

I HAVE A SAFE ROUTES TO SCHOOL PLAN, NOW WHAT? IMPLEMENTATION.

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Schools in Michigan:

An Historical Perspective

Then...

- Elementary schools integrated into neighborhoods
- Most children walked to school

% Walking to School:

- 1969: 42% walked
- 2001: 16% walked



Schools in Michigan:

An Historical Perspective



And now...

- Declining enrollment and building conditions = closure of many neighborhood schools
- Trend toward larger schools often in outlying areas
- Fewer students within walking distance
- Schools designed for bus and parent drop-offs, pedestrians and bikes are secondary
- Sidewalk systems often lacking or incomplete
- Common perception that walking to school is unsafe
- Students living within 1 mile:
 - 1969: 87% walked
 - 2001: 63% walked

Results:

Psychological Barriers to Walking

Perception

Why parents don't allow their children to walk:

- Long distances 62%
- Traffic danger 30%
- Adverse weather 19%
- Fear of crime 12%

Reality

Each year...

- 115 children are kidnapped
- 250,000 killed in auto accidents

Sources: CDC, 2005; Federal Government

Note: Sum of % is more than 100% because respondents could identify more than one barrier.

Strategies for SRTS Implementation

- Build enthusiasm, changing attitudes
- Build partnerships
- Audit the physical situation
- Know the “rules” for design, signs and signals
- Set priorities



Changing Attitudes



- Parents driving children to school contributes **20%-25% of morning traffic**

Source: NHTSA 2003; Dept. of Environment

- Driving is hazardous
- Environmental [air quality] benefits
- Student health
- St. Thomas Aquinas "Cool Kids Walk"

Commutes: A Michigan School Trip

Walking v. drop-off:

●—● Driving Path

●—● Walking Path



School Site Design

Things to consider...

- Less pavement = more playspace
- Priority for:
 1. Disabled
 2. Pedestrians
 3. Bikes
 4. Buses
 5. Parent drop-offs



School Review Limitations

- Elementary and Middle Schools: Superintendent of public instruction has sole and exclusive jurisdiction
- High Schools: Local advisory review for new schools in Townships only

Schools have no obligation to comply with local zoning requirements.



SRTS – 5 Steps to Implementation

1. **Raise awareness** within school “family”, but also community and municipal staff
2. **Check municipal plans**
 - Master plan
 - Non-motorized plan
 - Capital Improvement plan
 - Complete Streets policies
3. **Audit** existing conditions
4. **Mobilize** stakeholders into action
5. **Set Priorities**
 - Low and Higher cost
 - Immediate and Phased changes
 - Process to monitor results



MOBILIZE: Engage Stakeholders

- Student promotion (contests, prizes)
- National Walk to School Day, or one day per week
- Public forums & focus groups (parents, neighbors, teachers, school/church administration)
- AARP/seniors and those walking for exercise
- Hospitals and Health Care organizations
- Walking/biking tours
- Presentations to neighborhood associations and elected officials



AUDIT

- Inventory existing systems
- Identify road agency
- Conduct walkability/bikeability audits

SURVEY ABOUT WALKING AND BIKING TO SCHOOL
- FOR PARENTS -

Dear Parent or Caregiver,

Your child's school wants to learn your thoughts about children walking and biking to school. This survey will take about 10 - 15 minutes to complete. We ask that each family complete only one survey per school year (children attend). If more than one child from a school brings a survey home, please fill out the survey for the child with the next birthday from today's date.

After you have completed this survey, send it back to the teacher. Your responses will be kept confidential and not will be associated with any results. Thank you for your participation.

These first few questions appear only once and are to be completed only once.

- What is the grade of the child who brought home this survey?
- Is the child who brought home this survey male or female?
- How many children do you have in Kindergarten through 5th grade?
- What is your ZIP Code? (Please provide ZIP and 4-digit extension if you have it.)
- How far does your child live from school? (Please provide distance in miles.)
- On most days, how does your child arrive at school and leave for home after school? (Please check all that apply.)

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SAFE ROUTES TO SCHOOL
STUDENT ARRIVAL AND DEPARTURE TALLY SHEET

School Name: _____ Grade: _____ # of students enrolled in class: _____

Teacher: _____ Monday's Date: _____

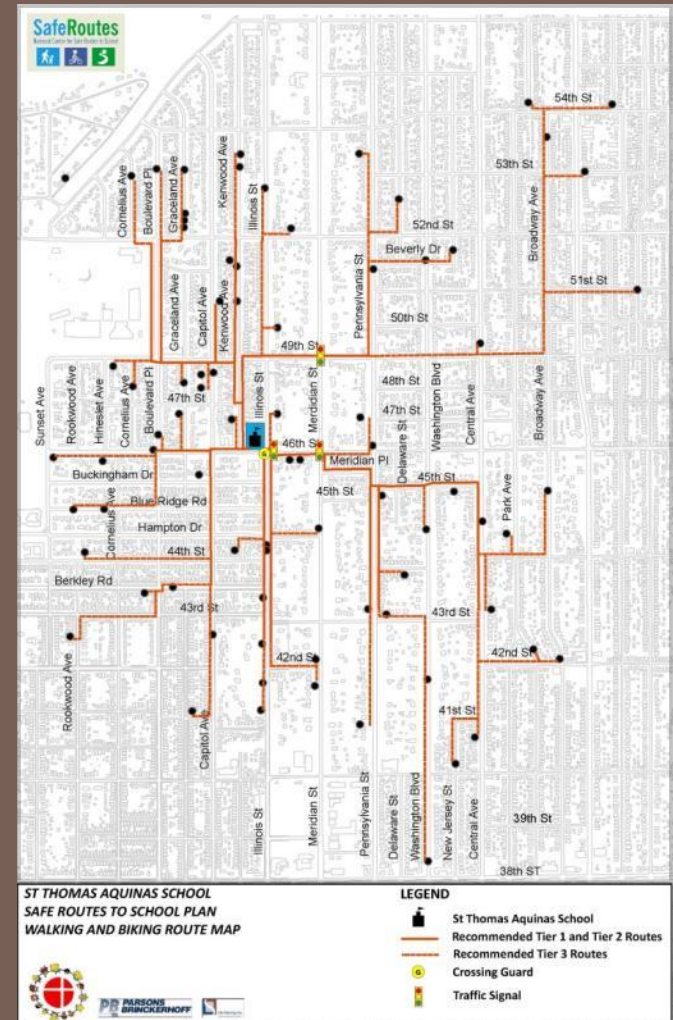
School's ZIP Code: _____ (used to identify weather conditions)

Teachers, here are some instructions for using this form:

- Please conduct these counts each of the five days of the assigned week.
- Before asking your students to raise their hands to indicate the one answer that is correct for them, read through all potential answers so they will know what the choices are.
- Ask your students as a group the question, "How did you arrive at school today?"
- Read each answer and record the number of students that raised their hands for each.
- Follow the same procedure for the question "How do you plan to leave for home after school?"
- Please conduct this count regardless of weather conditions (i.e., ask these questions on rainy days, too).

