City of Pleasant Ridge
23925 Woodward Avenue
Pleasant Ridge, Michigan 48069

City Commission Meeting
September 8, 2020
Agenda

Honorable Mayor, City Commissioners and Residents: This shall serve as your official notification of the Regular City Commission Meeting to be held Tuesday, September 8, 2020, via teleconference as described below. The following items are on the Agenda for your consideration:

REGULAR CITY COMMISSION MEETING – 7:30 P.M.

1. **Meeting Called to Order.**

2. **Pledge of Allegiance.**

3. **Roll Call.**

4. **PUBLIC DISCUSSION – items not on the Agenda.**

5. **Governmental Reports.**

6. **Consideration of the following Consent Agenda.**
   All items listed on the Consent Agenda are considered to be routine by the City Commission, will be enacted by one motion and approved by a roll call vote. There will be no separate discussion of these items unless a City Commissioner or visitor so requests, in which event, the item will be removed from the consent agenda and considered as the last item of business.
   a. Minutes of the Regular City Commission Meeting held Tuesday, July 14, 2020.
   b. Monthly Disbursement Report.
   c. Proclamation recognizing September as National Suicide Prevention and Recovery Month.

7. **Establishing public hearings on Tuesday, October 13, 2020, at 7:30 p.m. to solicit public comments on the following ordinance amendments to the Pleasant Ridge City Code:**
   a. Ordinance to amend Chapter 14 – Building and Building Regulations, Article I – In General by the addition of new Sections, Section 14-2 – Portable Toilets, Section 14-3 – Dumpster Use Regulations, and Section 14-4 – Construction Materials Regulations.
   b. Ordinance to amend Chapter 74 – Utilities, Article III – Sewers, Division 3 – Use, Section 74-197 – Prohibited Discharges.
   c. Ordinance to amend Chapter 74 – Utilities, Article II – Water, Division 4 – Cross Connections, Section 74-114 – Adoption of State Regulations, Section 74-115 – Inspections, and Section 74-116 – Testing.

8. **Woodward Heights Traffic Calming.**

9. City Manager's Report.

10. Other Business.

11. Adjournment.

Due to the COVID-19 State of Emergency declared by the Governor's Executive Order 2020-4, the limitation on public assemblies of Executive Order 2020-11, and the permitting of public meetings by remote participation allowed by Governor's Executive Order 2020-15, the September 8., 2020 Pleasant Ridge City Commission meeting will be conducted via remote participation.

All members of the public will be permitted to participate during the public comment and public hearing portions of the meeting. There are two ways that members of the public can participate in the meeting 1) by joining the Zoom meeting by computer videoconference, or 2) by watching the meeting livestream on the City's YouTube channel or public access channel and providing comments by email at appropriate times during the meeting. If you have any ADA questions, please call the Clerk's Office (248) 541-2901.

City of Pleasant Ridge
23925 Woodward Avenue
Pleasant Ridge, Michigan 48069

City Commission Meeting
September 8, 2020
Wording and Comments

Honorable Mayor, City Commissioners and Residents: This shall serve as your official notification of the Regular City Commission Meeting to be held Tuesday, September 8, 2020, via teleconference as described below. The following items are on the Agenda for your consideration:

REGULAR CITY COMMISSION MEETING – 7:30 P.M.

1. **Meeting Called to Order.**
2. **Pledge of Allegiance.**
3. **Roll Call.**
4. **PUBLIC DISCUSSION – items not on the Agenda.**

Notes_____

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5. **Governmental Reports.**

Notes_____

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6. **Consent Agenda.**

All items listed on the Consent Agenda are considered to be routine by the City Commission, will be enacted by one motion and approved by a roll call vote. There will be no separate discussion of these items unless a City Commissioner or visitor so requests, in which event, the item will be removed from the consent agenda and considered as the last item of business.

a. Minutes of the Regular City Commission Meeting held Tuesday, July 14, 2020.
b. Monthly Disbursement Report.
c. Proclamation recognizing September as National Suicide Prevention and Recovery Month.

There are three routine items on the Consent Agenda for your consideration this evening. The first and second items are the minutes of the July City Commission Meeting and July and August Disbursement Report. The third item is an annual resolution recognizing September 2020 as National Suicide Prevention and Recovery Month.

Commissioner #1: **Mayor, I move that Consent Agenda, be approved.**

Commissioner #2: **Second.**

Motion by _____**Second**_____

Notes_____

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7. Establishing public hearings on Tuesday, October 13, 2020, at 7:30 p.m. to solicit public comments on the following ordinance amendments to the Pleasant Ridge City Code:

a. Ordinance to amend Chapter 14 – Building and Building Regulations, Article I – In General by the addition of new Sections, Section 14-2 – Portable Toilets, Section 14-3 – Dumpster Use Regulations, and Section 14-4 – Construction Materials Regulations.

b. Ordinance to amend Chapter 74 – Utilities, Article III – Sewers, Division 3 – Use, Section 74-197 – Prohibited Discharges.

c. Ordinance to amend Chapter 74 – Utilities, Article II – Water, Division 4 – Cross Connections, Section 74-114 – Adoption of State Regulations, Section 74-115 – Inspections, and Section 74-116 – Testing.

Attached are three proposed ordinances for City Commission consideration. The first step in this process is to schedule a public hearing to solicit public comments on the proposed ordinances. Staff is recommending the public hearings be scheduled for the next regular City Commission meeting to be held Tuesday, October 13, 2020.

Commissioner #1: **Your Honor, I move that a public hearings on Tuesday, October 13, 2020, at 7:30 p.m. to solicit public comments on the following ordinance amendments to the Pleasant Ridge City Code:**

a. Ordinance to amend Chapter 14 – Building and Building Regulations, Article I – In General by the addition of new Sections, Section 14-2 – Portable Toilets, Section 14-3 – Dumpster Use Regulations, and Section 14-4 – Construction Materials Regulations,

b. Ordinance to amend Chapter 74 – Utilities, Article III – Sewers, Division 3 – Use, Section 74-197 – Prohibited Discharges, and

c. Ordinance to amend Chapter 74 – Utilities, Article II – Water, Division 4 – Cross Connections, Section 74-114 – Adoption of State Regulations, Section 74-115 – Inspections, and Section 74-116 – Testing.

Commissioner #2: **Second.**

Motion by _____Second_____

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8. Woodward Heights Traffic Calming.

The City has implemented a number of test projects on Woodward Heights over the past six weeks. We have been collecting traffic speed and volume data and have conducted a qualitative survey to gain resident feedback on the test projects. At this time, staff is requesting City Commission direction to staff for each of the following test projects, Entrance pinch point, Indiana corner bumpout, Bermuda (N) stop sign removal and pedestrian crossing improvements and Bermuda (S) speed hump. There will be a motion to implement the recommended changes and a motion to disregard the changes. The City Commission must determine what course of action will be.

Entrance pinch point at the Woodward alley

Implement

Commissioner #1: **Mayor, I move the City Commission direct staff to begin the process to implement the installation of a permanent entrance pinch point at the Woodward alley/Woodward Heights Blvd intersection.**

Commissioner #2: **Second.**

Motion by _____Second_____

+++OR+++

Disregard

Commissioner #1: **Mayor, I move the City Commission direct staff to not implement a permanent entrance pinch point at the Woodward alley/Woodward Heights Blvd intersection and that intersection remain unchanged.**

Commissioner #2: **Second.**

Motion by _____Second_____

Notes_____
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Indiana Corner Bumpouts

Implement

Commissioner #1: **Mayor, I move the City Commission direct staff to begin the process to implement the installation of a permanent corner bumpout at the Indiana Ave/Woodward Heights Blvd intersection.**

Commissioner #2: **Second.**

Motion by _____Second_____

+++OR+++

Disregard

Commissioner #1: **Mayor, I move the City Commission direct staff to not implement permanent corner bumpout at the Indiana Ave/Woodward Heights Blvd intersection and that intersection remain unchanged.**

Commissioner #2: **Second.**

Motion by _____Second_____

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Bermuda (N) stop sign removal and pedestrian crossing improvements
Implement

Commissioner #1: **Mayor, I move the City Commission direct staff to permanently remove the stop sign at the Bermuda – North /Woodward Heights Blvd intersection, and that the City install pedestrian crossing safety measures at the intersection.**

Commissioner #2: **Second.**

Motion by _____Second_____

+++OR+++

Disregard

Commissioner #1: **Mayor, I move the City Commission direct staff to install the stop sign at the Bermuda – North /Woodward Heights Blvd intersection.**

Commissioner #2: **Second.**

Motion by _____Second_____

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Bermuda (S) speed hump
Implement

Commissioner #1: **Mayor, I move the City Commission direct staff to implement the installation of a permanent speed hump at the Bermuda – South /Woodward Heights Blvd intersection.**

Commissioner #2: **Second.**

Motion by _____Second_____

+++OR+++

Disregard

Commissioner #1: **Mayor, I move the City Commission direct staff not to install a permanent speed hump at the Bermuda – South /Woodward Heights Blvd intersection and the intersection remain the same.**

Commissioner #2: **Second.**

Motion by _____Second_____

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9. City Manager's Report.

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10. Other Business.

Notes_____
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11. Adjournment.

