Soles & Spokes

The Pedestrian and Bicycle Plan for Chicago Area Transportation

TASK 1 REPORT:

Public Involvement Workshop

Prepared by Suzan A. Pinsof and Associates

With Assistance from the EK Team

Edwards and Kelcey
Chicagoland Bicycle Federation
League of Illinois Bicyclists
T.Y. Lin International
Sprinkle Consulting

Prepared for Chicago Area Transportation Study
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Introduction

To assist in the development of *Soles and Spokes: the Pedestrian and Bicycle Plan for Chicago Area Transportation ("the Soles and Spokes Plan"), a* workshop to solicit public involvement was held at the Chicago Area Transportation Study (CATS) on January 29, 2003 from 9:00 AM to 12:00 noon. The workshop was organized around two major activities: a review of the draft inventory of bicycle facilities and an exercise to assess the perception by participants of the types of improvements needed to facilitate walking and bicycling in several land use scenarios. It was a further goal of the workshop to identify the various criteria that would provide the rationale for the implementation of the recommended improvements.

The workshop also included several presentations about plan development including: an overview of the Soles and Spokes Planning Process; a presentation of and invitation to review the draft Goals and Objectives; and a summary of the bicycle and pedestrian level of service tools (BLOS and PLOS) being utilized in the planning process.

Attendees were personally invited to attend this workshop. CATS sent invitations to various public agencies, public interest groups and interested individuals. Anyone who expressed an interest in pedestrian and bicycle planning was invited. 54 people attended the workshop. Participants included representatives of local, county, and state government, transit agencies, planning consultants, representatives of public interest groups, and citizens.

Review Bicycle Facility Inventory Maps and Tables

An inventory that will provide information about all bicycle facility resources in the region is part of the Soles and Spokes planning process. The workshop began with an invitation to review the draft sub-regional inventory maps and to suggest additions, deletions, or corrections. Seven maps with associated data spreadsheets were available for comment as participants entered the workshop. Participants walked around and reviewed areas of the region with which they were familiar.

Fifteen comment forms were collected and many changes were suggested to the maps and data tables.

Developing Criteria to Evaluate "Good" Pedestrian and Bicycle Projects/Programs

Participants were assigned to one of nine tables. Facilitators at each table conducted an interactive exercise to identify what would make bicycling and walking possible in various types of communities. Participants also began to develop criteria that might be used to evaluate bicycle and pedestrian projects and to integrate non-motorized concerns into transportation planning.

Participants engaged in a brainstorming session to generate problem statements and project/program ideas using an annotated aerial photo of a community or area type as a stimulus. Various neighborhoods and destinations were marked on the aerials. Three unidentified area types were represented on the aerials including a highly urban neighborhood, a traditional suburb with a commuter rail station, and a newly developing suburban area that also has a commuter rail station. Each table was given one of the three aerial types on which several possible pedestrian and bicycle trips were identified.

Participants were asked to consider three questions:

- What problems might you encounter getting from here to there (various origin and destination pairs) as a bicyclist or a pedestrian in this environment?
- How might these problems be addressed?
- What rationale would you present to support the implementation of each of these suggestions?

The goal of this exercise was to generate criteria that should be considered in the funding of bicycle and pedestrian projects or programs and when bicycle and pedestrian accommodations are integrated into other transportation or development projects. The resulting answers to these three questions include:

- Problem statements that describe the overall trip and the conditions that would be encountered;
- A list of project/program ideas that would provide a potential solution to the problems;
- Criteria that describe the condition and rationale that would support the implementation of the problem solution;
- An identification of the improvement type which identifies whether the solution would require an independent bicycle or pedestrian project; should be implemented as part of another transportation project; or, would require different land use or policy measures.

Workshop Results

Following is a summary of the types of projects and program solutions workshop participants generated and the resulting dominant “criteria” that identify the conditions or needs that would justify a project or consideration. Detailed descriptions of the environments and trip scenarios that participants examined are summarized in Appendix A. The resulting problem statements; solutions; rationale/criteria; and, improvement type are summarized in Appendix B.