Step 1: Fill in the weather conditions and number of students in class each day		Step 2: Ask students "How did you arrive at school today?" and "How do you plan to leave for home after school?" record number of hands for each answer							
Weather (in words or code)	Number of students in class (in words or code)	Walk	Bike	School Bus	Family Vehicle (only with children from your family)	Carpool (only with children from other families)	Other (city bus, subway, etc.)	Other (other mode, etc.)	Other (other mode, etc.)
Mon AM									
Mon PM									
Tues AM									
Tues PM									
Wed AM									
Wed PM									
Thurs AM									
Thurs PM									
Fri AM									
Fri PM									

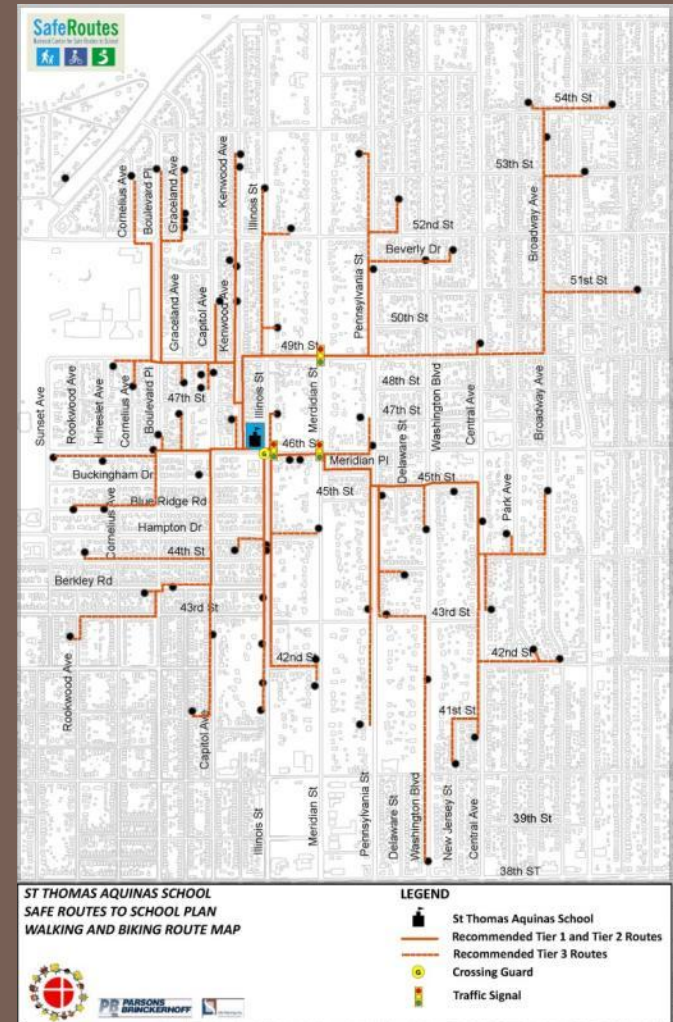
Comments (Please list any disruptions to these counts or any unusual travel conditions that occur on the days of the tally):



Walk and Bike-ability Audits:

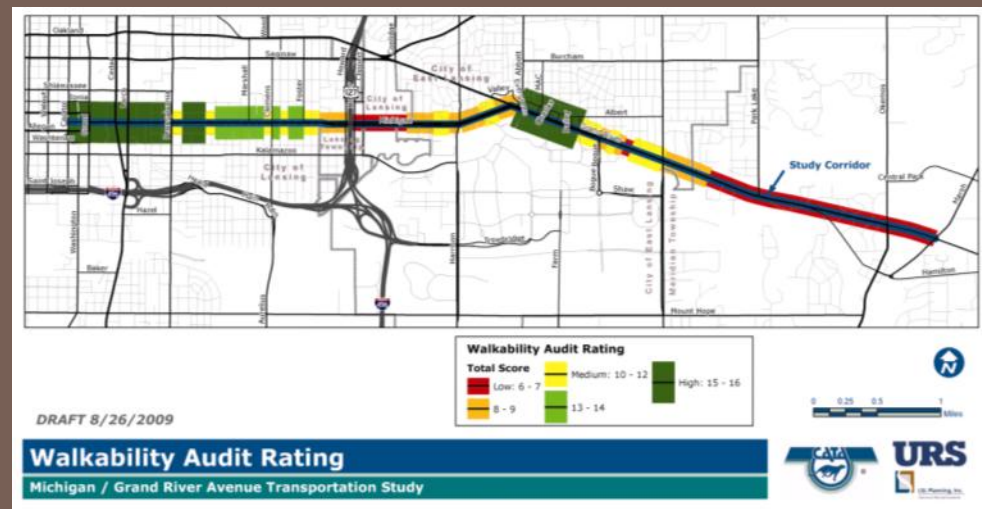
What to include

- Identify residential locations
- Walk zones within $\frac{1}{4}$ to $\frac{1}{2}$ mile of school
- Bike zones
- Identify main walking and bike routes
- Inventory sidewalk width & conditions
- Main crossing points, gaps and breaks