Due to the COVID-19 State of Emergency declared by the Governor's Executive Order 2020-4, the limitation on public assemblies of Executive Order 2020-11, and the permitting of public meetings by remote participation allowed by Governor's Executive Order 2020-15, the September 8., 2020 Pleasant Ridge City Commission meeting will be conducted via remote participation.

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City of Pleasant Ridge
23925 Woodward Avenue
Pleasant Ridge, Michigan 48069

Regular City Commission Meeting
July 14, 2020

Having been duly publicized, Mayor Metzger called the meeting to order at 7:30pm.

Present:	Mayor Metzger, Commissioners Budnik, Perry, Scott, Wahl,
Also Present:	City Manager Breuckman, City Attorney Need, City Clerk Allison
Absent:	None

Public Discussion

Natalie Campbell, 32 Ridge Road, discussed Small Cell antennas that could be installed in the neighborhoods. She discussed her beliefs on property rights, small cell installation sites and biological effects. City Manager Breuckman indicated that the City adopted an ordinance in June 2020 regarding DAS/Small Cell/Wireless installation. The State of Michigan controls the installation process.

Regina Weiss, Oak Park City Council representative and candidate for 27th District House Representative on the August 4th Primary Election Ballot. Kevin Kresch, candidate for 27th District House Representative on the August 4th Primary Election Ballot. Matthew Stoel, candidate for 27th District House Representative on the August 4th Primary Election Ballot. Commission Perry requested the candidates put their contact information and websites in the chat feature of the meeting.

Governmental Reports

Chief Kevin Nowak, Pleasant Ridge Police Department, tall grass and refuse collection receptacle violations have been tapering off, the Code Enforcement officer will still be monitoring properties ongoing violations. Resignation of Officer Dan Simon, thanked him for his service to the City.

Dennis Barr, Fire Marshall, Ferndale Fire Department discussed the recent house fire on Hanover. It was a vacant home and appears that the fire was electrical in nature. Ferndale, Hazel Park and Madison Heights Fire Departments all responded. There was significant damage to the interior of the home. The investigation is completed.

Consent Agenda

20-3469

Motion by Commissioner Perry second by Commissioner Wahl, to approve the consent agenda as presented.

Adopted:	Yeas: Commissioners Perry, Budnik, Scott, Wahl, Mayor Metzger
	Nays: None

City Manager's Report

Sylvan was closed at Woodward due to a sink hole. MDOT made repairs to the intersection and sewer infrastructure in that area. Concrete section repairs will begin in late summer. Those areas will be marked by our engineering staff shortly. A turnaround will be constructed across Oakland Park at the City Hall entrance. Pool park pavilion project is ongoing. The Gainsboro Park pavilion will begin on the fall. The Woodward Heights traffic calming test projects will begin in the next few weeks. Scott requested a summary of the Woodward Heights road calming project. Breuckman stated that project will begin sometime in the summer and look to implement after the test project. Budnik requested the status on 71 Devonshire. Breuckman indicated that is moving forward to Circuit Court for demolition. Scott commented about the crossing indicator lights at the Woodward/Oakland Park/Sylvan intersection. Breuckman responded that the indicators require the pedestrian press the request button in order to cross at the intersection, the indicators only change for the side of the crossing that the pedestrian request is made. Citywide garage sale will be held August 8th, the cost is $25.00.

Other Business

Scott commented that the Historical held a workshop, 100-year tile recipients discussed and updating of the Then and Now is ongoing, the committee is in the editing phase.

Budnik commented that Ferndale Public Schools is planning on holding classes in the fall, but it is still fluid as to in person or online or combination of both.

Wahl commented the recreation department has many virtual class offerings, the group family campout was cancelled but residents are encouraged to hold the campout in their own yard, the Community Garden is thriving, and the park area at Gainsboro Park is open.

Nowak indicated that the traffic signals at the Woodward/Main/ 696-Service Drive will be changed out, causing complete lane closures over the next two days.

Metzger gave an update on the census response rate. Pleasant Ridge has the second largest response rate in the state. Responses can still be submitted online or via paper survery.

Allison gave update on the August 4th Primary election and absentee voting options. The polls will be open from 7am-8pm on election day and voting will take place at the Pleasant Ridge Community Center. Absentee ballots can be returned until 8pm on election day and must be returned to the Pleasant Ridge City Hall.

With no further business or discussion, Mayor Metzger adjourned the meeting at 8:15pm.

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Mayor Kurt Metzger

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Amy M. Allison, City Clerk

July and August 2020

ACCOUNTS PAYABLE

PAYROLL LIABILITIES	$	23,521.66
ACCOUNTS PAYABLE	$	723,645.47
TAX LIABILITIES	$	5,820,247.18
TOTAL	$	747,167.13

PAYROLL

July 1, 2020	$	58,078.25
July 15, 2020	$	36,206.45
July 29, 2020	$	35,299.88
August 12, 2020	$	37,288.20
August 26, 2020	$	37,279.32
TOTAL	$	204,152.10

CHECK REGISTER FOR CITY OF PLEASANT RIDGE
PAYROLL LIABILITIES
July and August 2020

Check Date	Check	Vendor Name	Description	Amount
7/1/2020	6410500092	FOPLC	UNION DUES	$ 188.00
7/1/2020	6410500093	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 1,584.17
7/1/2020	6410500094	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 1,332.09
7/1/2020	6410500095	MISDU	FOC DEDUCTIONS	$ 224.60
7/1/2020	6410500096	ICMA - VANTAGEPOINT	RETIREMENT CONTRIBUTIONS	$ 80.00
7/1/2020	6410500097	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 1,881.39
7/1/2020	6410500098	ALERUS FINANCIAL	HCSP CONTRIBUTIONS	$ 457.80
7/15/2020	6410500099	MISDU	FOC DEDUCTIONS	$ 224.60
7/15/2020	6410500100	ALERUS FINANCIAL	HCSP CONTRIBUTIONS	$ 332.09
7/15/2020	6410500101	ICMA - VANTAGEPOINT	RETIREMENT CONTRIBUTIONS	$ 80.00
7/15/2020	6410500102	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 583.34
7/15/2020	6410500103	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 1,840.35
7/15/2020	6410500104	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 1,392.85
7/29/2020	6410500108	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 1,800.55
7/29/2020	6410500109	ALERUS FINANCIAL	HCSP CONTRIBUTIONS	$ 566.00
7/29/2020	6410500110	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 332.09
7/29/2020	6410500111	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 1,259.84
7/29/2020	6410500112	ICMA - VANTAGEPOINT	RETIREMENT CONTRIBUTIONS	$ 80.00
7/29/2020	6410500113	MISDU	FOC DEDUCTIONS	$ 224.60
8/12/2020	6410500123	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 1,873.48
8/12/2020	6410500124	MISDU	FOC DEDUCTIONS	$ 224.60
8/12/2020	6410500125	ALERUS FINANCIAL	HCSP CONTRIBUTIONS	$ 563.95
8/12/2020	6410500126	FOPLC	UNION DUES	$ 188.00
8/12/2020	6410500127	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 1,355.19
8/12/2020	6410500128	ICMA - VANTAGEPOINT	RETIREMENT CONTRIBUTIONS	$ 80.00
8/12/2020	6410500129	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 332.09
8/26/2020	6410500130	ICMA - VANTAGEPOINT	RETIREMENT CONTRIBUTIONS	$ 80.00
8/26/2020	6410500131	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 332.09
8/26/2020	6410500132	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 1,758.48
8/26/2020	6410500133	ALERUS FINANCIAL	HCSP CONTRIBUTIONS	$ 568.56
8/26/2020	6410500134	MISDU	FOC DEDUCTIONS	$ 224.60
8/26/2020	6410500135	ALERUS FINANCIAL	RETIREMENT CONTRIBUTIONS	$ 1,476.26
			TOTAL PAYROLL LIABILITIES	$ 23,521.66