Aerial # 1 shows a traditional suburban area with a commuter rail station, a Strategic Regional Arterial (SRA) with abutting shopping centers, strip shopping and several schools. There are also two major tollway interchanges within the community. Several trip scenarios were given to participants that involved crossing the SRA and another major arterial and walking to transit in a traditional suburban CBD. The resulting project recommendations (solutions) ranged from the provision of bike lanes, sidewalks and a

path through a park to a pedestrian overpass for independent bicycle and pedestrian projects. Improvements that would be part of another transportation project included major pedestrian crossing improvements including signal heads, refuge islands and bulb outs at intersections to shorten the crossing distance. Participants recommended that a pedestrian/transit access study be undertaken to better understand several pedestrian traffic crashes in the CBD and that a safe routes to school program and general road-sharing education be undertaken. Recommended policies to be implemented included reduced speed limits near schools, limited curb cuts along the SRA to reduce pedestrian-vehicle turning conflicts, and encouraging mixed use development.

Participants working on aerial # 1 were most concerned with school access issues and the difficulty of crossing the street at wide, high volume, high speed arterials. The conditions and criteria that participants noted most frequently to support the need for these improvements included:

- high pedestrian volumes;
- pedestrian safety concerns;
- ped/bike crash records;
- difficult street crossings;
- school access routes;
- high bicycle volumes.

Aerial # 2 illustrates an urban neighborhood with a highway interchange, a forest preserve, a university and an enclave of suburban-style development. The three trip scenarios involve crossing a river, and bicycling along and crossing a fairly high-speed arterial, among other challenges. The resulting solutions included several bicycle and pedestrian projects. Some of them are the addition of sidewalks in areas where they are missing or discontinuous; the provision of bicycle accommodations including bike lanes, a bike path through the forest preserve and wider lanes for road sharing; and a suggested pedestrian bridge over the river. Among the solutions that could be accomplished through other transportation projects were the addition of signalized intersections and pedestrian islands in locations of high pedestrian volumes along arterials; the redesign of interchanges to control merging traffic; and the improvement of lighting. The non-infrastructure solutions include an intersection study to improve access to the university and the removal of a fence that separates single family from multi-family housing.

Participants working on aerial # 2 were most concerned with the poor condition or lack of sidewalks in a highly urban area; the difficulty of crossing the street at locations of potentially high pedestrian volumes, and the barriers created by the river and the expressway interchange. The conditions and criteria that participants noted most frequently to support the need for these improvements included:

- traffic safety issues;
- difficult street crossings;
- incomplete sidewalks;
- record of crashes;

- serve high pedestrian and bicycle volumes;
- share the road with motor vehicles;
- access across barriers.

Aerial # 3 shows a low density suburban area served by a commuter rail, two regional trails and a local college. There is an SRA roadway, another major arterial and several low-density housing developments. The trip scenarios involve traveling along and crossing the arterials to access trails, schools and work at the college involving adults and a 12 year old. Among the independent bicycle and pedestrian improvements recommended by participants are trail additions and improvements, including lighting and re-alignment so that crossings occur at intersections. The provision of and improvements to sidewalks are also suggested, as is a tunnel or pedestrian bridge to cross the SRA. Participants also recommended crossing improvements that would most likely be part of an intersection and/or signal improvement project. These include push button activated pedestrian cycles with adequate timing and pedestrian refuge islands on the arterials. Bicycle transit access projects were also recommended including bikes on buses and on Metra and improved way-finding information. Policy initiated projects included recommendations for "walking (or biking) school buses" (several children led by a parent travel to school together) and for improved intergovernmental planning. Land use was addressed in a recommendation that a school be re-located closer to residential areas.

The issues of primary concern to participants working with aerial # 3 were high speeds on arterial roadways, the difficulty of crossing the SRA and the lack a continuous system of sidewalks, all of which contributed to the difficulty of walking even short distances to school, shopping and transit. The lack of bicycle facilities to access the regional trails was also noted. These conditions especially impact children who would like to get around without having to be driven. The criteria used most frequently to support the types of projects recommended are:

- personal safety (in the sense of traffic safety);
- difficult street crossings;
- school access.