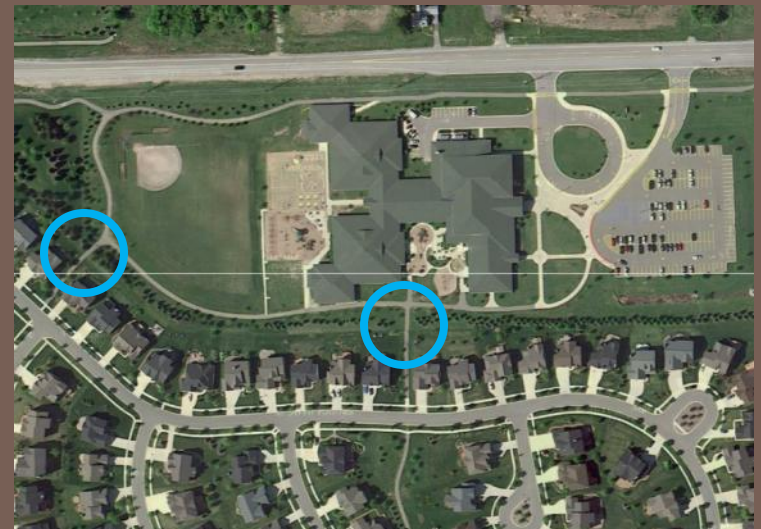
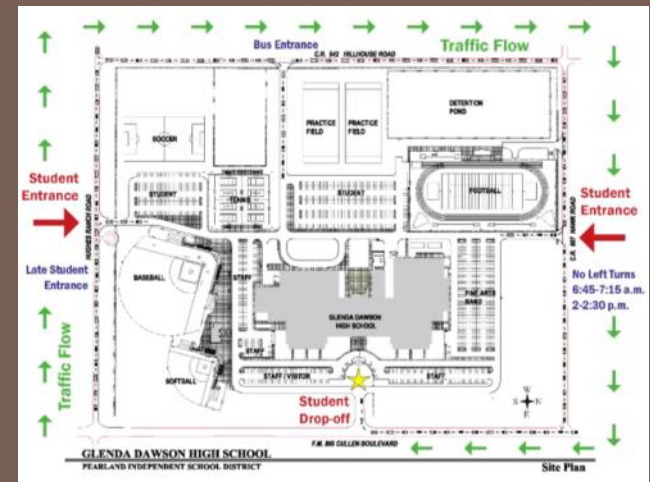
Walk and Bike-ability Audits: Evaluation

- Reveals most walkable and bikeable routes
 - Where landscaping should be trimmed
 - Gaps to fill
 - Sidewalk segments to replace/repair
 - Locations to provide or improve crosswalks

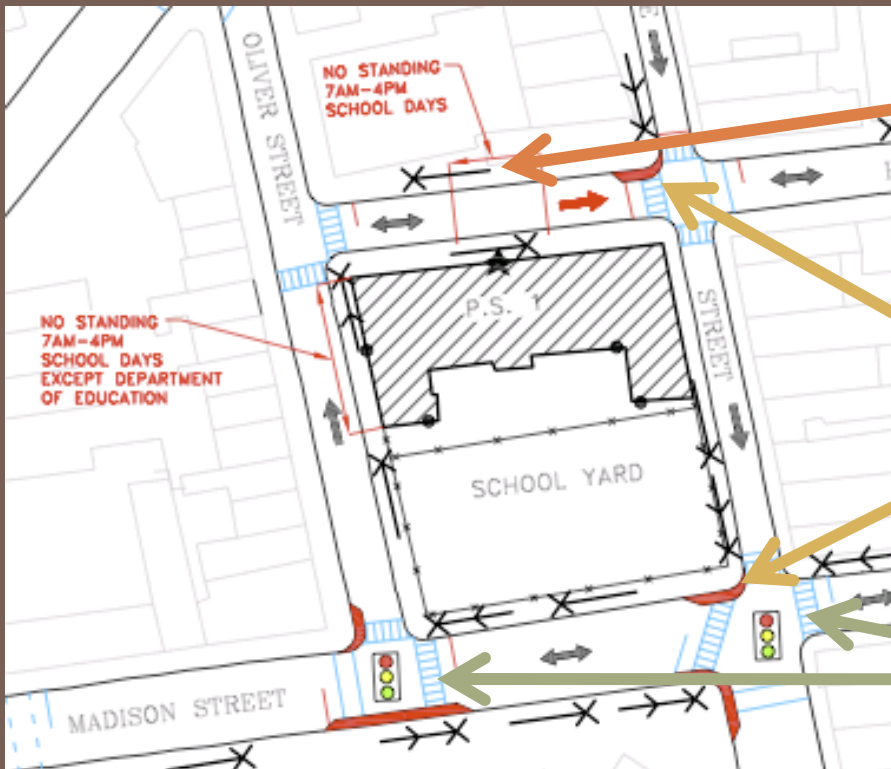


Site Plan (Re)-Design Guidelines

- Discuss school plans with school officials early in the design process
- Pedestrian connectivity – esp. between school & neighborhood
- Safe circulation:
 - Connection/easements to neighborhoods
 - Separate pedestrian traffic from drop-off & bus traffic
 - Improve road crossings at key locations
 - Drop-off areas should be well marked & organized
 - Use appropriate “traffic calming”



On-site Design: Example



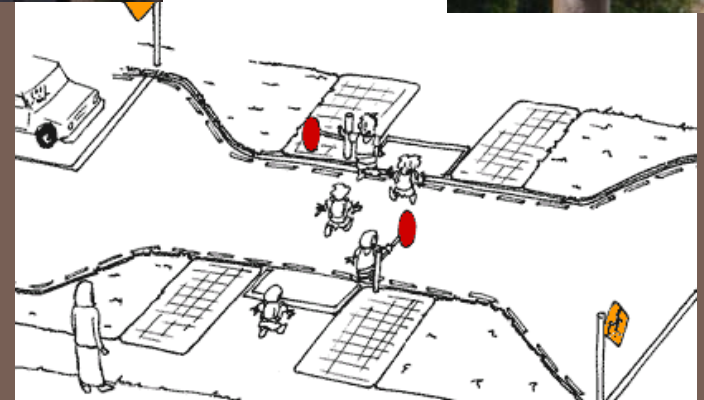
No standing
zones

Curb bump-outs

Crosswalk
delineation

Engineering Standards

- “Complete Streets”
- Require minimum 5' wide sidewalks, wider closer to school
- Be aware of design standards and warrants





QUESTIONS OR COMMENTS



thank you!