CHECK REGISTER FOR CITY OF PLEASANT RIDGE
TAX LIABILITIES
July and August 2020

Check Date	Check	Vendor Name	Description	Amount
7/21/2020	2731	CITY OF PLEASANT RIDGE-DDA	2020 TAX COLLECTIONS	$ 30,759.73
7/21/2020	2732	CITY OF PLEASANT RIDGE-TAXES	2020 TAX COLLECTIONS	$ 494,448.81
7/21/2020	2733	FERNDALE SCHOOL DISTRICT	2020 TAX COLLECTIONS	$ 258,352.20
7/21/2020	2734	FIRST AMERICAN TITLE INSURANCE COMP	2020 TAX OVERPAYMENT	$ 1,630.74
7/21/2020	2735	OAKLAND COUNTY TREASURER	2020 TAX COLLECTIONS	$ 342,236.43
8/11/2020	2736	CITY OF PLEASANT RIDGE-DDA	2020 TAX COLLECTIONS	$ 32,449.57
8/11/2020	2737	CITY OF PLEASANT RIDGE-GENERAL	2020 TAX COLLECTIONS	$ 9,784.90
8/11/2020	2738	CITY OF PLEASANT RIDGE-TAXES	2020 TAX COLLECTIONS	$ 2,078,691.06
8/11/2020	2739	CORELOGIC CENTRALIZED REFUNDS	2020 TAX OVERPAYMENT REFUND	$ 2,885.17
8/11/2020	2740	FERNDALE SCHOOL DISTRICT	2020 TAX COLLECTIONS	$ 923,027.07
8/11/2020	2741	OAKLAND COUNTY BROWNFIELD AUTH	2020 TAX COLLECTIONS	$ 9,351.10
8/11/2020	2742	OAKLAND COUNTY TREASURER	2020 TAX COLLECTIONS	$ 1,410,213.45
8/25/2020	2743	CITY OF PLEASANT RIDGE-DDA	2020 TAX COLLECTIONS	$ 1,477.33
8/25/2020	2744	CITY OF PLEASANT RIDGE-GENERAL	2020 TAX COLLECTIONS	$ 51.32
8/25/2020	2745	CITY OF PLEASANT RIDGE-TAXES	2020 TAX COLLECTIONS	$ 104,439.08
8/25/2020	2746	FERNDALE SCHOOL DISTRICT	2020 TAX COLLECTIONS	$ 46,154.03
8/25/2020	2747	KEVIN MCCOY	2020 TAX OVERPAYMENT	$ 86.56
8/25/2020	2748	OAKLAND COUNTY TREASURER	2020 TAX COLLECTIONS	$ 70,611.47
8/25/2020	2749	PRIMARY TITLE COMPANY	2020 TAX OVERPAYMENT	$ 3,597.16
			TOTAL TAX LIABILITIES	$ 5,820,247.18

CHECK REGISTER FOR CITY OF PLEASANT RIDGE
ACCOUNTS PAYABLE
July 2020

Check Date	Check	Vendor Name	Description	Amount
07/14/2020	23917	ALL PRO EXERCISE, INC.	FITNESS CENTER EQUIPMENT	$ 22,017.00
07/14/2020	23918	CITY OF FERNDALE	FIRE SERBVICES AGREEMENT	$ 21,381.72
07/14/2020	23919	CITY OF FERNDALE	DISPATCH SERVICES AGREEMENT	$ 3,250.00
07/14/2020	23920	DAVEY TREE EXPERT COMPANY	TREE MAINTENANCE SERVICES	$ 5,319.00
07/14/2020	23921	ELECTION SOURCE	ABSENTEE BALLOT MAILING SUPPLIES	$ 1,360.00
07/14/2020	23922	HISTORICAL SOCIETY OF MICHIGAN	ANNUAL MEMBERSHIP RENEWAL	$ 50.00
07/14/2020	23923	JANI-KING OF MICHIGAN, INC	JANITORIAL SERVICES AGREEMENT	$ 2,161.00
07/14/2020	23924	LEGAL SHIELD	PREPAID LEGAL BENEFIT	$ 25.90
07/14/2020	23925	MICH.MUNICIPAL WORKER'S COMP.	ANNUAL WORK COMP PREMIUM	$ 15,030.00
07/14/2020	23926	MICHIGAN MUNICIPAL LEAGUE	ANNUAL MEMBERSHIP DUES	$ 2,107.00
07/14/2020	23927	PATRICK THOMPSON DESIGNS, INC	ENGINEERING SERVICES PAVILIONS	$ 400.00
07/14/2020	23928	ROBERT RIED	UNIFORM ALLOWANCE	$ 69.99
07/14/2020	23929	TOSHIBA FINANCIAL SERVICES	COPIER LEASE SERVICES	$ 925.98
07/14/2020	23930	VOID CHECK	VOID CHECK	$ -
07/14/2020	23931	21ST CENTURY MEDIA-MICHIGAN	LEGAL NOTICE PUBLICATIONS	$ 433.00
07/14/2020	23932	ACCUSHRED, LLC	SHREDDING SERVICES	$ 5.00
07/14/2020	23933	ADKISON, NEED & ALLEN P.L.L.C.	CITY ATTORNEY SERVICES	$ 1,642.75
07/14/2020	23934	AQUATIC SOURCE	POOL MAINTENANCE SERVICES	$ 823.36
07/14/2020	23935	BADGER METER, INC.	WATER METER MAINTENANCE SERVICES	$ 98.31
07/14/2020	23936	BELSON OUTDOOR	POOL EQUIPMENT PURCHASES	$ 25,695.00
07/14/2020	23937	BRILAR	DPW SERVICES	$ 16,490.53
07/14/2020	23938	DAVEY TREE EXPERT COMPANY	TREE MAINTENANCE SERVICES	$ 419.00
07/14/2020	23939	DETROIT EDISON COMPANY	STREETLIGHTING - JUNE 2020	$ 3,642.61
07/14/2020	23940	EUGENE LUMBERG	PROSECUTION SERVICES	$ 405.00
07/14/2020	23941	GREAT AMERICA FINANCIAL SRV	TELEPHONE LEASE SERVICES	$ 433.00
07/14/2020	23942	HYDROCORP	CROSS CONNECTION CONTROL PROGRAM	$ 125.00
07/14/2020	23943	MICHIGAN MUNICIPAL LEAGUE	UNEMPLOYMENT COMP PREMIUM Q-2 2020	$ 5.24
07/14/2020	23944	O'REILY AUTO PARTS	DPW VEHICLE MAINTENANCE SUPPLIES	$ 11.97
07/14/2020	23945	OAKLAND COUNTY ROAD COMMISSION	TRAFFIC SIGNAL MAINTENANCE & REPAIRS	$ 529.89
07/14/2020	23946	OAKLAND COUNTY TREASURER	SEWERAGE TREATMENT - JUNE 2020	$ 49,825.91
07/14/2020	23947	OAKLAND COUNTY TREASURER	AV MAILING - MARCH 2020	$ 124.08
07/14/2020	23948	ROBERT RIED	UNIFORM ALLOWANCE FY20	$ 163.85
07/14/2020	23949	SCHEER'S ACE HARDWARE	BUILDING & PARK MAINTENANCE SERVICES	$ 71.49
07/14/2020	23950	SHERMAN NURSERY FARMS	SPRING TREE PLANTING PURCHASES	$ 31,429.70
07/14/2020	23951	SOCRRA	REFUSE COLLECTION AGREEMENT	$ 9,424.00
07/14/2020	23952	SOCWA	WATER PURCHASES - JUNE 2020	$ 26,804.84
07/14/2020	23953	THE HOWARD E NYHART COMPANY INC	AUDIT SERVICES - OPEB	$ 1,500.00
07/14/2020	23954	WEX BANK	FUEL PURCHASES	$ 1,124.19
07/21/2020	23955	ACCUSHRED, LLC	BALANCE OF SHREDDING SERVICES	$ 50.00
07/21/2020	23956	AERKO INTERNATION MICHIGAN,INC	POLICE DEPARTMENT SUPPLIES	$ 286.00
07/21/2020	23957	ANDERSON, ECKSTEIN & WESTRICK	ENGINEERING SERVICES	$ 14,164.79
07/21/2020	23958	BLUE CROSS BLUE SHIELD OF MICHIGAN	HEALTHCARE BENEFITS	$ 10,878.92
07/21/2020	23959	CITY OF FERNDALE	INSPECTION SERVICES	$ 2,718.75
07/21/2020	23960	CREGGER COMPANY	BUILDNG MAINTENANCE SERVICES	$ 295.00
07/21/2020	23961	GREAT LAKES WATER AUTHORITY	IWC CHARGES-JUNE 2020	$ 260.26
07/21/2020	23962	METRO CARBONIC	RECREATION PROGRAM SUPPLIES	$ 35.00
07/21/2020	23963	O'REILY AUTO PARTS	DPW VEHICLE MAINTENANCE	$ 25.18
07/21/2020	23964	ON DUTY GEAR, LLC	UNIFORM PURCHASES	$ 275.00
07/21/2020	23965	PLANTE & MORAN PLLC	ACCOUNTING SERVICES	$ 5,757.00
07/21/2020	23966	REBECCA BROWNBACKER	RECREATION PROGRAM REFUND	$ 15.00
07/21/2020	23967	SOCRRA	REFUSE COLLECTION AGREEMENT	$ 8,778.89
07/21/2020	23968	UNUM LIFE INSURANCE COMPANY	LIFE INSURANCE BENEFIT	$ 545.34
07/21/2020	23969	WATERWORK PLUMBING	PARTIAL PERMIT REFUND 20-0179	$ 50.00
			Total for July 2020	$ 289,460.44