The aerial # 3 groups also noted that several of the desired improvements could be accomplished with relatively small investments including: improved way-finding, the “walking school bus” concept and bikes on transit

Potential Applications

The issues that arose with the greatest regularity for workshop participants were concerns about the traffic safety of pedestrians and bicyclists, the difficulty, especially, of intersections, the lack of continuous sidewalks and the issue of school access. The criteria used most frequently to support the project solutions recommended for all three aerials were:

- personal safety (in the sense of traffic safety);
- difficult street crossings;

- lack of sidewalks;
- school access.

It was recognized that all of the environments analyzed posed major obstacles to bicycling and walking and that these difficulties were especially significant for children.

Participants recommended many independent bicycle and pedestrian projects including trail projects, various types of bikeways and underpasses and bridges. However, most of the improvements associated with the most frequently recommended criteria must be addressed through integration of pedestrian and bicycle concerns with general transportation planning.

Workshop results imply certain needs, including: better inter-governmental coordination of transportation planning; “context sensitive” design solutions; and, policy initiatives to better integrate bicycle and pedestrian concerns into transportation planning. The goals and objectives for the Soles and Spokes plan can address these concerns and plan recommendations can seek “best practices” examples and identify strategies to better accomplish the integration of bicycle and pedestrian needs into all levels of transportation planning.

Appendix A

Aerial Routes

AERIAL # 1: GENERAL CONDITIONS:

Suburban Collector:

- 2-4 lanes through traffic (11-12 ft. wide)
- 4-7 lanes at intersections
- traffic speeds average 30-40 mph
- only major intersections are signalized
- signalized intersection conditions:
    - sometimes lack pedestrian signal heads and crosswalk markings
    - signals are often center mounted and are sometimes difficult to see from the sidewalk/crosswalk area
    - where ped heads are provided they are generally demand actuated; direction of travel is not always clear

Suburban Arterial:

- 4-6 lanes through traffic (10-12 ft. wide)
- some have center turning lanes
- 6-9 lanes at intersections
- traffic speeds average 35-45 mph
- signalized intersections are at ½ mile intervals
- signalized intersection conditions:
    - frequently lack pedestrian signal heads and crosswalk markings
    - signals are often center mounted and are sometimes difficult to see from the sidewalk/crosswalk area
    - where ped heads are provided they are generally demand actuated; direction of travel is not always clear
- corner radii are often increased to facilitate vehicle turning movements, thereby widening the cross walk and increasing turning speed
- double turning lanes are sometimes provided

Strategic Regional Arterials (SRA's):

- arterial roadways to minimize motor vehicle traffic delay
- 4-6 lanes through traffic (11-12 ft. wide)
- some have center turning lanes or medians
- 8-9 lanes at intersections
- traffic speeds average 35-50 mph
- signalized intersections are minimized
- some SRA's have interchanges
- signalized intersection conditions:
    - frequently lack pedestrian signal heads and crosswalk markings
    - signals are often center mounted and are sometimes difficult to see from the sidewalk/crosswalk area
    - where ped heads are provided they are generally demand actuated
- corner radii are increased to facilitate vehicle turning movements
- double turning lanes are often provided

AERIAL # 1: TRIPS

Trip A:
Walk from home to work at the hospital (A1) and from work to lunch (A2).

Issues:
- No sidewalks within sub-division
- No sidewalks on section of arterial roadway
- No direct connection from sub-division to hospital
- Mid-block crosswalk from hospital to west side sidewalk is signalized with a flashing yellow light on side of road that is usually ignored by drivers
- Drivers entering and exiting hospital parking lot often do not yield to pedestrians
- At intersection at the southwest corner of hospital, ped signal is on west side crossing only

Trip B:
Bicycle from home to High School.