WHO TO INVOLVE AND ENGINEERING IMPLEMENTATION

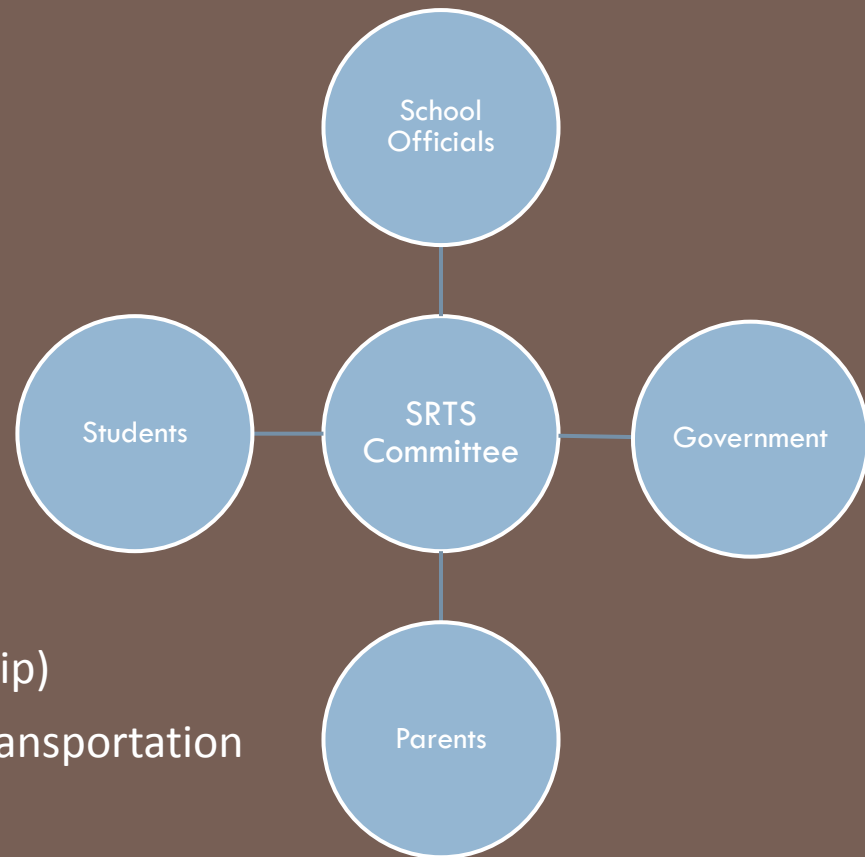
Sarah Binkowski, PE, PTOE
Parsons Brinckerhoff



Reassemble your Stakeholder Group

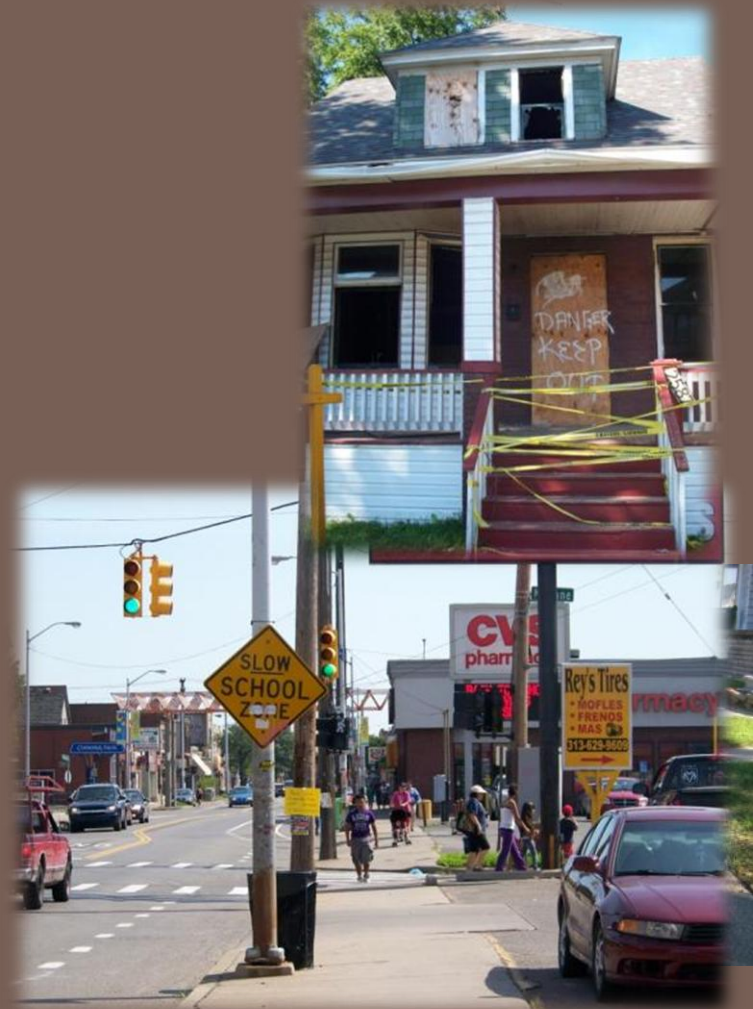
Should include...

- School officials
- Parents
- Students
- Police
- Government
 - ▣ City / Village
 - ▣ Road Commission (Township)
 - ▣ Michigan Department of Transportation
- Others?

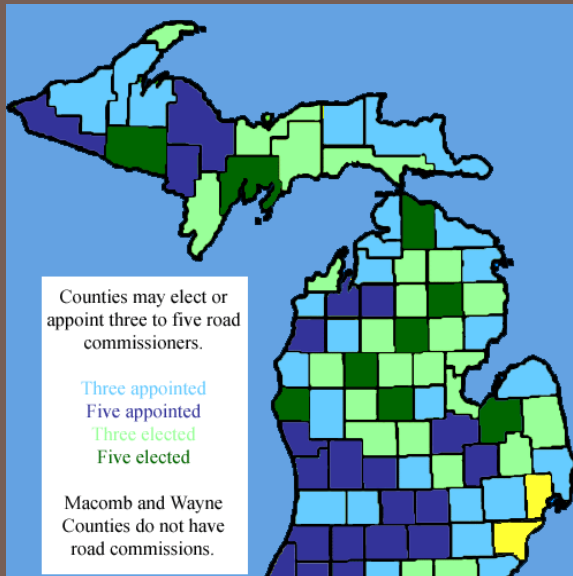


Assign Stakeholder Responsibilities

- School officials – Education, Encouragement, Enforcement and Evaluation
- Parents - Encouragement
- Students - Encouragement
- Police – Education, Encouragement and Enforcement
- Government - Engineering
 - ▣ City / Village
 - ▣ Road Commission (Township)
 - ▣ Michigan Department of Transportation
- Others?