CHECK REGISTER FOR CITY OF PLEASANT RIDGE
ACCOUNTS PAYABLE
August 2020

Check Date	Check	Vendor Name	Description	Amount
08/11/2020	23970	21ST CENTURY MEDIA-MICHIGAN	LEGAL NOTICE PUBLICATION	$ 3,557.86
08/11/2020	23971	ACCUSHRED, LLC	SHREDDING SERVICES	$ 55.00
08/11/2020	23972	ADKISON, NEED & ALLEN P.L.L.C.	ATTORNEY SERVICES AGREEMENT	$ 2,034.25
08/11/2020	23973	BADGER METER, INC.	WATER METER PURCHASES	$ 6,743.10
08/11/2020	23974	CANDACE ASBERRY	MCI 20PR00878 REFUND	$ 175.00
08/11/2020	23975	CITY OF FERNDALE	FIRE SERVICES AGREMEENT	$ 21,381.72
08/11/2020	23976	CITY OF FERNDALE	BUILDING INSPECTION AND PLAN REVIEW SERV	$ 2,175.00
08/11/2020	23977	CITY OF FERNDALE	DISPATCH SERVICES AGREEMENT	$ 3,250.00
08/11/2020	23978	CITY OF PLEASANT RIDGE-GENERAL	UTILITY BILLS CITY BLDGS	$ 1,040.31
08/11/2020	23979	COMMUNITY MEDIA NETWORK	MEETING RECORDING SERVICES	$ 250.00
08/11/2020	23980	DAVEY TREE EXPERT COMPANY	TREE MAINTENANCE SERVICES	$ 7,740.00
08/11/2020	23981	DETROIT EDISON COMPANY	STREETLIGHTING SERVICES	$ 3,659.04
08/11/2020	23982	ELECTION SOURCE	ELECTION SUPPLIES	$ 230.78
08/11/2020	23983	EUGENE LUMBERG	PROSECUTION SERVICES	$ 405.00
08/11/2020	23984	EXLTERRA	TREE MAINTENANCE SERVICES	$ 3,000.00
08/11/2020	23985	GREAT AMERICA FINANCIAL SRV	TELEPHONE LEASE SERVICES	$ 433.00
08/11/2020	23986	HUNT SIGN COMPANY, LTD	TRAFFIC SIGNS	$ 39.00
08/11/2020	23987	HYDROCORP	CROSS CONNECTION PROGRAM	$ 125.00
08/11/2020	23988	J & J AUTO TRUCK CENTER	POLICE VEHICLE MAINTENANCE	$ 345.92
08/11/2020	23989	MICHIGAN POLICE EQUIPMENT	POLICE DEPARTMENT	$ 616.68
08/11/2020	23990	O'REILY AUTO PARTS	POLICE VEHICLE MAINTENANCE	$ 33.99
08/11/2020	23991	OAKLAND COUNTY TREASURER	GWK BOND PAYMENTS	$ 4,880.28
08/11/2020	23992	OAKLAND COUNTY TREASURER	CLEMIS SERVICES	$ 2,347.50
08/11/2020	23993	OAKLAND SCHOOLS	PRINTING & MAILING SERVICES	$ 1,012.83
08/11/2020	23994	PATRICK THOMPSON DESIGNS, INC	DESIGN SERVICES	$ 1,000.00
08/11/2020	23995	PLANTE & MORAN PLLC	ACCOUNTING SERVICES	$ 5,757.00
08/11/2020	23996	PROGRESSIVE IRRIGATION	IRRIGATION REPAIR SERVICES	$ 1,402.08
08/11/2020	23997	ROCKET ENTERPRISE, INC	FLAG MAINTENANCE SERVICES	$ 295.00
08/11/2020	23998	SCHEER'S ACE HARDWARE	MAINTENANCE SUPPLIES	$ 104.02
08/11/2020	23999	SOCRRA	REFUSE COLLECTION SERVICES	$ 9,713.00
08/11/2020	24000	SOCWA	WATER PURCHASES	$ 28,377.68
08/11/2020	24001	SPECTRUM PRINTERS LLC	ELECTON SERVICES	$ 46.79
08/11/2020	24002	THE BANK OF NEW YORK	BOND INTEREST - ACCT PLEAGEN03	$ 28,450.00
08/11/2020	24003	USZTAN CONSTRUCTION	PAVILION CONSTRUCTION SERVICES	$ 59,985.14
08/11/2020	24004	WEX BANK	FUEL PURCHASES	$ 1,307.37
08/25/2020	24005	AMANDA HUSBAND	RECREATION PROGRAM REFUND	$ 130.00
08/25/2020	24006	ANN CONTE	RECREATION PROGRAM REFUND	$ 60.00
08/25/2020	24007	AQUATIC SOURCE	POOL MAINTENANCE & REPAIRS	$ 2,529.59
08/25/2020	24008	ARIANA EITREM	RECREATION PROGRAM REFUND	$ 50.00
08/25/2020	24009	AYLIN SAMORAY	RECREATION PROGRAM REFUND	$ 110.00
08/25/2020	24010	BETH OKEEFE	RECREATON PROGRAM REFUND	$ 60.00
08/25/2020	24011	BRILAR	DPW SERVICES - JUNE 2020	$ 31,696.97
08/25/2020	24012	BRYAN BUSH	RECREATION PROGRAM REFUND	$ 40.00
08/25/2020	24013	CAMILLE COOKE	RECREATION PROGRAM REFUND	$ 70.00
08/25/2020	24014	CARYN LEONARD	RECREATION PROGRAM REFUND	$ 50.00
08/25/2020	24015	CHRISTOPHER JOHNSON	RECREATION PROGRAM REFUND	$ 40.00
08/25/2020	24016	CITY OF FERNDALE	FIRE SERVICES AGREEMENT	$ 21,381.72
08/25/2020	24017	CITY OF FERNDALE	DISPATCH SERVICES AGREEMENT	$ 3,250.00
08/25/2020	24018	CITY OF ROYAL OAK	DPW SERVICES	$ 6,829.36
08/25/2020	24019	COMMUNITY MEDIA NETWORK	CITY COMMISSION MEETING RECORDING	$ 250.00
08/25/2020	24020	DAMON HENRY	RECREATION PROGRAM REFUND	$ 50.00
08/25/2020	24021	DAN FUOCO	RECREATION PROGRAM REFUND	$ 50.00
08/25/2020	24022	DANA TOUCHETTE	RECREATION PROGRAM REFUND	$ 40.00
08/25/2020	24023	DAVE ZIENTEK	RECREATION PROGRAM REFUND	$ 150.00
08/25/2020	24024	DAVEY TREE EXPERT COMPANY	TREE MAINTENANCE SERVICES	$ 440.00
08/25/2020	24025	ELECTION SOURCE	ELECTION SUPPLIES & SERVICES	$ 998.19
08/25/2020	24026	ERIN GRIGORIOU	RECREATION PROGRAM REFUND	$ 60.00
08/25/2020	24027	GARRETT RENTROP	RECREATION PROGRAM REFUND	$ 110.00
08/25/2020	24028	GRACE PETERHANS	RECREATION PROGRAM REFUND	$ 110.00
08/25/2020	24029	GREAT LAKES WATER AUTHORITY	IWC CHARGES-JULY 2020	$ 260.26
08/25/2020	24030	ICMA RETIREMENT CORPORATION	QUARTERLY PLAN FEE	$ 250.00

Contined on next page

CHECK REGISTER FOR CITY OF PLEASANT RIDGE
ACCOUNTS PAYABLE
August 2020 - continued

Check Date	Check	Vendor Name	Description	Amount
08/25/2020	24031	J & J AUTO TRUCK CENTER	VEHICLE MAINTENANCE	$ 236.62
08/25/2020	24032	JEFFREY GASPAROTT	RECREATION PROGRAM REFUND	$ 80.00
08/25/2020	24033	JENNIFER RIZK	RECREATION PROGRAM REFUND	$ 70.00
08/25/2020	24034	JENNY MARCHECK	RECREATION PROGRAM REFUND	$ 80.00
08/25/2020	24035	JON MOBILY	RECREATION PROGRAM REFUND	$ 60.00
08/25/2020	24036	JULIE KOEHLER	RECREATION PROGRAM REFUND	$ 110.00
08/25/2020	24037	KELLY PETTIBONE	RECREATION PROGRAM REFUND	$ 80.00
08/25/2020	24038	KIMBERLY GALLAGHER	RECREATION PROGRAM REFUND	$ 130.00
08/25/2020	24039	KRISTEN LINTER	RECREATION PROGRAM REFUND	$ 50.00
08/25/2020	24040	KRISTI MCAULIFFE	RECREATION PROGRAM REFUND	$ 70.00
08/25/2020	24041	KYLE SANDVEIT	RECREATION PROGRAM REFUND	$ 110.00
08/25/2020	24042	LAUREN SHAH	RECREATION PROGRAM REFUND	$ 50.00
08/25/2020	24043	LEGAL SHIELD	PREPAID LEGAL SERVICES	$ 25.90
08/25/2020	24044	LINDSAY NEHRA	RECREATION PROGRAM REFUND	$ 70.00
08/25/2020	24045	LISA JACOKES	RECREATION PROGRAM REFUND	$ 40.00
08/25/2020	24046	MARANDA WIDER	RECREATION PROGRAM REFUND	$ 40.00
08/25/2020	24047	MARK BURDE	RECREATON PROGRAM REFUND	$ 70.00
08/25/2020	24048	MATTHEW VELICK	RECREATION PROGRAM REFUND	$ 100.00
08/25/2020	24049	MEGHAN POTT	RECREATION PROGRAM REFUND	$ 60.00
08/25/2020	24050	MICHIGAN ELECTION RESOURCES	ELECTION SUPPLIES	$ 304.94
08/25/2020	24051	NYE UNIFORM	UNIFORM SUPPLIES	$ 394.99
08/25/2020	24052	O'REILY AUTO PARTS	VEHICLE MAINTENANCE SUPPLIES	$ 19.99
08/25/2020	24053	OAKLAND COUNTY TREASURER	SEWERAGE TREATMENT - JULY 2020	$ 50,476.26
08/25/2020	24054	OPTUM BANK	HSA CONTRIBUTIONS-GUZIK	$ 362.50
08/25/2020	24055	PATRICK THOMPSON DESIGNS, INC	PAVILLION PROJECT DESIGN	$ 3,000.00
08/25/2020	24056	PROGRESSIVE IRRIGATION	PARK SPRINKLER REPAIRS	$ 1,400.26
08/25/2020	24057	RALPH GEARY	RECREATION PROGRAM REFUND	$ 50.00
08/25/2020	24058	ROBERT KOTASEK	RECREATION PROGRAM REFUND	$ 50.00
08/25/2020	24059	SHEILA CUMMINGS	RECREATION PROGRAM REFUND	$ 70.00
08/25/2020	24060	SOCRRA	REFUSE COLLECTION AGREEMENT	$ 8,784.76
08/25/2020	24061	STEPHANIE GOODMAN	RECREATION PROGRAM REFUND	$ 110.00
08/25/2020	24062	TEEK ELECTRIC	PARK LIGHTING REPAIRS	$ 1,224.00
08/25/2020	24063	TORRE CHURCH	RECREATION PROGRAM REFUND	$ 130.00
08/25/2020	24064	TOSHIBA FINANCIAL SERVICES	COPIER LEASE AGREEMENT	$ 925.98
08/25/2020	24065	UNIFIRST CORPORATION	MAT RENTAL AND JANITORIAL SUPPLIES	$ 140.66
08/25/2020	24066	UNUM LIFE INSURANCE COMPANY	LIFE INSURANCE BENEFITS	$ 545.34
08/25/2020	24067	WETMORE TIRE AND AUTO	POLICE VEHICLE MAINTENANCE	$ 22.50
08/25/2020	24068	WOODWARD AVENUE ACTION ASSOC.	ANNUAL MEMBERSHIP DUES	$ 1,250.00
			Total for August 2020	$ 341,830.13