Issues:
- Originating neighborhood has few sidewalks
- Sidewalks are intermittently missing along collector and SRA
- Frequent driveways to access commercial areas along SRA
- Pedestrian and bicycle crash cluster near high school
- T-intersections along the SRA have stop sign control only
- There are 9 lanes at the intersection of SRA and arterial at the northeast corner of the high school; this is the only signalized intersection along the route
- Signal at that crossing is in the middle of the intersection and is difficult to see from the sidewalk
- There is no pedestrian head on the signal
- There are clusters of pedestrian and bicycle crashes near high school

Trip C:
Walk from home to CBD commuter rail station (C1) in the morning. After work, walk from commuter rail station to shops (C2) north of the tracks and then home by a different route than that used in the morning.

Issues:
- There are several multiple pedestrian crash sites along route
- Pedestrians south of the tracks must cross two one-way streets
- Railroad crossing is at-grade
- There is a skewed intersection just north of the tracks where heavy traffic sometimes obscures crossing pedestrians
- Rolling stops are common at stop sign controlled intersections
- Traffic is heavy on the arterial that serves as the north/south “Main Street” and travels at speeds between 30 and 40 mph as it approaches the CBD.
- There is an uncontrolled mid-block marked crosswalk on the commercial CBD street south of the railroad tracks

AERIAL # 2: GENERAL CONDITIONS

Urban Collector:

- Generally 44 feet wide with two lanes of traffic and with parking on both sides of street
- Sidewalks are sometimes lacking along forest preserves and cemeteries

Urban Arterial:

- 2-4 lanes of traffic moving at variable speeds depending on type of adjacent land use and relative congestion
- 3-6 lanes at intersections
- Often widened near major traffic generators for additional lanes but bridges and underpasses are not reconstructed
- Signals are generally at ½ mile intervals only
- Enlarged curb radii increase crossing distance at intersections

Angled Intersections:

- Create difficult pedestrian crossing environments with wide crossing areas and difficult sight angles

Non-controlled Highway Interchanges:

- Entering traffic is often accelerating
- Exiting traffic pulls up to intersecting street edge without regard for pedestrians
- Driver concentration is on merging and pedestrians are often not seen
- Sidewalks stop and long areas of entering and exiting traffic must be crossed

AERIAL 2: TRIPS

Trip A:
Fourteen-year-old bicycles from home to Park District pool.

Issues:
- Must cross un-signalized angled intersection
- Arterial is heavily traveled; traffic at 35-40 mph
- Interchanges are un-signalized and one on/off ramp area is very wide
- Roadway widens near expressway to 4, 11-foot lanes but bridge over expressway narrows to 4, 9-foot lanes
- Roadway under railroad narrows and sidewalk is adjacent to roadway and in poor repair
- No signalized crossings of urban arterial on route

Trip B:
Walk from home to shopping center.

Issues:
- No sidewalks in residential enclave (trip origin)
- Fence prevents taking more direct route
- No signal where cul de sac meets collector
- No sidewalks along north edge of Cemetery
- No walkway through shopping center parking lot

Trip C:
Walk from home to work at University.

Issues:
- Limited river crossings requires indirect route
- Very few signalized intersections near university
- Heavy fast moving traffic on urban arterial

AERIAL 3: GENERAL CONDITIONS

Suburban Collector:

- 2-4 lanes through traffic (11-12 ft. wide)
- 4-7 lanes at intersections
- traffic speeds average 30-40 mph
- only major intersections are signalized
- signalized intersection conditions:
    - sometimes lack pedestrian signal heads and crosswalk markings
    - signals are often center mounted and are sometimes difficult to see from the sidewalk/crosswalk area
    - where ped heads are provided they are generally demand actuated; direction of travel is not always clear

Suburban Arterial:

- 4-6 lanes through traffic (10-12 ft. wide)
- some have center turning lanes
- 6-9 lanes at intersections
- traffic speeds average 35-45 mph
- signalized intersections are at ½ mile intervals
- signalized intersection conditions:
    - frequently lack pedestrian signal heads and crosswalk markings
    - signals are often center mounted and are sometimes difficult to see from the sidewalk/crosswalk area
    - where ped heads are provided they are generally demand actuated; direction of travel is not always clear
- corner radii are often increased to facilitate vehicle turning movements, thereby widening the cross walk and increasing turning speed
- double turning lanes are sometimes provided
- if provided, sidewalks are usually on one side of roadway only

Strategic Regional Arterials (SRA's):

- arterial roadways to minimize motor vehicle traffic delay
- 4-6 lanes through traffic (11-12 ft. wide)
- some have center turning lanes or medians
- 8-9 lanes at intersections
- traffic speeds average 35-50 mph
- signalized intersections are minimized
- some SRA's have interchanges
- signalized intersection conditions:
    - frequently lack pedestrian signal heads and crosswalk markings
    - where provided crosswalks are often limited to two legs of intersection
    - signals are often center mounted and are sometimes difficult to see from the sidewalk/crosswalk area
    - where ped heads are provided they are generally demand actuated
- corner radii are increased to facilitate vehicle turning movements
- double turning lanes are often provided
- where right-of-way is available, lanes are frequently added to SRA's to handle increasing suburban traffic

Developing Suburban Neighborhoods:

- Mixture of sub-divisions, some with and some without, sidewalks
- Access from neighborhoods to other land-uses requires use of arterial and SRA roadways

Trails:

- Efforts are usually made to retain available rights-of-way and develop trails
- Access to trails from neighborhoods is often difficult and many users drive to trail

AERIAL 3: TRIPS

Trip A:
Children are bused for this trip of <1mile; 12 year old wants to bicycle from home to school (A1) and from school to shopping strip (A2) and home again

Issues:
- No sidewalks in sub-division
- SRA intersection is 170 ft. wide
- Plans to add an additional lane to SRA
- Ped cycle on signal allows 45 seconds (the minimum plus 10 seconds) which is split 7/30/6 (ped figure/flashing hand/clearance)
- Trail crossing is close to intersection and is controlled by stop sign on trail only
- Turning radii on SRA are very large
- No sidewalks along SRA
- Sidewalk abruptly ends along collector serving school
- SRA/arterial crossing has crosswalk markings and ped head on two legs only (NE/NW and NW/SW corners)

Trip B:
Bicycle from west side trail to pick up cycling buddy (B1) and then bicycle to east side trail (B2), make a loop and return home

Issues:
- Wide SRA arterial crossing – see Trip A
- Narrow sidewalk on one side of busy arterial, no shoulder, 11 foot lanes and traffic speeds average 45-50 mph
- No neighborhood connection to trail

Trip C:
Walk from Metra to College

Issues:
- Ped head for only one leg of four leg intersection (SW/SE corner)
- Trail intersects with arterial west of crosswalk area (behind the stop line)
- Trail crossing is close to intersection and is controlled by stop sign on trail only
- Turning radii on SRA are very large
- No signal at entrance to college
- No sidewalk along N/S arterial

Appendix B

Working Group Summaries

AERIAL #_1_	Problem Statement			TRIP_A
Person to walk from home to work at hospital and then from work to lunch. Route has no sidewalks within subdivision, no sidewalks along section of arterial, no direct connection from subdivision to hospital, unobserved mid-block signalized crosswalk near hospital, unyielding traffic entering/exiting hospital parking and inadequate pedestrian signal near hospital intersection.				
Solutions	Rationale/Criteria	Improvement Type		
		B/P	Trans	L/U/other
*Add sidewalk along arterial	No existing sidewalk Existing gaps in sidewalk Cost effective Land use type/density	X		
*Add signalized pedestrian crosswalk	Difficult crossing High pedestrian travel Pedestrian crash record	X	X	
*Traffic Calming	Difficult crossing Pedestrian visibility	X	X	
Add ped heads at crosswalks		X	X	
Raised median	High pedestrian volume Pedestrian crash record	X	X	
Improved education		X		X
Mixed Use Development				X
Change Development Requirements		X		X

AERIAL #_1_ Problem Statement TRIP_B

Person to bicycle from home to High School. Along route neighborhood has few sidewalks, sidewalks are intermittent along collector and SRA, frequent driveways along SRA, pedestrian and bicycle crash cluster near high school, stop sign controlled T intersections along SRA, 9 lane intersection near high school and hard to see signal at intersection with no ped head.

