed by Roger Geller, Bicycle Coordinator, Portland Office of Transportation


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Bike Lanes / Paved Shoulders (approx. 5' wide)

- Designated Travel Lane For Bicyclists
- Delineated by Solid White Stripe, Bike Icon Pavement Markings and Signs.
- Bicyclists Travel The Same Direction as Motorized Vehicles



Target Audience: "Enthusied and Confident" Bicyclists

Context: Used on Primary Roads in All Areas. Busy and High Speed Roadways May Warrant Wider Bike Lanes

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Sidewalks/Sidepaths vs. Bike Lanes

- Motorists Are Not Looking for Bicyclists on Sidewalks or Sidepaths Especially When They Are Bicycling Opposite the Flow of Traffic
- Bicycling on the Sidewalk is Generally Slower and More Inconvenient than Bicycling on the Roadway.
 - the presence of pedestrians
 - motorists that block the sidewalk or crosswalk.



Bicycles are vehicles!

There is a reason experienced bicyclists Travel on the road.

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Wide Bike Lanes / Paved Shoulders (5-7')

- Extra Width Provides More Comfort for Less Experienced Bicyclists on Lower Volume Road
- Also More Space For Experienced Bicyclists On High Volume Roads




Target Audience: "Enthusied and Confident" Bicyclists

Context: Used on Primary Roads in All Areas, Especially on Busy and High Speed Roadways

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Contraflow Bike Lane

- A Two-Way Road for Bicyclists But Restricted To One-Way for Motorists
- Used To Reduce Out-of-Direction Travel Caused By One-Way Roads
- Used to Reduce Motorized Travel on A Roadway
- Generally Done In Short Segments
- Some Issues With Visibility At Intersections




Target Audience: "Enthusied and Confident" Bicyclists

Context: Generally Used on Low Volume and Low Speed Collectors and Arterials Close To Town

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Shared Use Arrow

- Used Where A Bike Lane is Not Feasible and/or Desirable
- Indicated To Motorists To Expect Bicycles
- Indicates to Bicyclists To:
 - Ride With Traffic
 - Ride A Safe Distance Away From Car Doors
- Currently "Experimental" Marking, But Planned to Be Included in Next Version of the Manual of Traffic Control Devices



Target Audience: "Enthusied and Confident" Bicyclists

Context: Used on Lower Speed Primary Roads Often in Downtown Areas

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Signed Shared Roadways

- Most Local Residential Roads Can Provide Key Links Without Special Facilities
- Signs Provide Wayfinding Or Identify Specific Routes
- Can Provide Links Between Trails and Bike Lanes




Target Audience: "Interested But Concerned" Bicyclists

Context: Generally Used on Local Residential Roads and Rural Routes with Moderate Speed and Traffic Volumes.

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Bicycle Boulevards

- Can Take Many Forms
- Discourage Through Motor Vehicle Traffic Through Diverter Islands
- Reduce Speed Through Traffic Calming Measures
- Provide for Through Bicycle Traffic Via Median Openings and Exceptions To One-Way Travel
- Residents Benefit from Reduced and Slowed Traffic



The diagram shows a street layout with a median opening allowing bicycle traffic to proceed straight through while motor vehicles are diverted. Labels include: 'Reduced median opening restricts motor vehicle traffic from cutting through', 'Median opening allows bicycle traffic to proceed straight', 'Traffic circle acts as traffic calming device', 'Turning stop signs to force through movement on bike block', 'One-way streets signed for motor vehicles', and 'Traffic signal allows bikes to cross street'. Photos show a street with a median opening and a traffic circle.

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Off-Road Trail – Shared Use

- A Shared Use Path Outside of a Road ROW
 - 10' Min Width
 - 2' Clear Areas
- Complement, But Do Not Replace On-road Facilities
- Great Place for Inexperienced Bicyclists to Build Skills



Target Audience: "Interested but Concerned" Bicyclists

Context: Generally Used in Rural and Suburban Areas Where ROW's and Large Parks Provide Space. Difficult to Introduce Into An Existing Urban Area.