CITY OF PLEASANT RIDGE CHECK REGISTER
ELECTRONIC PAYMENTS
July and August 2020

Check Date	Check	Vendor Name	Description	Amount
07/10/2020	2225	MUNICIPAL EMP.RETIREMENT SYST.	RETIREMENT BENEFITS	31,268.62
07/21/2020	2224	BLUE CROSS BLUE SHIELD OF MICHIGAN	HEALTHCARE BENEFITS	13,185.65
08/12/2020	2226	MUNICIPAL EMP.RETIREMENT SYST.	RETIREMENT CONTRIBUTIONS	34,714.98
08/13/2020	2227	BLUE CROSS BLUE SHIELD OF MICHIGAN	HEALTHCARE BENEFITS	13,185.65
			TOTAL ELECTRONIC PAYMENTS	$ 92,354.90

City of Pleasant Ridge
23925 Woodward Avenue
Pleasant Ridge, Michigan 48069

PROCLAMATION

National Suicide Prevention Week and National Recovery Month
September 2020

WHEREAS, the week of September 6-12, 2020 is National Suicide Prevention Week, and September 2020 is National Recovery Month, when millions of people around the world join their voices to share a message of hope and healing; and

WHEREAS, these observances are united in raising awareness that prevention is possible; treatment is effective; and people do recover; and

WHEREAS, in these challenging times messages of hope and healing are more needed than ever; and

WHEREAS, Pleasant Ridge residents should be able to access high quality prevention, support, rehabilitation, and treatment services that lead to recovery and a healthy lifestyle; and

WHEREAS, every day in Oakland County people enter treatment into behavioral health services and community supports and begin the road to wellness and recovery; and

WHEREAS, resiliency begins early in life within families, day cares, and schools, and can be strengthened and reinforced throughout the life span; and

WHEREAS, recovery and wellness encompass the whole individual, including mind, body, spirit, and community; and

WHEREAS, the benefits of preventing and overcoming mental health challenges, suicide attempts and loss, and substance abuse are significant and valuable to individuals, families, and our community at large; and

WHEREAS, it is essential that we educate residents about suicide, mental health and substance abuse problems and the ways they affect all people in the community; and

WHEREAS, we must encourage relatives, friends, co-workers, and providers to recognize the signs of a problem, and guide those in need to appropriate services and supports; and

WHEREAS, Suicide Prevention Week and Recovery Month inspire millions of Americans to raise awareness, build resiliency, and find hope.

NOW, THEREFORE the Pleasant Ridge City Commission proclaim the month of September 2020 is Suicide Prevention and Recovery Month: "Finding Hope, Building Resiliency, Supporting Recovery".

IN WITNESS WHEREOF, I, Amy M. Allison, duly certified Clerk of the City of Pleasant Ridge, do hereby attest that the foregoing is a true and accurate copy of a Resolution adopted by the Pleasant Ridge City Commission at its Regular Meeting held Tuesday, September 8, 2020.

_____

Amy M. Allison, City Clerk

City of Pleasant Ridge

James Breuckman, City Manager

From: Jim Breuckman, City Manager

To: City Commission

Date: September 3, 2020

Re: Construction Site Ordinance Amendment

Overview

The attached ordinance amendment to Chapter 14 – Building and Building Regulations, Article I – In General would establish specific requirements for the placement of portable toilets, dumpsters, and construction materials on construction sites in the City.

Background

While the City has attempted to minimize the visibility and presence of portable toilets, dumpsters, and stored construction materials on job sites, without an ordinance we are sometimes limited in our enforcement ability. The proposed ordinance amendments would require these to be located in a side or rear yard, with provision for them to be located in a front yard with reasonable conditions on their location if it is not possible to keep them in a side or rear yard.

The purpose of this amendment is to prevent construction sites from becoming a blight on the neighboring area. For example, contractors often prefer to locate portable toilets next to the sidewalk. While this may be most convenient for them, these toilets can be on a job site for months at a time and are unappealing to look at and sometimes smell for neighboring residents and anyone walking on the sidewalk.

Requested Action

City Commission scheduling of a public hearing on the construction site ordinance amendment for the October 13 City Commission meeting.

City of Pleasant Ridge

Ordinance No. ___

AN ORDINANCE TO AMEND THE CITY OF PLEASANT RIDGE CODE OF ORDINANCES, CHAPTER 14 – BUILDING AND BUILDING REGULATIONS, ARTICLE I.

THE CITY OF PLEASANT RIDGE ORDAINS:

Section 1. Amendments.

1. Add new Sec. 14-2. – Portable Toilet Regulations as follows:

(a) For purposes of this Section:

(1) Portable Toilet means a freestanding movable toilet structure with a watertight impervious container, which receives waste discharge through a hopper, seat, urinal, or similar device, and into which container may be placed disinfecting or deodorizing chemicals.

(2) Terms defined in the City of Pleasant Ridge Zoning Ordinance shall have the same meaning in this Article.

(b) Portable toilets shall only be allowed in the City to provide temporary bathroom facilities as part of construction projects, or for special events with the approval of the City Manager.

(c) Nothing in this section shall prohibit portable toilets required by rule R 408-40129 of the Michigan Administrative Code.

(d) Location and orientation.

(1) Portable toilets shall be located in the side or rear yard of any residential property.

(2) In the event a portable toilet required by rule R 408 40129 cannot be feasibly located in accordance with the requirements of this section, the City Manager or his or her designee may grant a deviation. The City Manager may condition such deviation on such conditions as are necessary to minimize any adverse impacts on adjacent properties or the public.

2. Add new Sec. 14-3. – Dumpster Use Regulations as follows:

The following regulations apply to dumpsters used on a temporary basis at properties upon which construction is ongoing pursuant to a validly issued building permit:

(a) For the purposes of this Section:

(1) "Dumpster" shall mean a metal solid waste receptacle, for use primarily at commercial industrial businesses and construction sites, designed to be lifted and emptied mechanically, or with wheels to allow removal from the site, and includes receptacles commonly known as "dumpster trailers", "roll-offs" or "roll-off dumpster"

(2) Terms defined in the City of Pleasant Ridge Zoning Ordinance shall have the same meaning in this Article.

(b) Dumpsters shall be maintained in clean, painted, and sound condition.

(c) Dumpsters shall not be located in the front yard of any property.

(d) Dumpsters shall not encroach upon or be placed upon, over, or across any sidewalks, streets, or rights of way of the City.

(e) Dumpster lids shall be kept closed at all times when materials are not being deposited. Property with dumpsters that do not have lids affixed or attached shall at all times be maintained in a neat and orderly manner to eliminate litter around and about the location of the dumpster.

(f) The City Manager or his or her designee shall have the authority to permit the location of a dumpster in a front yard only after a determination that there is no other feasible location on site. In the event the City Manager makes such a determination, the City Manager may impose such conditions as are necessary to minimize any impacts on the adjacent properties or impacts on the public.

3. Add new Sec. 14-4. – Construction Material Regulations as follows:

(a) For the purposes of this section:

(1) "Construction materials" shall mean building materials appurtenant to construction, remodeling, repair, or demolition operations.

(2) Terms defined in the City of Pleasant Ridge Zoning Ordinance shall have the same meaning in this Article.