Solutions	Rationale/Criteria	Improvement Type		
		B/P	Trans	L/U/other
*Add signals at intersections	School access route Cost effective	X	X	
*Add pedestrian island	Difficult crossing School access route	X	X	
*Combine parking to limit curb cuts	Land use density High bike volume		X	X
*Reduce speed limit	School access route		X	
*Add refuge islands				
Add bike lanes	High bike volume		X	
Add sidewalks	High pedestrian volume	X		
Limit SRA access	Reduce traffic conflicts		X	
Add path trough park	More direct route	X		
Add pedestrian overpass	Pedestrian volume	X	X	
Safe Route to School program	Student outreach	X		X
Way finding signage	Provide direction	X		
Change SRA guidelines				

AERIAL #_1_ Problem Statement TRIP_C

Person to walk from home to commuter rail station in morning and on return trip walk from commuter rail station to shopping by different route. Along routes there are several pedestrian crash sites, pedestrians south of tracks must cross two one way streets, rail crossing is at-grade, skewed intersection with heavy traffic that obscures pedestrians, rolling stops common at stop signs, heavy high speed traffic along "Main Street" and uncontrolled pedestrian crosswalk on commercial street.

Solutions	Rationale/Criteria	Improvement Type		
		B/P	Trans	L/U/other
*Traffic calming	High pedestrian volume Pedestrian safety Crash record Cost effective	X	X	
*Pedestrian/traffic/transit study	Crash record Difficult crossing High pedestrian use	X	X	X
Pedestrian signal improvement	Crash record Difficult crossing	X		
Channelize	High pedestrian volume Pedestrian crash record	X	X	
Bulb out intersections	Difficult street crossing	X		
Stop sign enforcement	Pedestrian safety		X	

AERIAL #_2_	Problem Statement			TRIP_A
Fourteen year old to bicycle from home to Park District pool. Route must cross un-signalized angled intersection, heavily traveled high speed arterial, un-signalized interchange with wide on/off ramp, wide four lane roadway that narrows lanes at bridge over expressway, narrowing roadway under rail bridge with sidewalks in disrepair and no signalized crossings at urban arterial.				
Solutions	Rationale/Criteria	Improvement Type		
		B/P	Trans	L/U/other
*Signalize intersections	High pedestrian volume Crash record	X	X	
*Add bike route	Crash record Difficult street crossing Cost effective	X		
*Add sidewalks/path	High bike/ped volume Sidewalk poor condition Road sharing issues	X		
*Reduce traffic lanes	Capacity, road sharing issues Personal security issues	X	X	
*Add pedestrian overpass/underpass	Personal security issues Bike/ped volume	X		
*Redesign on/off ramp interchange	Crash record Difficult street crossing Personal safety issues	X	X	
Provide bike transit access	Transit access			X
Add lighting	Personal security issues	X		

AERIAL #_2_ Problem Statement TRIP_B

Person to walk from home to shopping center. Route has no sidewalks in residential enclave, fence prevents direct route, no signal where cul de sac meets collector, no sidewalks along north edge of cemetery and no walkway through shopping center parking lot.

Solutions	Rationale/Criteria	Improvement Type		
		B/P	Trans	L/U/other
*Add sidewalks	No existing sidewalks Man made barriers Personal security issues Transit access	X		
*Add pedestrian access at shopping center	No existing sidewalks Crash record	X		
*Create bike path through forest preserve	Direct route No existing sidewalks Man made barriers	X	X	X
Add bike lane along collector	Cost effective Better access	X		
Open fence between developments	Man made barrier	X		
Add signal at cul de sac	Personal security issues Turning movement hazard	X	X	
Add bike racks at shopping	Personal security issues Encourages bike use	X	X	X
Redo parking striping/ change angles	Accommodates larger vehicles frees space for bike/ped access	X	X	X
Require pedestrian connectivity	Poor planning			X

AERIAL #_2_ Problem Statement TRIP_C

Person to walk from home to work at university. Route has limited river crossings, very few signalized intersections and heavy fast moving traffic on urban arterial.