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Sidepath – Share Use

- A Shared Use Path Adjacent to a Roadway
 - 10' Min Width
 - 2' Clear Areas
 - Separated From Road
- Many Operational Difficulties Primarily Due to Conflicts At Intersecting Driveways and Roadways
- Many Bicyclists Will Still Prefer to Bike in the Road
- In Application, Often a Glorified Sidewalk



Target Audience: "Interested but Concerned" Bicyclists

Context: Used Along Busy or High Speed Primary Roads In Areas With Very Few Driveway Intersections.

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Sidewalk (approx 5' wide)

- Should Be Located on Both Sides of the Road
- Ideally Set Back From The Roadway and Barriers Between The Roadway And The Sidewalk
 - Trees
 - Light Poles
 - Parked Cars



Context: Generally In Urban and Close-In Suburban Areas

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Wide Sidewalk (6-8' wide)

- Allow Two Pedestrians to Comfortably Walk Side by Side
- Suitable For Light Bicycle Use By Novice Bicyclists But Not A Designated Bicycle Facility



Context: Generally In More Suburban and Rural Areas Along Busier Primary Roadways

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Basic Crosswalk

- Serve as Pedestrian Right-of-Way Across a Street
- Usually Occurring at an Intersection Where the Crosswalk Become an Extension of a Sidewalk or Shoulder Across the Intersection
- Inform Motorists of the Location of A Pedestrian Crossing so That They Have Time to Yield to A Crossing Pedestrian



Context: 2 Lane Lower Speed Lower Volume Roads

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Actuated Rectangular Rapid Flash Beacon

- High Intensity LED Flashers Area Paired With Crosswalk Signs
- Alternating Flashers Get Motorists Attention When Activated
- Can Be Passively or Push-Button Activated
- Solar Power Options
- Can Be Linked to Advance Warning Signs
- 80 to 90% Adherence After 1 Year in Test
- Interim Approval by FHWA To Use




Context: Busier Faster Primary Roadways




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Crossing Island

- Provide Storage Area for Pedestrians to Wait for Acceptable Gaps in the Flow of Traffic Before Completing the Street Crossing.
- Zig-Zag Crossing Provide Room for Multiple Bicycles, Trailers and Tandems



Context: 3 Or More Lane Busy And / Or High Speed Roadways



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Hybrid Pedestrian Beacon

- Address Many of the Problems With Traditional Pedestrian Signals
- Minimize Delay to Motor Vehicle Traffic
- Lower Warrants
- Will Be In Next Version of MMUTCD
- Good For Locations Where There Are Few Usable Gaps In Traffic or Crossing Island Is Not Feasible
- Roundabout Applications




Context: High Speed / High Volume Roadways Where A Crossing Island Is Not Practicable



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Non-motorized Transportation Plan Inventory & Analysis




- ❖ Existing Conditions
- ❖ Potential Facilities
- ❖ Context Analysis

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Overview


Population: Currently Estimated To Be 46,254
Size: 11.25 Square Miles



Community and Recreational Centers
Schools
Parks
Water
Local Roads
Primary Roads
Rural Roads

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Existing Bicycle Route



Trails
Paved Shoulder/Bike Lanes
Unmarked On-Street Routes
Alleys
Primary Roads
Local Roads

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Sidewalk Quality

A – Facility with Vertical Buffer B – Facility with Buffer C – Facility along Curb

D – No Facility, but Passable E – No Facility, Not Passable

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Sidewalk Quality Assessment

A Key Factor to A Pedestrians Comfort on A Sidewalk is the Degree of Separation From The Roadway.

Buffer (Lawn Extensions) and Vertical Elements Such as Trees and Light Poles Increase The Pedestrians Comfort Level.

Sidewalk Rating

- A - Facility with Vertical Buffer
- B - Facility with Buffer
- C - Facility along Curb
- D - No Facility/Passable
- E - No Facility/Not Passable

63% (46.5 Miles) of Existing Sidewalk Coverage Along Primary Roads

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Distance Between Crosswalks

Crosswalk Spacing is A Key Factor in Directness of Travel. Most Pedestrian Trips for Personal Business (Like Walking to The Store) are About 1/2 Mile Long.