(b) No construction materials, construction equipment, or debris associated with work performed or undertaken in connection with a building permit shall be stored or maintained in any front yard unless specifically authorized in writing by the City Manager or his or her designee.

(c) The City Manager or his or her designee shall have the authority to permit the storage of such materials, equipment, or debris in a front yard only after a determination that there is no other feasible location on site.

(d) The City Manager or his or her designee may impose such conditions as are necessary to minimize any impacts on the adjacent properties or impacts on the public including,

but not limited to, the establishment of time limitations, provisions to address any storm water run-off impacts, or other potentially adverse impacts.

Section 2. Severability.

Should any provision or part of this Article be declared by any court of competent jurisdiction to be invalid or unenforceable, the same shall not affect the validity or enforceability of the balance of this Article, which shall remain in full force and effect.

Section 3. Repealer.

All other ordinances or parts of ordinances in conflict with this ordinance are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

Section 4. Savings clause.

Nothing in this Article shall be construed to affect any suit or proceeding pending in any court or any rights acquired or any liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed as cited in Section 3 of this Ordinance; nor shall any just or legal right or remedy of any character be lost, impaired, or affected by this Ordinance.

Section 5. Effective Date.

This Ordinance shall become effective fifteen days after enactment and upon publication as provided by law.

Section 6. Adoption.

This Ordinance is hereby declared to have been adopted by the City Commission of the City of Pleasant Ridge at a meeting duly called and held on the ____ day of _____, 2020, and ordered to be given publication in the manner prescribed by law.

_____
James Breuckman, City Manager

_____
Amy M. Allison, City Clerk

City of Pleasant Ridge

James Breuckman, City Manager

From: Jim Breuckman, City Manager

To: City Commission

Date: September 3, 2020

Re: Sewers Ordinance Amendment

Overview

The attached ordinance amendment to Chapter 74, Article III Sewers, Division 3 – Use amends the City's sewer ordinance to address the dumping of concrete slurry and waste into the public sewers.

Background

There have recently been several instances where contractors or homeowners have washed out concrete into City sewers. This can block up the sewer inlets and cause the sewers to not function properly, costing the City to then repair or clean the sewers.

The attached ordinance amends the City's existing sewers ordinance to specifically identify and prohibit concrete or cement slurries, wash water, or residues from being drained into City sewers, and to establish penalties for doing so.

Requested Action

City Commission scheduling of a public hearing on the sewer ordinance amendment for the October 13 City Commission meeting.

City of Pleasant Ridge

Ordinance No. ___

AN ORDINANCE TO AMEND THE CITY OF PLEASANT RIDGE CODE OF ORDINANCES, CHAPTER 74 – UTILITIES, ARTICLE III. - SEWERS, DIVISION 3. - USE, SEC. 74-197. - PROHIBITED DISCHARGES.

THE CITY OF PLEASANT RIDGE ORDAINS:

Section 1. Amendments.

1. Add a new Chapter 74, Article III, Division 3 – Section 74-197, subsection (10) to read as follows:

> Any materials which exert or cause unusual concentration of inert suspended solids, which are capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewage works, such as, but not limited to (i) concrete or cement slurries; (ii) concrete wash water; or (iii) concrete or cement residues.

2. After subsection (10), add the following language:

> Any person who violates this section shall be subject to the following penalties:
>
> (a) A civil fine of not less than $500.00, plus any costs, assessments, damages, expenses, and other sanctions, for each infraction;
>
> (b) All costs of containment, clean up, abatement, removal, and disposal of any substance unlawfully discharged into the sewer works, as well as the costs of any replacement or repair to the sewage works caused by the violation;
>
> (c) In addition to any other remedy, the City may bring legal action to enjoin the continuing violation of this section, and the existence of any other remedy at law or in equity shall be no defense to any such action; and
>
> (d) The remedies set forth in this section are cumulative, not exclusive.

Section 2. Severability.

Should any provision or part of this Article be declared by any court of competent jurisdiction to be invalid or unenforceable, the same shall not affect the validity or enforceability of the balance of this Article, which shall remain in full force and effect.

Section 3. Repealer.

All other ordinances or parts of ordinances in conflict with this ordinance are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

Section 4. Savings clause.

Nothing in this Article shall be construed to affect any suit or proceeding pending in any court or any rights acquired or any liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed as cited in Section 3 of this Ordinance; nor shall any just or legal right or remedy of any character be lost, impaired, or affected by this Ordinance.

Section 5. Effective Date.

This Ordinance shall become effective fifteen days after enactment and upon publication as provided by law.

Section 6. Adoption.

This Ordinance is hereby declared to have been adopted by the City Commission of the City of Pleasant Ridge at a meeting duly called and held on the ____ day of _____, 2020, and ordered to be given publication in the manner prescribed by law.

_____
James Breuckman, City Manager

_____
Amy M. Allison, City Clerk

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City of Pleasant Ridge

James Breuckman, City Manager

From: Jim Breuckman, City Manager

To: City Commission

Date: September 3, 2020

Re: Cross Connection Ordinance Amendment

Overview

The attached ordinance amendment to Chapter 74, Article II, Division 4 amends the City's Cross Connection ordinance based on the current laws and administrative rules of the State. The City has retained HydroCorp to conduct our cross-connection testing program.

Background

Cross connection is an arrangement of piping that could allow undesirable water, sewage, or chemical solutions to enter your drinking (potable) water system as a result of backflow. Cross connections with potable piping systems have resulted in numerous cases of illness and even death. Historically, cross connections have been one of the most serious public health threats to a drinking water supply system and many times are present in a residential water system.

Cross connection testing is required by the state to ensure that contaminants can not backflow into the public water system. The State recently adopted rules that require testing for residential sites in addition to commercial sites, although we have not yet started testing residential sites. HydroCorp is currently testing 12-14 commercial sites each year, including City facilities (City Hall, 4 Ridge, and the DPW building).

The proposed ordinance amendments have been suggested by HydroCorp to ensure that we are compliant with State laws and administrative rules.

Requested Action

City Commission scheduling of a public hearing on the cross-connection ordinance amendment for the October 13 City Commission meeting.

City of Pleasant Ridge

Ordinance No. ___

AN ORDINANCE TO AMEND THE CITY OF PLEASANT RIDGE CODE OF ORDINANCES, CHAPTER 74 – UTILITIES, ARTICLE II. - WATER, DIVISION 4. – CROSS CONNECTIONS.

THE CITY OF PLEASANT RIDGE ORDAINS:

Section 1. Amendments.

1. Amend Section 74-114 to read as follows:

> The city hereby adopts by reference the Water Supply Cross-Connection Rules of the ~~Michigan Department of Public Health~~ Michigan Department of Environment, Great Lakes and Energy, being R 325.11401 to R 325.11407 of the Michigan Administrative Code, as now in force or as subsequently amended. A copy of such rules shall be available at city hall.
>
> This ordinance does not supersede the state plumbing code or the plumbing regulations of the City Code but is supplementary to them.

2. Amend Section 74-115 to read as follows:

> It shall be the duty of the city's director of public works or his authorized agent to cause inspections to be made of all properties served by the public water supply where cross connections with the public water supply is deemed possible. The frequency of inspections and reinspections based on potential health hazards involved shall be as established by the city and as approved by the ~~state department of public health~~ Michigan Department of Environment, Great Lakes, and Energy.

3. Section 74-116 is deleted in its entirety and amended to read as follows:

> All testable backflow prevention assemblies shall be tested initially upon installation, relocation and/or repair to be sure that the assembly is working properly. Subsequent testing of assemblies shall be on an annual basis or as required by the City and in accordance with Michigan Department of Environment, Great Lakes and Energy requirements. Only individuals that hold an active ASSE 5110 tester's certification shall be qualified to perform such testing. That individual(s) shall certify the results of his/her testing.

Section 2. Severability.

Should any provision or part of this Article be declared by any court of competent jurisdiction to be invalid or unenforceable, the same shall not affect the validity or enforceability of the balance of this Article, which shall remain in full force and effect.

Section 3. Repealer.

All other ordinances or parts of ordinances in conflict with this ordinance are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

Section 4. Savings clause.

Nothing in this Article shall be construed to affect any suit or proceeding pending in any court or any rights acquired or any liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed as cited in Section 3 of this Ordinance; nor shall any just or legal right or remedy of any character be lost, impaired, or affected by this Ordinance.

Section 5. Effective Date.

This Ordinance shall become effective fifteen days after enactment and upon publication as provided by law.

Section 6. Adoption.

This Ordinance is hereby declared to have been adopted by the City Commission of the City of Pleasant Ridge at a meeting duly called and held on the ____ day of _____, 2020, and ordered to be given publication in the manner prescribed by law.

_____
James Breuckman, City Manager

_____
Amy M. Allison, City Clerk

City of Pleasant Ridge

James Breuckman, City Manager

From: Jim Breuckman, City Manager

To: City Commission

Date: September 3, 2020

Re: Woodward Heights Test Project Evaluation

Overview

The City has implemented a number of test projects on Woodward Heights over the past six weeks:

- Entrance pinch point at the Woodward alley
- Curb bumpout at Indiana
- Curb bumpout and stop sign removal at Bermuda (N)
- Speed hump at east City entrance at Bermuda (S)

We have been collecting traffic speed and volume data and have conducted a qualitative survey to gain resident feedback on the test projects.

