



TRAIN HORN QUIET ZONES

City Commission Special Meeting
June 17, 2015

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Order of Presentation:

- The Why/What/How:
 - Rationale
 - Description & Visuals
 - Process to create
- What the City has Done
- Requirements:
 - Supplemental Safety Measures
 - Additional Safety Measures
 - Liability / Insurance
- Implications to the City & Residents
- Summary & Recommendation



Timeline of Events:

● **In 2013** – Several residents of the City of Plymouth requested that Quiet Zones be implemented within the community, advocating an improved quality of life and increased property values.

- In response, the City Commission launched this Quiet Zone study.

● **In 2014** – City representatives conducted research into implementation:

- Researched requirements (Fed, State, County)
- Researched available grant funding (Fed, State, County)
- Researched requirements with CSX
- Infrastructure improvements must be made (CSX)
- Available grant funding (None)
- Costs associated with these improvements



What the City has Done:

- ◎ The City Commission has made review of Quiet Zones a goal:
 - 2014 and 2015
- ◎ City Commission approved Wade Trim to make an assessment:
 - Up to \$18,200 in cost
- ◎ Conducted a Diagnostic Team Field Review:
 - Wade Trim, City Commission, City Manager, DMS, CSX, MDOT, FRA, and Plymouth Residents
 - Wade Trim presented their findings
 - June 2, 2014



What the City has Done:

- ◎ City Commission has set guidelines on how to proceed:
 - Must retrofit all 7 crossings
 - Reasonable cost estimates must be obtained
 - Funding source must be secured



Summary of What the City has Done:

- ◎ 2013-2014 City did meet with citizen Quiet Zone advocates
- ◎ 2014, City representatives conducted research into implementation:
 - Researched requirements (Fed, State, County)
 - Researched available grant funding (Fed, State, County)
 - Researched requirements with CSX
 - Determined short & long-term financials associated with project
- ◎ 2014-2015 City Commission held public meetings and discussions:
 - Public comments and discussion at City Commission meetings
 - Reports and documents posted on the website



Public Discussion of Quiet Zones:

- 12/02/2013 – Resident input was provided about quiet zones
- 01/06/2014 – **GOAL:** City Commission 2014 Quiet Zone research / review goal was announced
- 01/20/2014 – Resident input was provided about quiet zones
- 02/03/2014 – Resident input was provided about quiet zones
- 02/17/2014 – Resident input was provided about quiet zones
- 03/03/2014 – Resident input was provided about quiet zones
- 04/07/2014 – Authorization for city engineer services - \$18,200, at City Commission meeting
- 05/05/2014 – Diagnostic Field Team Review meeting announced for 06/02/14
- 06/02/2014 – Results of the Diagnostic Field Team Review reported to City Commission



Public Discussion of Quiet Zones:

- 06/16/2014 – Commissioner Dooley provided an update to Quiet Zone information
- 08/04/2014 – Commissioner Wright spoke about the Quiet Zone report status
- 09/15/2014 – Commissioner Wright provided a summary of Quiet Zones
- 11/03/2014 – Conversation re: setting priority of Quiet Zones
- 11/17/2014 – Commissioner Wright report about Wade Trim diagnosis to the City Commission
- 12/15/2014 – Commissioner Wright provides an overview of liability issues with Quiet Zones
- 01/05/2015 – City Commission reviewed insurance bids
- 01/19/2015 – **GOAL:** City Commission 2015 Quiet Zone research / review goal extended
- 04/16/2015 – Report from Commissioner Dalton



Publicly Posted Reports & Documents:

City Commission Reports:

- 04/07/15 – Commissioner Dalton Report on Quiet Zones
- 06/03/15 – Commissioner Dalton Report on Quiet Zones (updated)
- 06/12/15 – Commissioner Dalton Report on Quiet Zones (updated)

City Commission Goals:

- 01/2014 – City Commission 2014 Goals
- 01/2015 – City Commission 2015 Goals

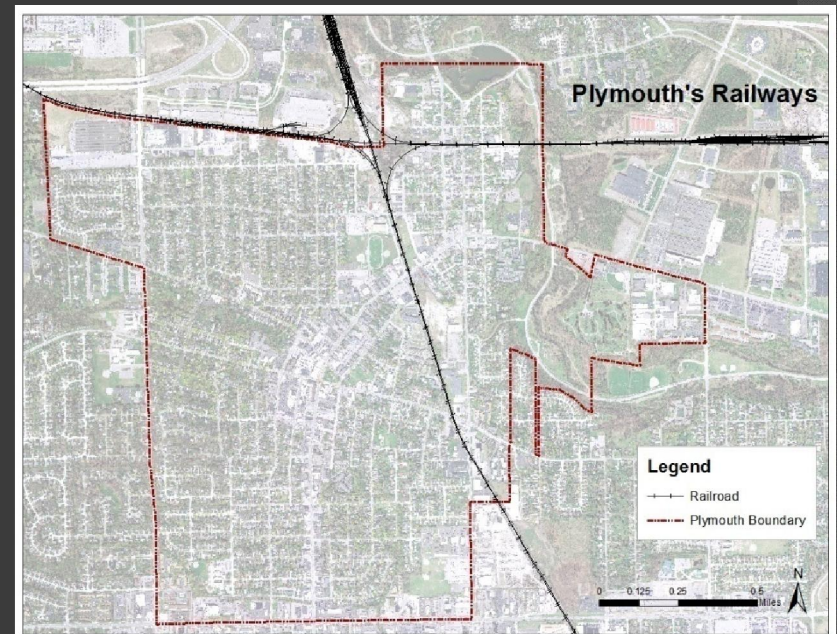


What is a Quiet Zone?

“A quiet zone is a section of a rail line at least one-half mile in length that contains one or more consecutive public highway-rail grade crossings at which locomotive horns are not routinely sounded when trains are approaching the crossings.” - Federal Railroad Administration.



Tracks in Old Village



Tracks in the City of Plymouth



What is a Quiet Zone?

- Realistically considered a: “Reduced Noise Zone”

- With a Quiet Zone, trains will still sound their horns for:

- An emergency or at the discretion of an engineer
- When stopping/starting
- When leaving the train yard
- When in reverse

- Other Train Noises are not affected

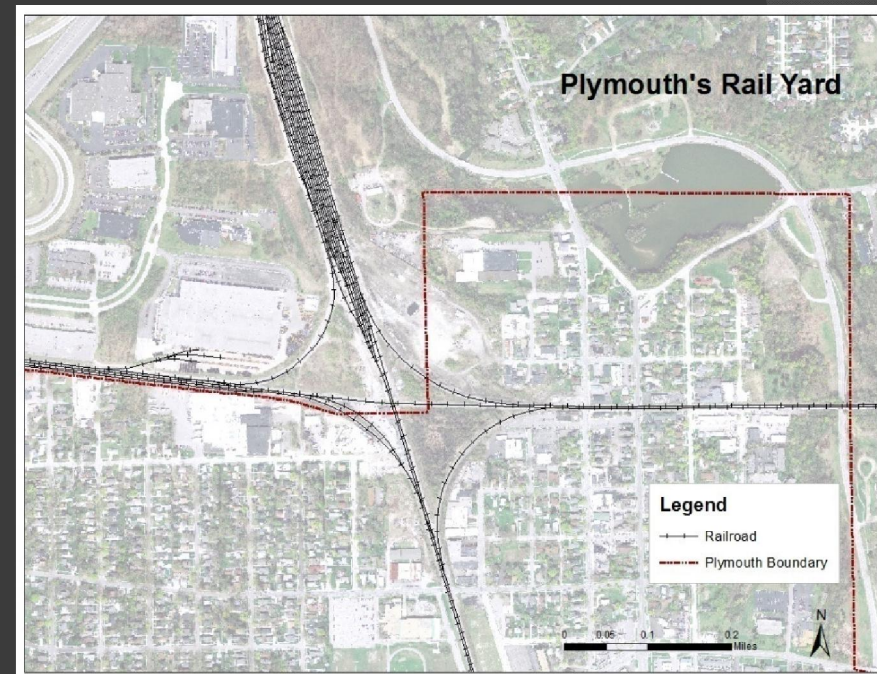
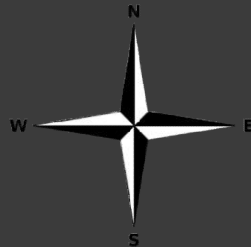
- Shaking ground, rumble noises, wayside horns