Local / County / State Government

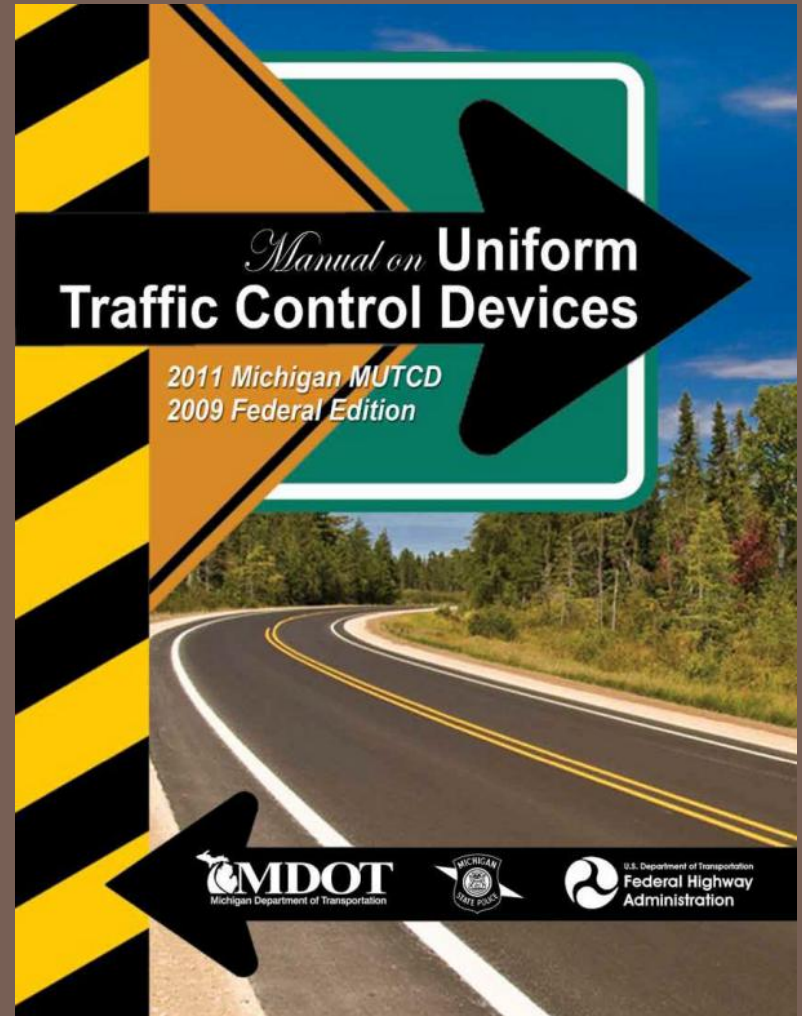


- Get them involved early in the process, why?
 - ▣ May have plans in place
 - ▣ Describe processes that are needed
 - ▣ Provide information on funding
 - ▣ Provide information on Ordinances / Regulations
 - ▣ Will know jurisdiction and who to involve
 - ▣ Help you get information you may need
 - Traffic Counts
 - Speed Studies
 - ▣ Advice on Permits, inclusion in TIP / STIP
 - ▣ Take over part of the implementation...

Guidelines to be aware of...

2011 Michigan Manual Uniform Traffic Control Devices (MMUTCD)

- Traffic Signals
- Signs
- Pavement Markings
- Located:
<http://mdotwas1.mdot.state.mi.us/public/tands/plans.cfm>



Guidelines to be aware of...

Traffic Signals and 4-Way Stop Signs

- “Warrants” need to be met
- Need to have a minimum amount of traffic
- High number of crashes
- High Pedestrian volumes















Guidelines to be aware of...

HAWK Signals

- Alternative to full traffic signals
- Still need to have a minimum pedestrian volumes



	What Drivers See	What Pedestrians See
1.	 DARK	 Push the button.
2.	 FLASHING	
3.	 STEADY	
4.	 STEADY	 Start crossing.
5.	 ALTERNATING (like RXR) Stop. Then go if clear.	 FLASHING Continue crossing.
6.	 DARK	

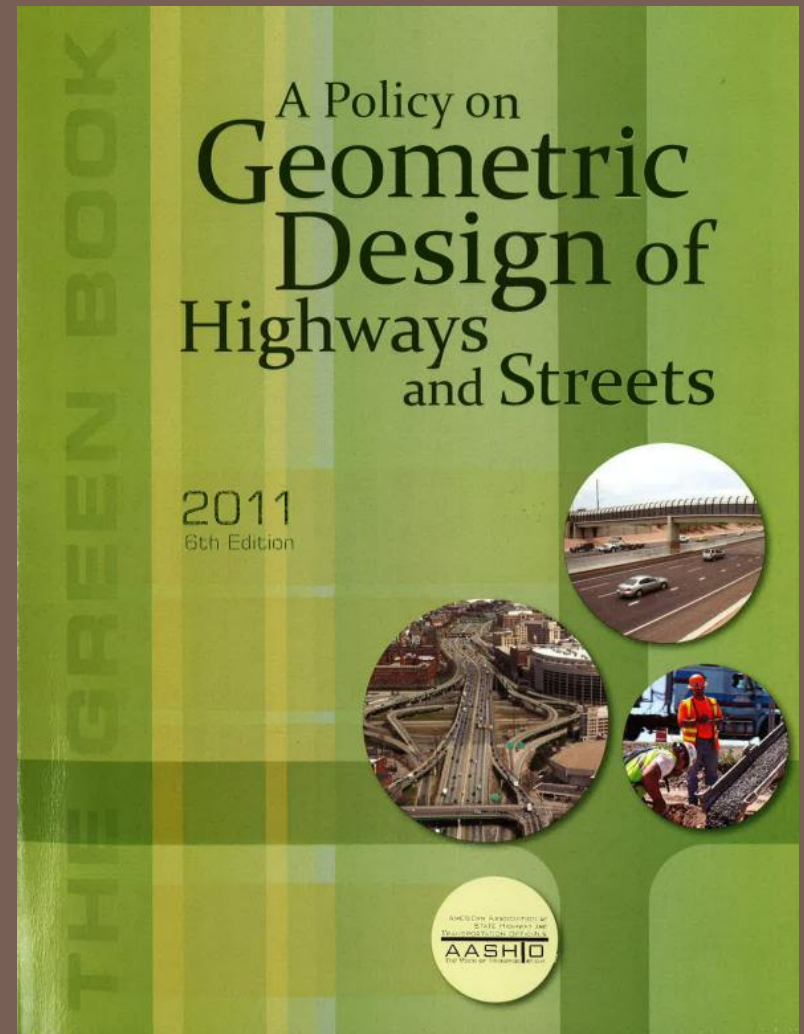
Guidelines to be aware of...