Staff is requesting City Commission direction on which, if any, of the test projects to make permanent.

Background

Attached to this agenda summary are a series of supporting documents, including a presentation deck summarizing the quantitative data collected during the test, survey results broken out between Woodward Heights residents and other respondents, and a summary of feedback from residents who live near the temporary speed hump at Bermuda (S).

Overall Speed Impact

Traffic speed and volumes were measured at three locations along Woodward Heights during the test:

- Location 1: At 37 Woodward Heights, halfway between Indiana and Bermuda (N)
- Location 2: At Bermuda (N) to gauge the impact of the stop sign removal
- Location 3: at 75 Woodward Heights, 150 feet west of the speed hump to gauge the immediate impact of the speed hump removal

Location 1

- Removal of the stop sign at Bermuda (N) did not change the average speed on the street. The average speed was between 25.2 and 25.4 mph before and during the test.

- Removal of the stop sign did not change the 85th percentile speed, which was 29.0 mph before and during the test.

- The only measurable difference of note is that the percentage of vehicles traveling over 35 mph at location 1 slightly increased from 1.8% before the test to 2.1 - 2.4% during the test, an increase of about 12 cars per day traveling over 35 mph.

	May 2015	June 2020	July 2020	Aug. 2020	Sep. 2020
Avg Daily Vehicles	2,854	2,354	2,622	2,811	2,755
Avg Speed	26.2 mph	25.2 mph	25.4 mph	25.2 mph	25.2 mph
85th % Speed	29.9 mph	29.0 mph	29.0 mph	29.0 mph	29.0 mph
% over 25 mph	54.7%	45.6%	46.6%	44.9%	43.4%
% over 30 mph	16.4%	11.7%	12.9%	12.2%	11.8%
% over 35 mph	3.8%	1.8%	2.3%	2.1%	2.4%
Avg Daily Trucks	18	52	39	40	44

Location 2

- The average speed through the Bermuda (N) intersection was between 22.7 and 23.5 mph.

- The 85th percentile speed was 27.0 mph.

- Most vehicles (over 75%) travel below the speed limit through the intersection.

- Vehicles that stop at the intersection are not counted, as the radar does not register vehicles traveling less than 12 mph.

	July 30 – Aug. 5	Aug. 14-19	Aug 26-31
Average Daily Vehicles	2,319	2,707	2,703
Average Speed	23.5 mph	23.0 mph	22.7 mph
85th Percentile Speed	27.0 mph	27.0 mph	27.0 mph
% over 25 mph	29.8%	26.3%	23.5%
% over 30 mph	6.6%	6.4%	5.6%
% over 35 mph	0.9%	1.1%	0.9%

Location 3

See the speed hump section below for discussion of the impact.

Conclusion

The test projects did not have a measurable impact on traffic speed or volume. Traffic speeds were within acceptable limits during the project. Some or all the test projects can be made permanent based on the preference of the City Commission.

Following is a discussion of each of the test projects, including survey results.

Woodward Alley Pinch Point

The pinch point at the Woodward alley would serve as a gateway entrance from the Woodward environment into a neighborhood environment by visually narrowing the street and adding more green vegetation to reduce the amount of concrete at the neighborhood entrance. This element would be a decorative entrance feature rather than solving a specific traffic issue.

Parking and turning movements from Woodward and the alley are present, so this would have to be designed to not create congestion. If made permanent, I would recommend that only the south side of the street be bumped out to avoid impeding the pseudo bike lane on the north side of the street.

Finally, this would be an opportunity to introduce green infrastructure to infiltrate some rainwater from the street into the ground instead of the sewer system.

Survey Results:

- 55% of Woodward Heights survey respondents favor making this element permanent, while 35% oppose it.

- 31% of non-Woodward Heights survey respondents favor making this element permanent, while 53% oppose it.

Example Image

Recommendation

Installation of a permanent entrance pinch point is estimated to cost about $30,000 and would improve the pedestrian crossing experience and aesthetics on the street but will not impact traffic characteristics. I offer no recommendation on this item, but if the Commission wishes to implement it, we would likely do so in the next few years opportunistically in conjunction with another project.

Indiana Bumpout

The bumpout at Indiana is intended primarily to improve the pedestrian crossing experience. Similar to the pinch point, I would recommend that a permanent improvement only be added on the south side of the street to avoid impeding the pseudo bike lane.

Bumping out the area on the south side of the street would allow pedestrians a landing space that would reduce the crossing distance from curb to curb from 30 feet to 22 feet, a reduction of 27%. The bumpout area would occupy the same space as the parking lane, so it would have only ancillary traffic calming benefit. This would be an opportunity to add more green space within the street, so there would be some aesthetic improvement as well.

Finally, this would be an opportunity to introduce green infrastructure to infiltrate some rainwater from the street into the ground instead of the sewer system.

Survey Results:

- 57% of Woodward Heights survey respondents favor making this element permanent, while 37% oppose it.

- 34% of non-Woodward Heights survey respondents favor making this element permanent, while 56% oppose it.

Permanent Bumpout Example

Recommendation

Installation of a permanent curb bumpout is estimated to cost about $30,000 and would improve the pedestrian crossing experience and aesthetics on the street but will not impact traffic characteristics. I offer no recommendation on this item, but if the Commission wishes to implement it, we would likely do so in the next few years opportunistically in conjunction with another project.

Bermuda (N) Crosswalk

Reason for Removal

The stop sign on Woodward Heights at the Bermuda intersection was removed because it does not meet the warrants (i.e. criteria) for a stop sign. Stop signs are intersection control, not speed control, and they are to be used where conditions exist at an intersection that requires controlling one or more entrances to the intersection. This most often is due to traffic characteristics, but it can also be due to bicycle or pedestrian traffic if it exists in high enough numbers. While there is a widespread perception that stop signs slow or calm traffic, this is not supported by the science. Refer to the attached Federal Highway Administration's stop sign fact sheets for more information about the appropriate use of stop signs.

The City's traffic engineering consultant studied the intersection to see if the stop signs were warranted on Woodward Heights. In their study they found that there were only 88 cars that entered the intersection from Bermuda in a 24-hour period, while Woodward Heights averages 2,700 to 3,000 vehicles per day. In such an instance, many drivers will roll or ignore the stop sign on Woodward Heights as they perceive it to be unnecessary since they very rarely see a car stopped at Bermuda, or pedestrians crossing the street.

By comparison, Indiana carries about 1,000 cars per day, so the stop sign is justified at that location.

Data Summary

The data collected during the test supports the research that stop signs do not result in slower traffic speeds. As discussed above, the only difference was a small increase in the number of cars traveling over 35 mph – an increase from 1.8% before to 2.4% after the removal of the Bermuda stop sign. This is the only measurable difference in traffic speed. Whether that is enough of a reason to restore the stop sign is up to the City Commission's discretion.

A permanent bumpout installation at this location will likely not be possible due to the location of multiple driveways. In this case, if the stop sign is permanently removed the "stop for pedestrians' signs would be made permanent, and we could add the pedestrian crossing identification signs like those at the Bermuda (S) intersection.

Survey Results:

Public from the survey supports restoring the stop sign, although a few residents who live near the Bermuda intersection have noted that the removal of the stop sign has eliminated noise from vehicles stopping and starting and has resulted in a more peaceful environment near the stop sign.

- 57% of Woodward Heights survey respondents support having stop signs at Bermuda (N), while 36% say there should not be stop signs.

- 53% of non-Woodward Heights survey respondents support having stop signs at Bermuda (N), while 30% say there should not be stop signs.

Recommendation

While popular opinion supports the restoration of the stop sign, I recommend that we remove it. The stop sign does not meet warrants, and the data does not indicate that a speed problem exists without the sign. Other measures can be made permanent to highlight the crosswalk at this location if its removal is made permanent.

Bermuda (S) Speed Hump

The speed hump at the Bermuda (S) intersection was installed on a temporary basis as a test for the following reasons:

- Speed humps or bumps are something that residents often request and desire on their street.
- Truck traffic is an issue on Woodward Heights that enforcement can only mitigate but not eliminate. We wanted to test putting speed humps at the City entrance to see if it would deter any truck traffic from using Woodward Heights.
- We wanted to test out the real-world impact of a speed hump to see if it matches the body of research regarding speed humps.

Data Summary

The data shows that the speed hump had a small impact on travel speed at 150 feet, but no impact at 600 feet.

The data also shows that the speed hump had no impact on truck traffic. The average daily truck counts before and after the speed hump were unchanged. Note that the measurements 600 feet west of the speed hump each include about a week of data, so we have a more reliable average daily truck count. The measurement at 150 feet west of the hump includes only a few days of data, not enough to result in an accurate measurement of average daily trucks. Also note that trucks per day is for weekdays, weekend truck counts are much lower.