CSX Major Train Switch Yard

- CSX has a large switching/rail yard located within the City:

- In Old Village, West of Cherry St. & Pearl St.
- Trains routinely parked/stacked:
 - N/S line at Mill St. South
 - E/W line just west of the switchyard



Plymouth's Rail Yard



Quiet Zones and Property Values:

● In December, 2013 Wayne County Assessing reviewed the impact of Quiet Zones on property values in the City of Plymouth:

- Residential property values in Plymouth have been on the rise since 2012, with an anticipated **9.6% increase in 2014** and continued increase in 2015.
 - *NOTE: Headlee Amendment limits the amount property tax increase.
- Train horns have not, at this point, proven to have a significant negative impact on property values within the City.
- The City of Plymouth was rated as the #13 place to raise a family in the State of Michigan – *Niche.com*



Requirements for a Quiet Zone:

● Federal Government Requirements:

● In order to establish one or more Quiet Zones, the Federal Railway Administration (FRA) requires:

- An analysis of all public railroad crossings within the proposed quiet zone
- Meet the standard for safety established by the National Risk Index:
 - Installation of Supplemental Safety Measures (SSM)
 - Use of Additional Safety Measures (ASM)

● Insurance Company Requirements:

- Must meet national safety standards
- May require Additional Safety Measures to reduce liability



Supplemental Safety Measures

- ⦿ Engineering improvements which reduce the risk of a collision at a crossing (compensating for the lack of the train horn). Approved SSMs include:
 - Four quadrant gates
 - Gates with medians or channelization devices, also known as traffic separators
 - One-way streets equipped with gates that fully block the street
 - Temporary closure (i.e., nighttime closure)
 - Permanent closure
 - I.e: what was done with York St.

-Federal Railroad Administration: "Train Horn Rule Glossary"



Supplemental Safety Measures

SSMs are required to establish a quiet zone. SSMs are determined by CSX. Below are some examples of what SSMs may look like:

Median Channelization Devices



City of Lincoln, NE

4 Quadrant Gate System

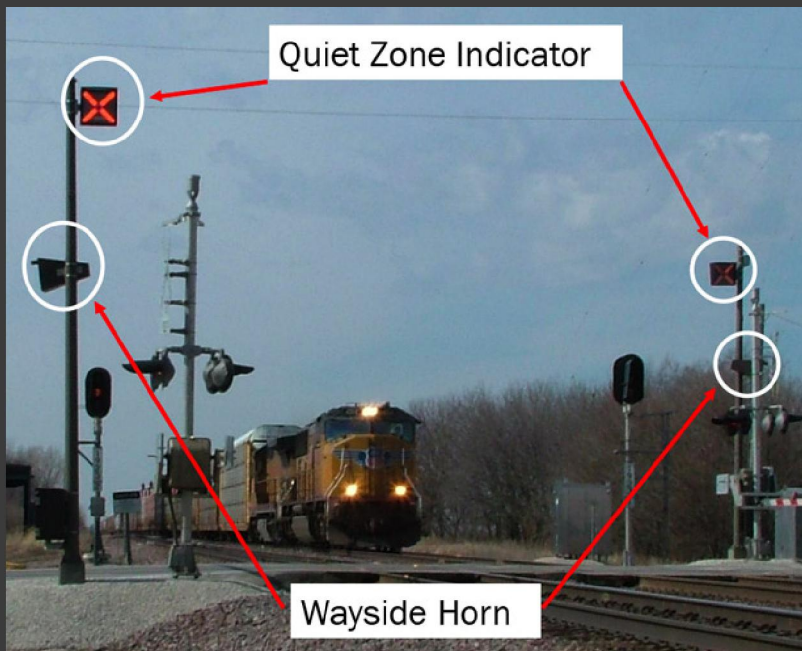


City of Fort Lauderdale, FL



Additional Safety Measures

Wayside Horns – sound a directional horn noise. They can be used in addition to SSMs. Below are some examples of what Wayside Horns may look like:





Permanent Closure

The City of Plymouth may opt to close one or more crossings to reduce expenses necessary to establish the Quiet Zone. The crossing located at York St. was closed in 2002.