American Association of State Highway and Transportation Officials (AASHTO)

A Policy on Geometric Design of Highways and Streets, 6th Edition, 2011, commonly referred

to as “the Green Book,” contains the current design research and practices for highway and street geometric design.

https://bookstore.transportation.org/item_details.aspx?id=1919



Guidelines to be aware of...

MDOT Design Guidelines

- Provides additional information on intersection, roadway, and freeway design
- Pavement Marking
- Roadway Signs
- High Community Use

<http://mdotwas1.mdot.state.mi.us/public/design/englishroadmanual/>



Road Design Manual

Michigan Department of Transportation
Traffic and Safety

PAVEMENT MARKING STANDARD PLANS



PAVE-900 THRU PAVE-990

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ENGLISH VERSION



DEPARTMENT DIRECTOR

KIM T. STEGALL

PROPOSED

TRAFFIC AND SAFETY

ENCLOSURE OF "TRAFFIC AND SAFETY"

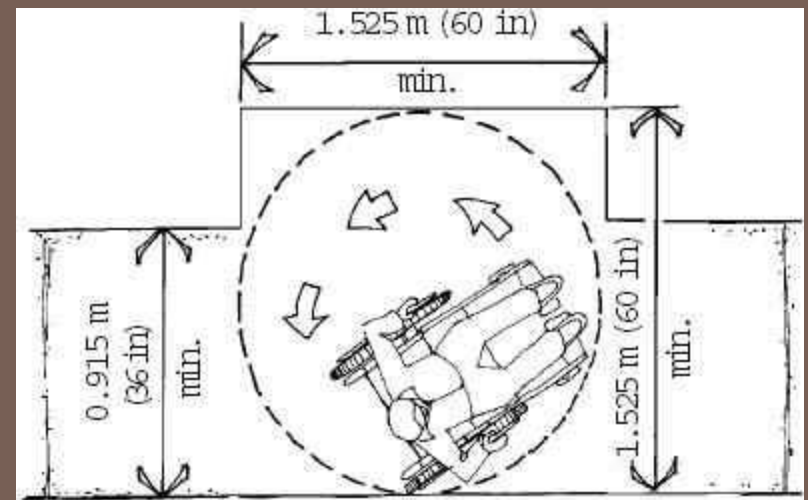
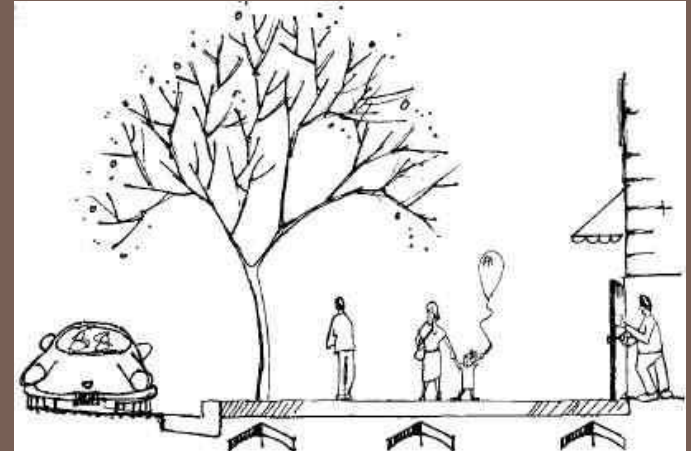
FORM 301-001

MDOT 1/2007

Guidelines to be aware of...

Local Design Guidelines

- Can differ from Federal and State guidelines
- May have wider sidewalk standards
- May have different mid-block crossing standards

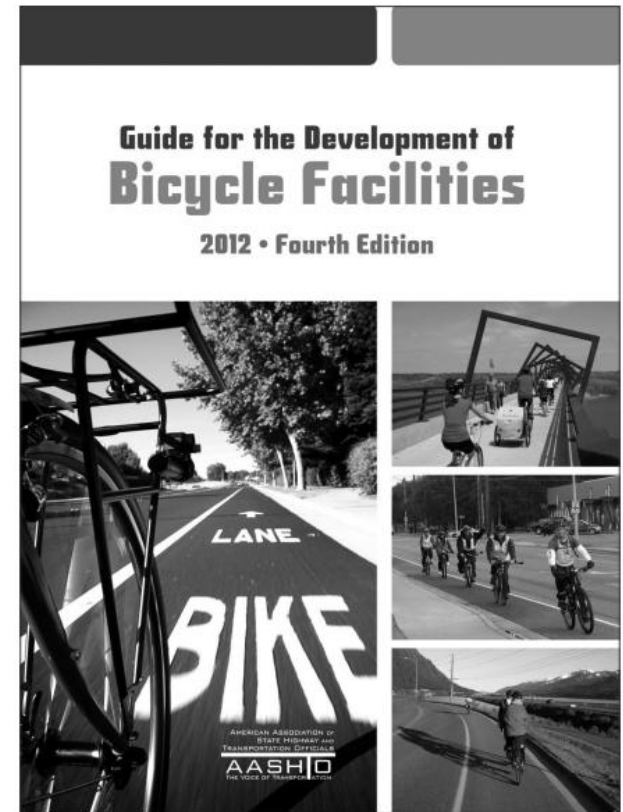


Guidelines to be aware of...

AASHTO Guide for the Development of Bicycle Facilities, 4th Edition (NEW!)