Where There is Demand to Cross the Road and Crosswalk Spacing is Over 1/2 of A Mile Apart, Mid-block Crossings are Likely to Occur.

Distance Between Crosswalks

- 0 to 1/8 Mile
- 1/8 to 1/4 Mile
- 1/4 to 1/2 Mile
- Over 1/2 Mile

- Signalized Road Crossings
- Unsignalized Road Crossings
- Pedestrian Bridges

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Road Crossing Difficulty Assessment

Road Crossing Difficulty is A Measurement of How Difficult A Person Would Typically Find it to Cross A Road at an Unmarked Mid-block Crosswalk.

It is Based on the Number of Lanes, Speed and Average Daily Traffic.

Road Crossing Difficulty (Based on Lanes & ADT)

- A
- B
- C
- D
- E

- Signalized Road Crossings
- Unsignalized Road Crossings
- Pedestrian Bridges

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Road Crossing Difficulty Assessment

- Multiple Lane Roads With High Volumes and Few Gaps In Traffic Lead to Pedestrians Making Dangerous Crossings.

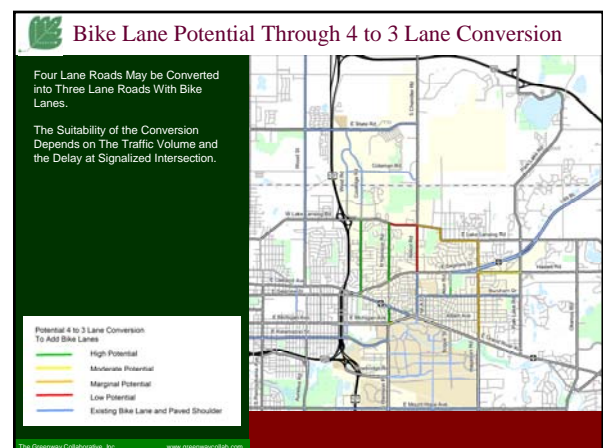
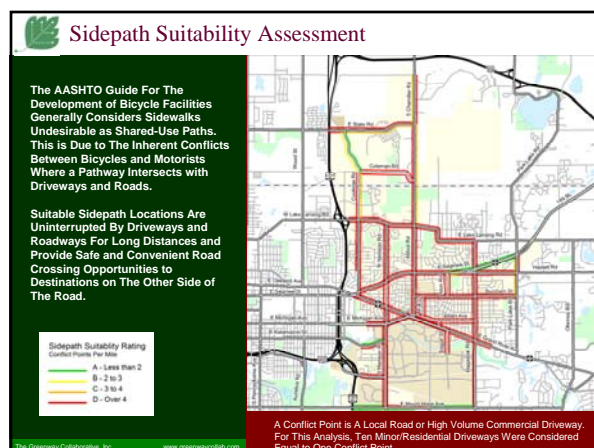
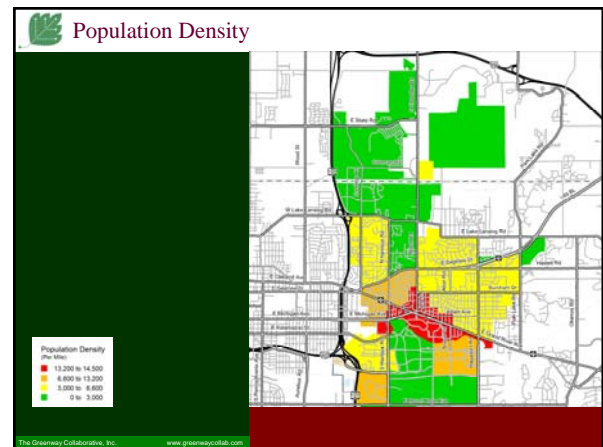
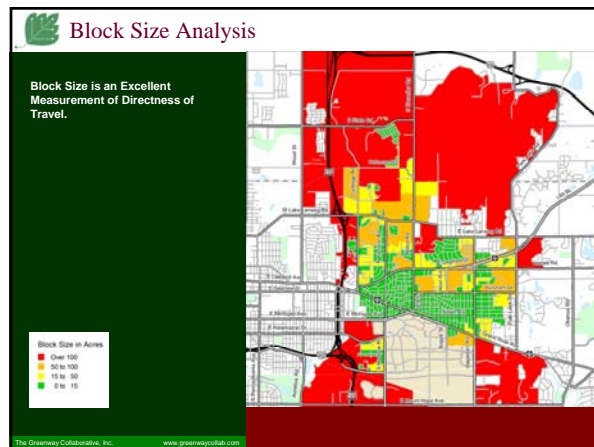
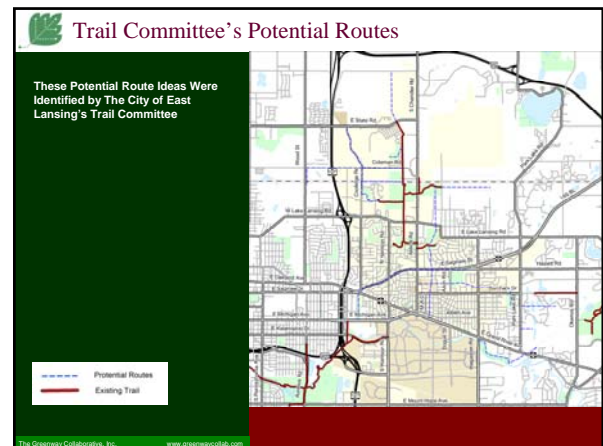
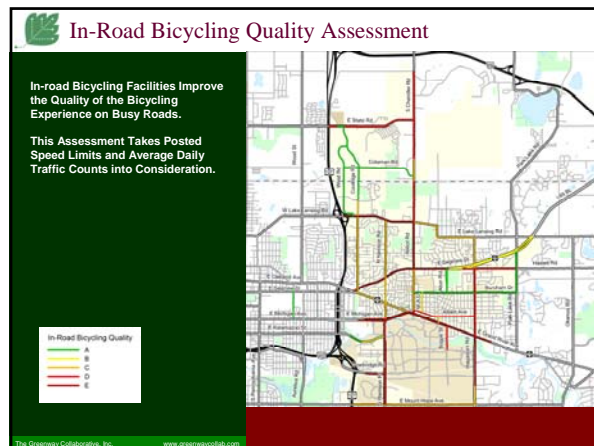
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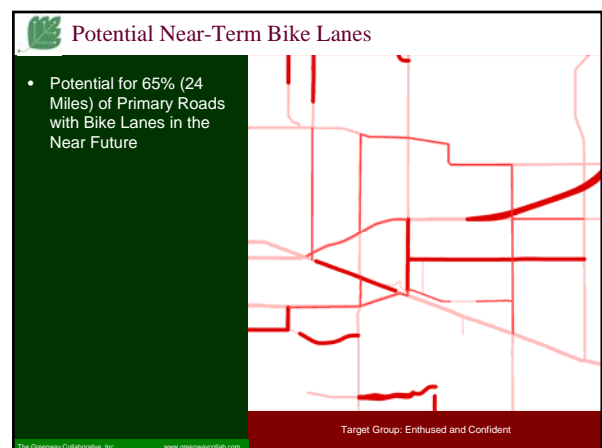
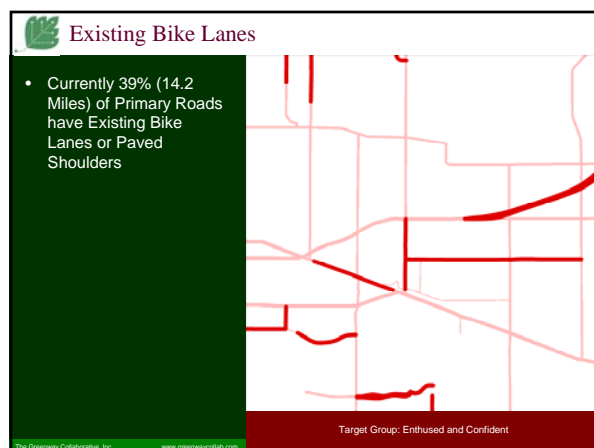