- The City has been offered minimal funds to close crossings:
 - CSX: \$10,000 per crossing (any)
 - MDOT: \$150,000/ea (N. Holbrook & Farmer)
- The city must compare economic benefits of less congestion on major thoroughfares and more flexibility with direct routes to the potential for a minimal one-time payment.
- The City would be responsible for all costs related to the closure including property acquisition and road turn-arounds.
- No pedestrian access for closed crossings.



Closed York St. Crossing



Train Crash Statistics:

Michigan Train Collisions:

- 58 total incidents
- Jan 2000 – Mar 2015

Crossing Collisions are a Michigan reality

*CROSSINGS THAT HAVE HAD THE MOST FATAL INCIDENTS, UP TO 25 CROSSINGS LISTED
SORTED BY MOST FATAL INCIDENTS, MOST FATALITIES, MOST INJURY INCIDENTS, MOST INJURIES*

FREQUENCY OF CROSSING COLLISIONS (FROM FORM FRA F 6180.57 DATA)

Selections: All Railroads
Michigan, All Counties
Jan 2000 To Mar 2015

Nbr	Crossing ID	State	County	City	Total Incidents	Fatal Incidents	Total Deaths	Injury Incidents	Total Injuries
1	512363H	Michigan	WAYNE	DETROIT	9	2	3	2	6
2	511654U	Michigan	WAYNE	TRENTON	4	2	2	1	1
3	511099Y	Michigan	MACOMB	WARREN	2	2	2	1	1
4	511630F	Michigan	WAYNE	RIVER ROUGE	5	2	2	1	1
5	258231Y	Michigan	MONROE	DUNDEE	2	2	2	1	1
6	283680D	Michigan	SHIAWASSEE	PERRY	2	2	2	1	1
7	545191U	Michigan	WAYNE	WAYNE	1	1	5	1	1
8	545476F	Michigan	KALAMAZOO		1	1	3	1	1
9	283602W	Michigan	EATON	CHARLOTTE	1	1	2	1	1
10	284398D	Michigan	GENESEE	LINDEN	1	1	2	1	1
11	284090K	Michigan	MACOMB	MOUNT CLEMENS	1	1	2	1	1
12	258136D	Michigan	WAYNE	TAYLOR	1	1	2	1	1
13	000540V	Michigan	ISABELLA		2	1	1	1	4
14	283612C	Michigan	EATON		2	1	1	1	2
15	232412D	Michigan	GENESEE	MOUNT MORRIS	2	1	1	1	2
16	511945J	Michigan	WAYNE	DETROIT	3	1	1	1	2
17	234824X	Michigan	BERRIEN	ST JOSEPH	3	1	1	1	1
18	545468N	Michigan	KALAMAZOO	KALAMAZOO	2	1	1	1	1
19	511660X	Michigan	MONROE	SOUTH ROCKWOOD	2	1	1	1	1
20	284304A	Michigan	OAKLAND	PONTIAC	4	1	1	1	1
21	234628R	Michigan	OTTAWA		2	1	1	1	1
22	545193H	Michigan	WAYNE		3	1	1	1	1
23	545296H	Michigan	JACKSON	JACKSON	1	1	1	1	13
24	284543A	Michigan	LAPEER		1	1	1	1	3
25	283607F	Michigan	EATON	CHARLOTTE	1	1	1	1	2
					58	31	42	13	43



Train Crash Statistics:

- Total number of incidents/accidents, according to the FRA:

Year	Total # of Incidents	Fatalities
2006	13,803	903
2007	13,936	851
2008	12,958	804
2009	11,247	695
2010	11,630	734
2011	11,502	691
2012	11,050	677
2013	11,594	707
2014	11,863	805
*2015	2,805	200

*Includes statistics until March, 2015

- Train incidents and collisions can occur anywhere a train is present

<http://safetydata.fra.dot.gov/OfficeofSafety/publicsite/Query/TenYearAccidentIncidentOverview.aspx>



The City of Plymouth's Liability

- Without a quiet zone:
 - The city has 100% immunity from liability
 - Train companies have all liability

- With a quiet zone:
 - City now has liability risk
 - Max liability: \$200 million, per accident, per crossing