- Presents sound guidelines that result in facilities that meet the needs of bicyclists and other highway users. Sufficient flexibility is permitted to encourage designs that are sensitive to local context and incorporate the needs of bicyclists, pedestrians, and motorists.

https://bookstore.transportation.org/collection_detail.aspx?ID=116

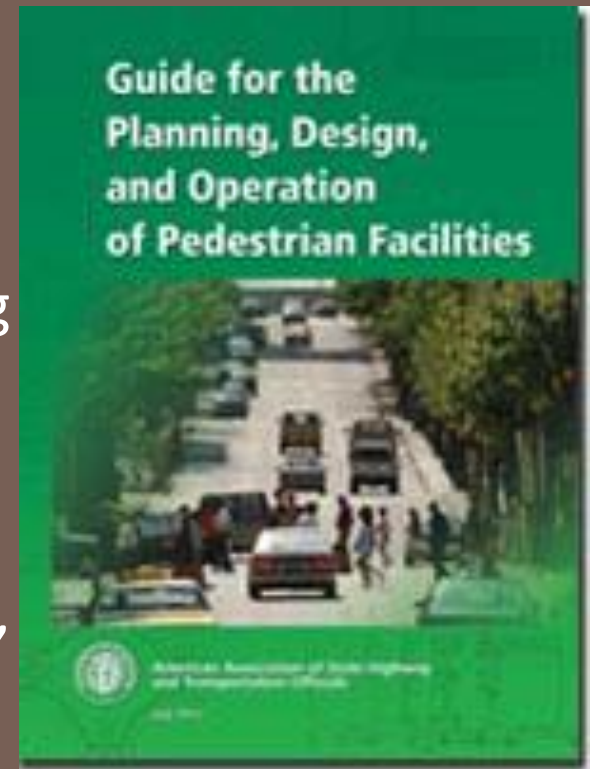


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Guidelines to be aware of...

AASHTO Guide for the Planning, Design and Operation of Pedestrian Facilities

- This guide focuses on identifying effective measures for accommodating pedestrians on public rights-of-way. Appropriate methods for accommodating pedestrians, which vary among roadway and facility types, are described in this guide.
- https://bookstore.transportation.org/collection_detail.aspx?ID=39



Traffic Calming

- #1 Complaint received in residential areas are about speeding
- People will drive what they are comfortable driving
- Usually first request is for four-way stop signs
- Traffic calming is a strategy to reduce speeds along a corridor through the three “E”s
 - ▣ Engineering
 - ▣ Education
 - ▣ Enforcement



Traffic Calming – 4-Way Stop? NO!

- 70 Technical Papers on the effects of multi-way stop signs on speed
- *The research found that, overwhelmingly, multi-way stop signs DO NOT control speed except under very limited conditions.*
- *Unwarranted Stop signs can actually INCREASE speeds due to people making up perceived lost time*
- Safety of pedestrians is DECREASED at unwarranted multi-way stops, especially small children.



Traffic Calming – What can be done?

- ❑ Street Narrowing
- ❑ Traffic Chokers
- ❑ Sidewalks and Other Pedestrian Solutions
- ❑ Traffic Diverters
- ❑ Neighborhood Street Design
- ❑ Speed Humps
- ❑ On-Street Parking
- ❑ Roundabouts
- ❑ One Way Streets
- ❑ Neighborhood Speed Watch



Some Typical SRTS Engineering Recommendations

- Complete / Add Sidewalks
 - ▣ Things to consider: What is the minimum sidewalk width required? Are you connecting to an intersection? Are there any elevation challenges? Are there any other barriers? Can it be included in the existing right-of-way?
 - ▣ What to include when considering: cost of the engineering design, construction and possible right-of-way easement



Some Typical SRTS Engineering Recommendations

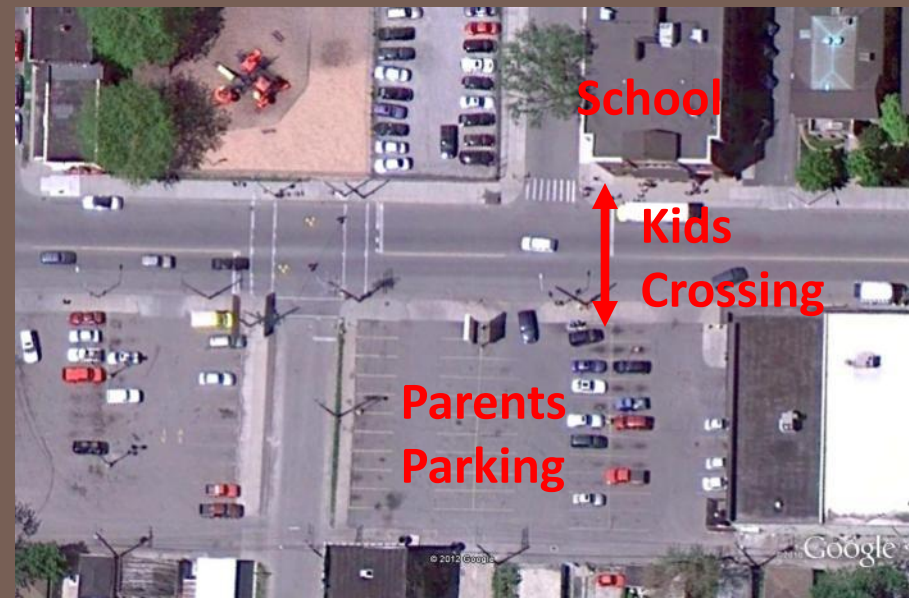
- Marked Unsignalized Pedestrian Crosswalks
 - ▣ Things to consider: Where are children crossing now? Is it unsafe? Where would you like them to cross? If you put it there, would they cross there?
 - ▣ What to include when considering: paint for the crosswalks, ADA ramps on either side of the crosswalk, signs at and possibly before crosswalk
 - ▣ What is the law? Pedestrians have right-of-way ONLY in crosswalk, not on the sidewalk



Some Typical SRTS Engineering Recommendations

□ New Traffic Signal

- ▣ Things to consider: What are the traffic volumes, crash history, number of pedestrians and bicycles crossing?
- ▣ What to include when considering: cost of the traffic signal, may need to upgrade curb ramps to ADA standards, pedestrian push buttons
- ▣ What about a HAWK Signal?
- ▣ Cost? \$100,000



Some Typical SRTS Engineering Recommendations

- Add Countdown Signals to Existing Signal
 - Things to consider: Are there currently pedestrian signal heads? How old is the traffic signal controller? Does the intersection already have ADA ramps?
 - What to include when considering: cost of the pedestrian signal head, may need to upgrade curb ramps to ADA standards
 - Cost? Could be as low as \$6,000 if there are existing pedestrian signal heads



Some Typical SRTS Engineering Recommendations

- 4-Way Stop Intersection
 - Things to consider: What are the traffic volumes, crash history, number of pedestrians and bicycles crossing?
 - What to include when considering: cost of the signs and also additional paint for the STOP bars, parking will be limited in front of intersection
 - Cost? Minimal



Questions?