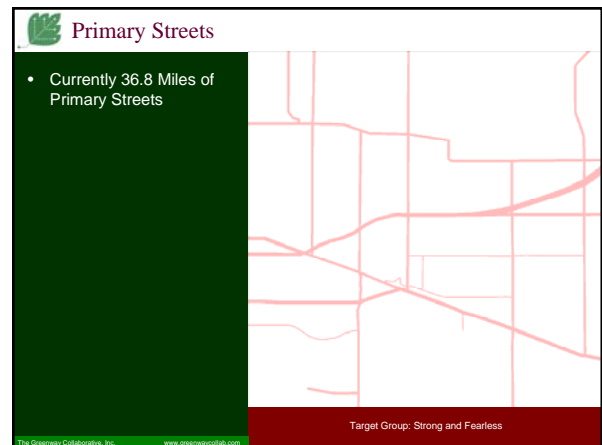
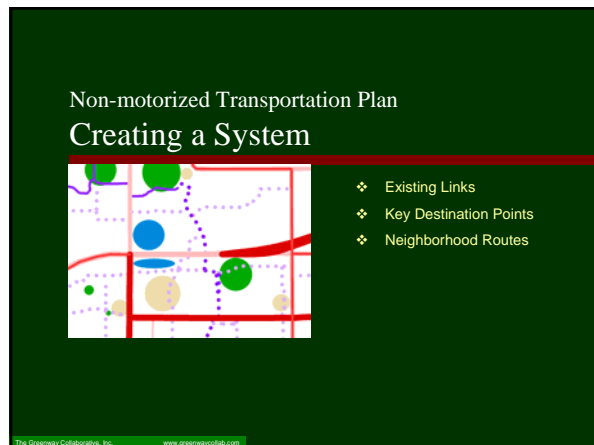
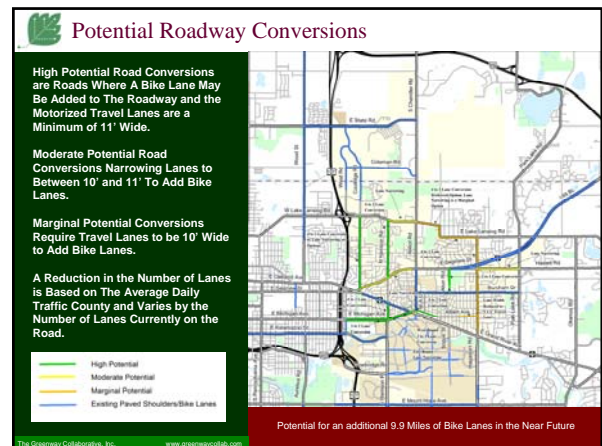
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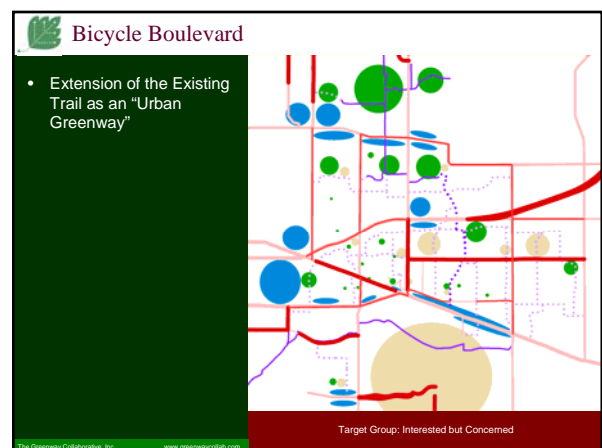
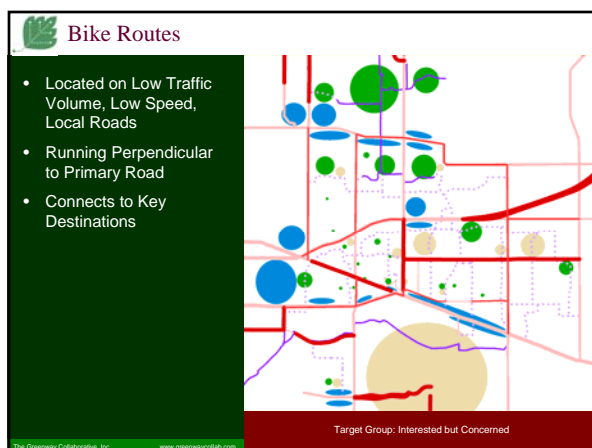
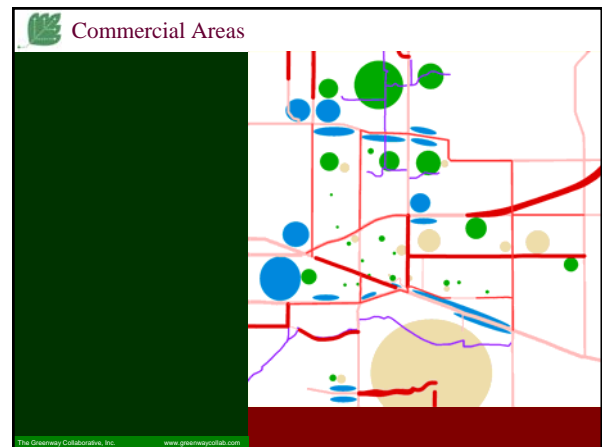
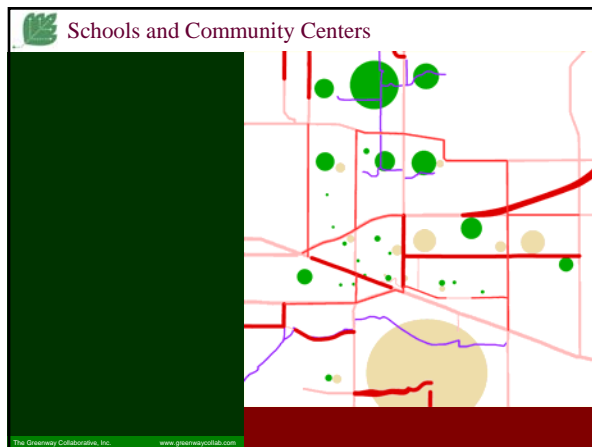
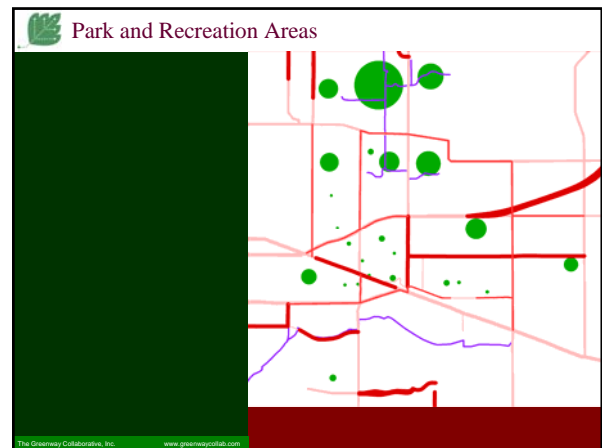
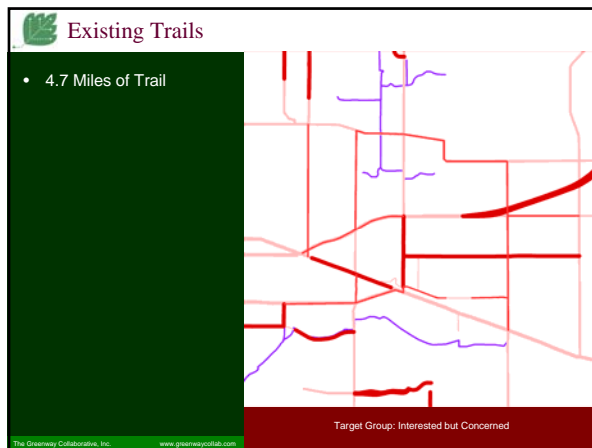