Insurance for Quiet Zones

- The City has received two sealed bids with three proposals:
 - **Michigan Municipal League**
 - \$5 million liability limit – need additional coverage
 - **HUB International**
 - \$5 million liability limit – Travelers Insurance
 - \$20,000 - \$40,000 annually
 - \$200 million liability limit – Lloyds of London
 - \$200,000 annually
 - First year estimate – pending review of improvements
 - Not clear if this price is per crossing (7) or per incident, or solely a \$200 million policy
- The City's current (FY 14-15) annual insurance premium: \$187,000



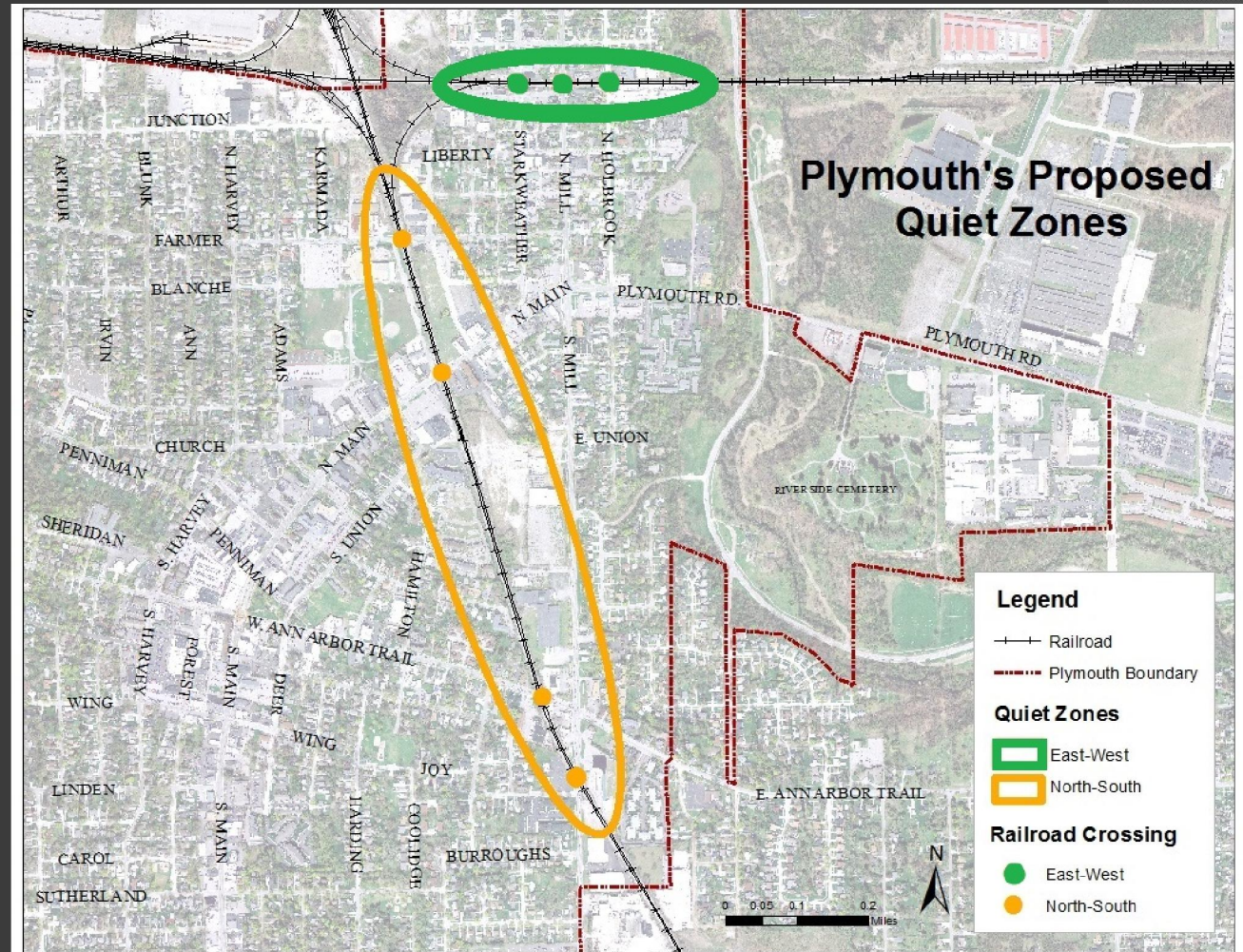
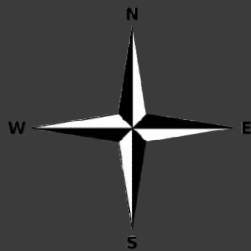
Where: Two Quiet Zones in Plymouth

North/South Tracks

- Farmer St.
- Main St.
- Ann Arbor Trail
- Lilley Rd.