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INCREASING PARTICIPATION AND EXCITEMENT FOR SRTS

Jennifer Pyrz, PE
St. Thomas Aquinas
Parsons Brinckerhoff



Agenda

Tools for increasing participation and excitement

- ▣ Inviting Media
- ▣ Tracking Progress
- ▣ Including the Community
- ▣ Getting Creative



Inviting the Media

- Bring in many voices to share the message
 - ▣ Media is looking for a fresh message
 - ▣ Scale is a media draw
 - ▣ More points of view bring fresh perspectives and broader appeal
 - ▣ Shared lessons learned



Sharing the Message

- Not just publicity for publicity's sake but for...
 - ▣ Encouraging more schools / communities to participate
 - ▣ Encouraging students to walk/bike
 - ▣ Bringing skeptics on board
 - ▣ Supplementing classroom activities
 - ▣ Recruiting volunteers



Tracking Progress

STA.Active4.me

[Home](#)

[Contact](#)

[Register](#)

[Statistics](#)

St. Thomas Aquinas Summary

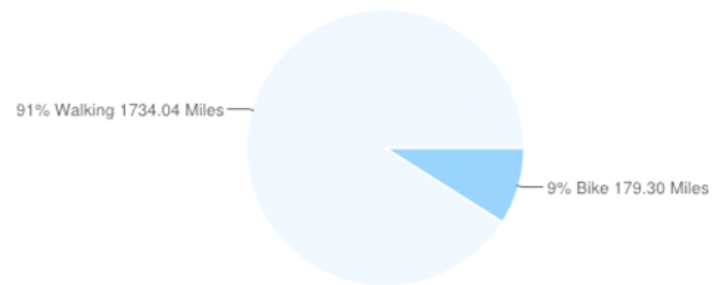
[Teacher](#)

[Grade](#)

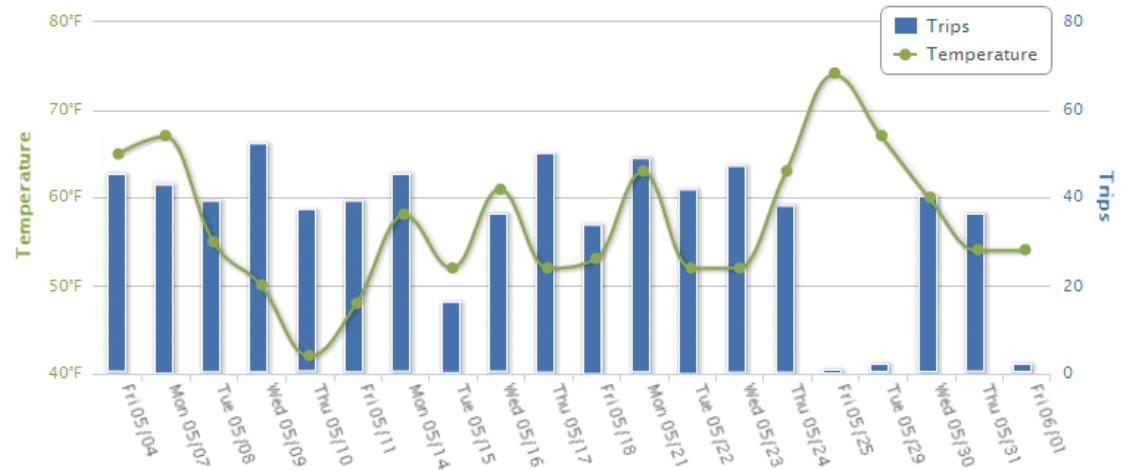
[Students](#)

Trips	#Users	Miles	CO2	Gal	Cal	\$ Gas
2426	89	1913.34	1,705 lbs	88.8	76,534	373.03

St. Thomas Aquinas



Trips and Temperature Last 20 Days



Tracking Progress



STA.Active4.me [Home](#) [Contact](#) [Register](#) [Statistics](#)

32,732 lbs of CO2 Averted

Way to go St Thomas Aquinas Tigers!!

[More statistics »](#)

Register Now!

Are you ready to scan? Register now to receive a scan tag and retractable reel for your backpack! Make those miles count. Every time you walk or bike to school your miles will be logged. Track your distance, CO2 and gas savings, and compete against others for fun prizes!

[Register »](#)

School Buses are Walking

Walking school buses are in operation on five routes - most operate 5 days a week. Want to walk to school with a group of STA students and a responsible parent or too? Check out www.staindy.org/SRTS for maps, schedules, and more great information!

Be a part of the fun!

Do you love walking and biking too?? We are always looking for Safe Routes to School Committee members, walking school bus 'drivers' and special event help! Contact Jennifer Pyrz at pyrz@pbworld.com to volunteer.

Challenges...

Neighborhood Walk to School Challenge!

- Invite other schools to participate and compete for a fun prize
- Joint planning committee to plan the event
- 1 day, 1 month, 1 year – up to you!
- Issue joint press release
- Coordinate involvement from police department, donors, etc



Neighborhood Walk to School Challenge

- Solicit donations for ALL participants
- Make a trophy!
- Find someone exciting to present it.



Including the Community

When and How?

- Special events
- Routine tasks (sidewalk clearance from trash cans, snow)
- Major infrastructure projects



Including the Community



WHO?

- Different schools
- Neighboring or sister cities
- Neighborhood organizations
- Community and public health organizations
- Police Department
- Political appointees

Invite others to become part of the fun

- US Secretary of Transportation
- Our congressman and Mayor
- A bike advocacy group
- Mayor's Office of Sustainability representatives
- Parks Director
- Department of Public Works employees
- League of American Bicyclists president
- Local bike shop owners



Invite others to become part of the fun

- What are the resources in your neighborhood?
- Who are the local celebrities?

For us...

- Local University basketball players and their mascot!
- High School Cheerleaders
- Local businesses
- Local hospital
- Grandparents



Getting Creative



Keep it fun!



Questions?

Jennifer Pyrz, PE

Indianapolis, Indiana

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