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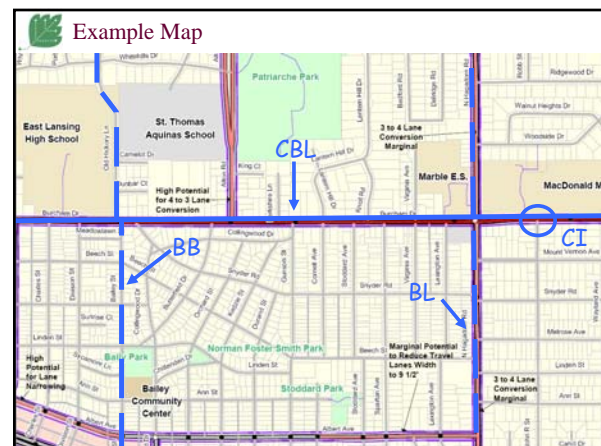
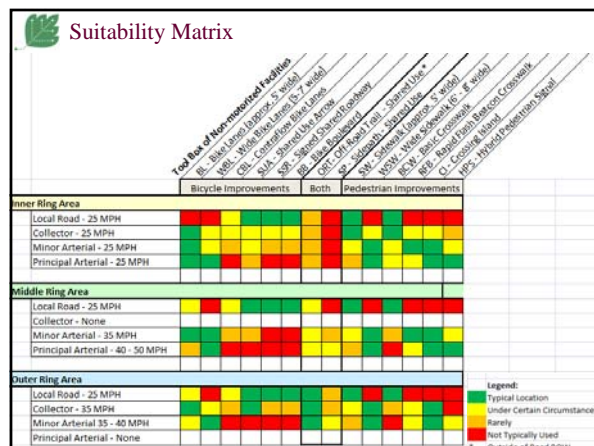
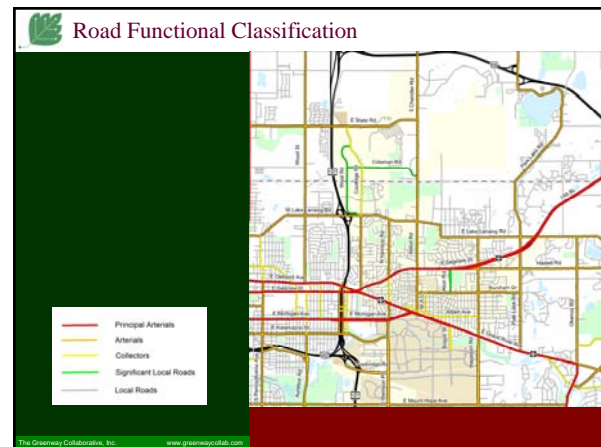
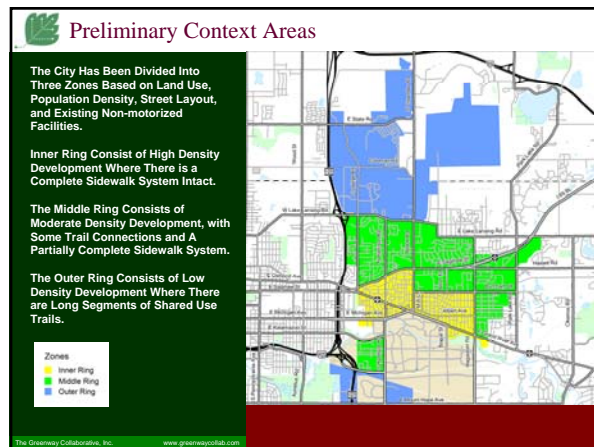
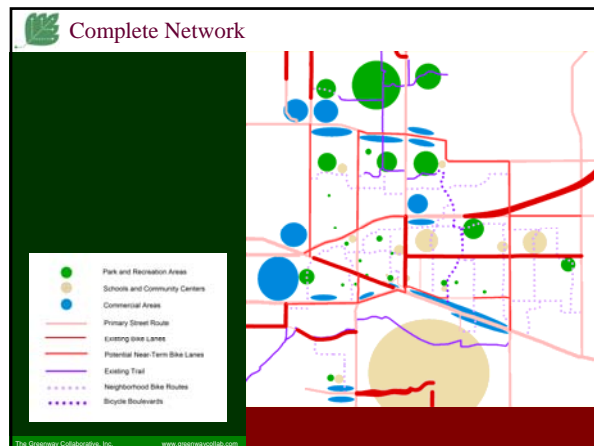
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Questions or Comments



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