East/West Tracks

- Starkweather Rd.
- N. Mill St.
- N. Holbrook Rd.





North / South Tracks Crossings:



Farmer Street Crossing



Ann Arbor Trail Crossing



Main Street Crossing



Lilley Road Crossing



East / West Tracks Crossings:



Starkweather Street Crossing



Holbrook Street Crossing



Mill Street Crossing



Findings

1. Infrastructure improvements are required (CSX)
2. Limited grant funding
3. Costs associated are threefold:
 - A. Implementation
 - B. Ongoing
 - C. Assumed Insurance Risk & Costs (from CSX)
4. Limited noise reduction



What does this mean to the City and Residents?



Cost of Quiet Zones

- ◉ Safety improvements (estimates):
 - SSM Upgrades (7) crossings: \$ 4,433,107.72 - \$5,263,149.70 (CSX)
 - Road engineering & utilities: Unknown
 - Annual Maintenance: \$50,000
 - ◉ Insurance (estimate):
 - Lloyds of London: \$200,000 annually
-

Initial Cost: \$4.4 - 5.2 million

-Railroad Infrastructure Costs

-Does not include: road engineering / utilities

Annual Cost: \$250,000

-Insurance Cost

-Maintenance Costs





Cost of Quiet Zones

- Why does it cost so much?
 - The Quiet Zone Risk Index for each crossing must be below the national significant risk threshold or risk index with horns.
 - The City of Plymouth's railroad crossings are expensive to retrofit with SSMs and ASMs to achieve this goal.
 - CSX is solely responsible for making decisions regarding which kind of improvements to make.
 - All new crossing equipment must be installed.
 - Site-specific restrictions contribute to increased cost.





Cost of Quiet Zones

- There are no federal, state, or railroad funds for Quiet Zones
 - According to FRA, MDOT, & CSX – June 2, 2014 Diagnostic Field Team Review Meeting
- All expenses would have to be sourced from:
 - General fund
 - Millage
 - Special Assessment
 - Bonds





What Other Communities Have Done:

- Pricing estimates are consistent with our numbers
 - Few communities have been able to secure insurance
 - Implementation takes 2-3 years per Quiet Zone
-





What Other Communities Have Done:

- ◉ Carrollton, TX
 - Working on their 4th Quiet Zone with 9 crossings
 - Already completed 3 Quiet Zones
 - Cost: \$350,000 - \$500,000 average per crossing
 - BNSF Railroad
 - \$50,000/ annually for maintenance through contract
 - No insurance – could not get coverage
 - Used wayside horns per requirement
 - After spending this amount of money, residents were surprised that train noise didn't go away
- ◉ Batavia, IL
 - Considering their first Quiet Zone
 - 5 crossings
 - Cost: \$517,150 - \$1,114,850 per crossing
 - Total: Estimated at just above \$4 million
 - BNSF Railroad



Summary:

- Objective: Reduce noise
 - Train horns will still sound: stopping, starting, going into reverse, leave the train yard, or in an emergency
 - Wayside horns will introduce a new noise
- Quiet Zones attach liability to the City
 - Current Liability: With CSX Railroad
 - Future Liability with Quiet Zone: City of Plymouth
 - Cap on damages: \$200 million, per incident, per crossing.
- Costs
 - \$4.4 – \$5.2 million to implement (+ road & utilities)
 - \$50,000 annual maintenance
 - \$200,000 annual insurance rider



Recommendation



Recommendation:

Necessary upgrades to crossing infrastructure, annual maintenance, and annual liability insurance expenses are prohibitively costly. Furthermore, Quiet Zones will only reduce part of the noise associated with a train.

For these reasons, we recommend that Quiet Zones **not be implemented** in the City of Plymouth, Michigan.