Solutions	Rationale/Criteria	Improvement Type		
		B/P	Trans	L/U/other
*Add sidewalk/path from arterial to university	Direct route High pedestrian volume School access route Existing gaps in network	X	X	X
*Add pedestrian bridge over river	Natural barrier High pedestrian volume Access to park Personal safety issues	X		
*Add pedestrian signal on arterial	Personal safety issues Crash record Turning movement hazard	X	X	
*Pedestrian overpass/ underpass at arterial	High pedestrian volume Personal safety issues Crash history School Route Difficult intersection	X	X	
Pedestrian island on arterial	Personal safety issues High pedestrian volumes Cost effective	X	X	
Intersection safety study	Crash record Personal safety High pedestrian volumes			X

AERIAL #_3_ Problem Statement TRIP_A

12 year old wants to bicycle from home to school and from school to a shopping trip then home again. There are no sidewalks in sub division or on SRA, wide SRA intersections with large turn radii and inadequate signals along the route.

Solutions	Rationale/Criteria	Improvement Type		
		B/P	Trans	L/U/other
*Add sidewalks along SRA and sub division	Personal safety	X		
*Connect existing path to destination (school/retail)		X		
*Add path through park	School route No existing sidewalk	X		
*Add pedestrian crossing signal/island at SRA	Personal safety	X		
*Add bike lane on arterials/collectors	Road sharing issues	X	X	
Adjust signal timing/add push button signals		X	X	
Add crosswalks at major intersections		X	X	
Add pedestrian bridge across SRA		X		
Improve facilities for non-drivers/people with disabilities		X	X	X
Bike/Bus program	Uses existing facilities	X		X
People Bus	Personal safety	X		X
Relocate school		X	X	X

AERIAL #_3_ Problem Statement TRIP_B

Bicyclist to make a cross-town recreational trip to meet friend and continue bicycling together. Cyclist must safely negotiate through neighborhood that has high-speed wide SRA arterials and suburban collectors that are lacking in bicycle and pedestrian facilities including no sidewalks, no shoulder and no neighborhood connection to trail.

Solutions	Rationale/Criteria	Improvement Type		
		B/P	Trans	L/U/other
*Add bike lanes to arterial SRA/collectors	Personal security issues	X		
*Install Bike Route signs		X		
Separated path along arterial		X		
Add left turn lanes to collector		X	X	
Reduce traffic speed on Suburban arterial		X	X	
Add sidewalk on collector		X		
Separated path along arterial	Lane exists	X	X	
Crosswalk for access to eastern trail across arterial		X	X	
Ped/Bike tunnel/bridge under/over arterial		X		

AERIAL #_3_	Problem Statement			TRIP_C
Person to walk from Metra station to college. Trail runs parallel to SRA and train tracks, intersects behind crosswalk stop line and is controlled by a stop sign only. Turning radii on SRA are very large, there is no crossing at entrance of college and no sidewalk along arterial.				
Solutions	Rationale/Criteria	Improvement Type		
		B/P	Trans	L/U/other
*Access trail at college entrance	High pedestrian volumes Gap in sidewalk network Sidewalk poor condition/design	X		
*Activated signal at college/ trail crossing, improved signals	Difficult street crossing	X	X	
*Sidewalk along arterial		X		
*Light trail	Personal safety	X		
Install ped heads	Potential high bike/ped volume	X	X	
Way finding signs from Metra to college	School/transit access Difficult street crossing Small investment required	X		
Realign trail to intersect at arterial corner		X	X	
Pedestrian refuge at arterial intersection		X	X	
Bike access on bus/Metra	Transit access	X	X	
Improved intergovernmental planning				X