	150 ft. West	600 ft. West (pre)	600 ft. West (post)
Average Daily Vehicles	2,788	2,707	2,703
Average Speed	22.3 mph	23.0 mph	22.7 mph
85th Percentile Speed	26.0 mph	27.0 mph	27.0 mph
% over 25 mph	15.2%	26.3%	23.5%
% over 30 mph	3.8%	6.4%	5.6%
% over 35 mph	0.4%	1.1%	0.9%
Trucks per day	--	45	47

Research Summary

Refer to the attached study from Iowa State University for an overview of the research into speed hump use and placement. The bottom line is that:

- Speed humps will slow traffic to about 15-20 mph at the hump
  We confirmed this observation during our test.
- Speeds between speed humps will be 25-30 mph
  We confirmed that the speed hump impacted travel speed 150 feet away but had no significant impact at 600 feet.

- Speed humps must be installed every 200-600 feet to be effective along a section of roadway
  We confirmed this finding. To be effective on Woodward Heights, we would need to install at least six speed humps along the street.

- Speed humps are most appropriate on streets that have 85the percentile speeds of 31-34 mph
  We confirmed this finding. The 85th percentile speed on Woodward Heights is 29 mph. The 85th percentile speed at 150 feet from the speed hump was 26 mph, so the impact of the speed hump on travel speed was small.

Resident Feedback

We solicited input from residents who live within 200 feet of the test speed hump to gain their insight what it is like living near one, and if they want the hump to be made permanent or removed. We received four responses:

- Three residents want the speed hump removed citing the noise impacts of the hump.
- One resident would like for it to stay.

Future Speed Humps

If residents on Woodward Heights would like to see more speed humps on their street, they may petition the City using the process in the City's traffic calming manual.[1] If a petition is submitted meeting our criteria, we would install a series of 5-6 humps along the street to achieve consistent traffic calming along the length of the street. One or a few humps will only slow down traffic near the hump, but speeds will be unchanged between the humps if they are spaced far enough apart.

Recommendation

Our test speed hump confirmed the reasons why the City does not use speed humps as part of our traffic calming improvements. I recommend removal of the speed hump. If Woodward Heights residents would like speed humps on their street, the City can implement those upon petition.

[1] https://cityofpleasantridge.org/wp-content/uploads/2019/01/Traffic-Calming-Manual.pdf

Requested Action

City Commission direction to staff for each of the following test projects:

1. Entrance pinch point
2. Indiana corner bumpout
3. Bermuda (N) stop sign removal and pedestrian crossing improvements
4. Bermuda (S) speed hump

Permanent implementation of some of these elements will not be immediate, such as the gateway entrance pinch point, the bumpouts at the intersections, or the installation of a permanent speed hump at Bermuda as these require design work and bringing in a contractor to make the improvements.

Restoration of the stop sign or making the “stop for pedestrian” signs at Bermuda (N) would be immediate.

Woodward Heights Traffic Calming Test Project Evaluation

September 8, 2020

Traffic Calming Tests

- Pinch Point @ Woodward Alley
- Bumpouts at Indiana & Bermuda crosswalks
- Stop sign removal at Bermuda (North)
- Speed Hump @ Bermuda (South)

Woodward Hts.

Woodward Hts.

Woodward Hts.

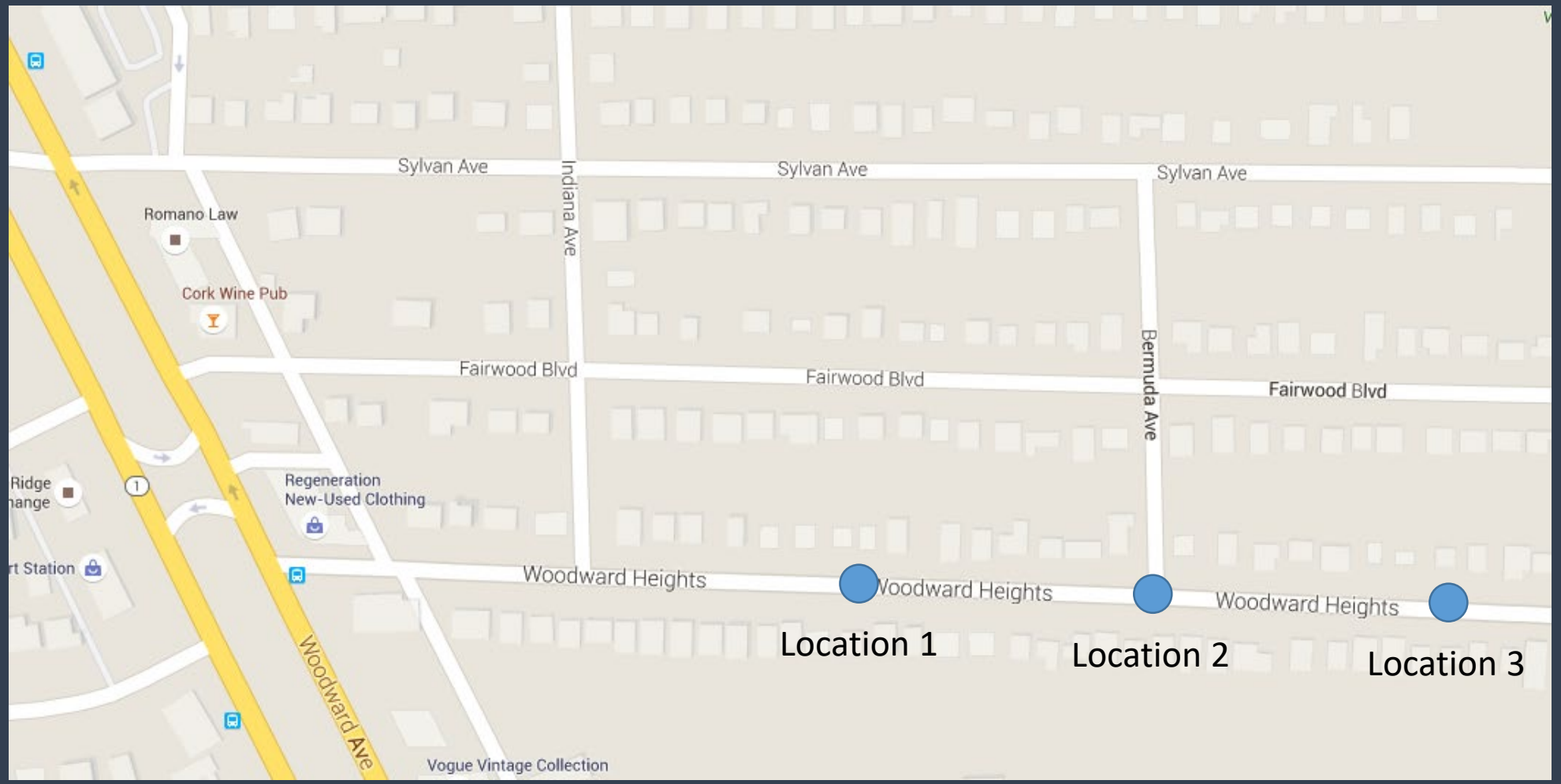
Process

- Collect baseline data
- Install test projects
- Collect test data
- Remove some test projects
- Collect further test data
- Decision what (if anything) to implement

Traffic Data Collector

- Radar unit
- Collects speed and volume data
- Unobtrusive – does not influence results

Count Locations



Count Dates

Location 1

- April 21-28, 2015
- June 12-17, 2020
- July 28-29, 2020
- August 11-13, 2020
- August 31 – September 3, 2020

Location 2

- July 31 – August 5, 2020
- August 14-19, 2020
- August 26-31, 2020

Bottom Line Up Front

- Vehicle speed did not increase during test
  - *Average, 85% speeds unchanged at location 1*
- @ Bermuda – average speed was 23 - 23.5 mph
  - *Stop sign removal did not result in excessive speed through intersection*

Key Data – Mid-Block Location 1

	May 2015	June 2020	July 2020	Aug. 2020	Sep. 2020
Avg Daily Vehicles	2,854	2,354	2,622	2,811	2,755
Avg Speed	26.2 mph	25.2 mph	25.4 mph	25.2 mph	25.2 mph
85th % Speed	29.9 mph	29.0 mph	29.0 mph	29.0 mph	29.0 mph
% over 25 mph	54.7%	45.6%	46.6%	44.9%	43.4%
% over 30 mph	16.4%	11.7%	12.9%	12.2%	11.8%
% over 35 mph	3.8%	1.8%	2.3%	2.1%	2.4%
Avg Daily Trucks	18	52	39	40	44

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	May 2015	June 2020	July 2020	Aug. 2020	Sep. 2020
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85th % Speed	29.9 mph	29.0 mph	29.0 mph	29.0 mph	29.0 mph
% over 25 mph	54.7%	45.6%	46.6%	44.9%	43.4%
% over 30 mph	16.4%	11.7%	12.9%	12.2%	11.8%
% over 35 mph	3.8%	1.8%	2.3%	2.1%	2.4%
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% over 25 mph	54.7%	45.6%	46.6%	44.9%	43.4%
% over 30 mph	16.4%	11.7%	12.9%	12.2%	11.8%
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% over 30 mph	16.4%	11.7%	12.9%	12.2%	11.8%
% over 35 mph	3.8%	1.8%	2.3%	2.1%	2.4%
Avg Daily Trucks	23	52	39	40	44

Key Data – @ Bermuda Location 2

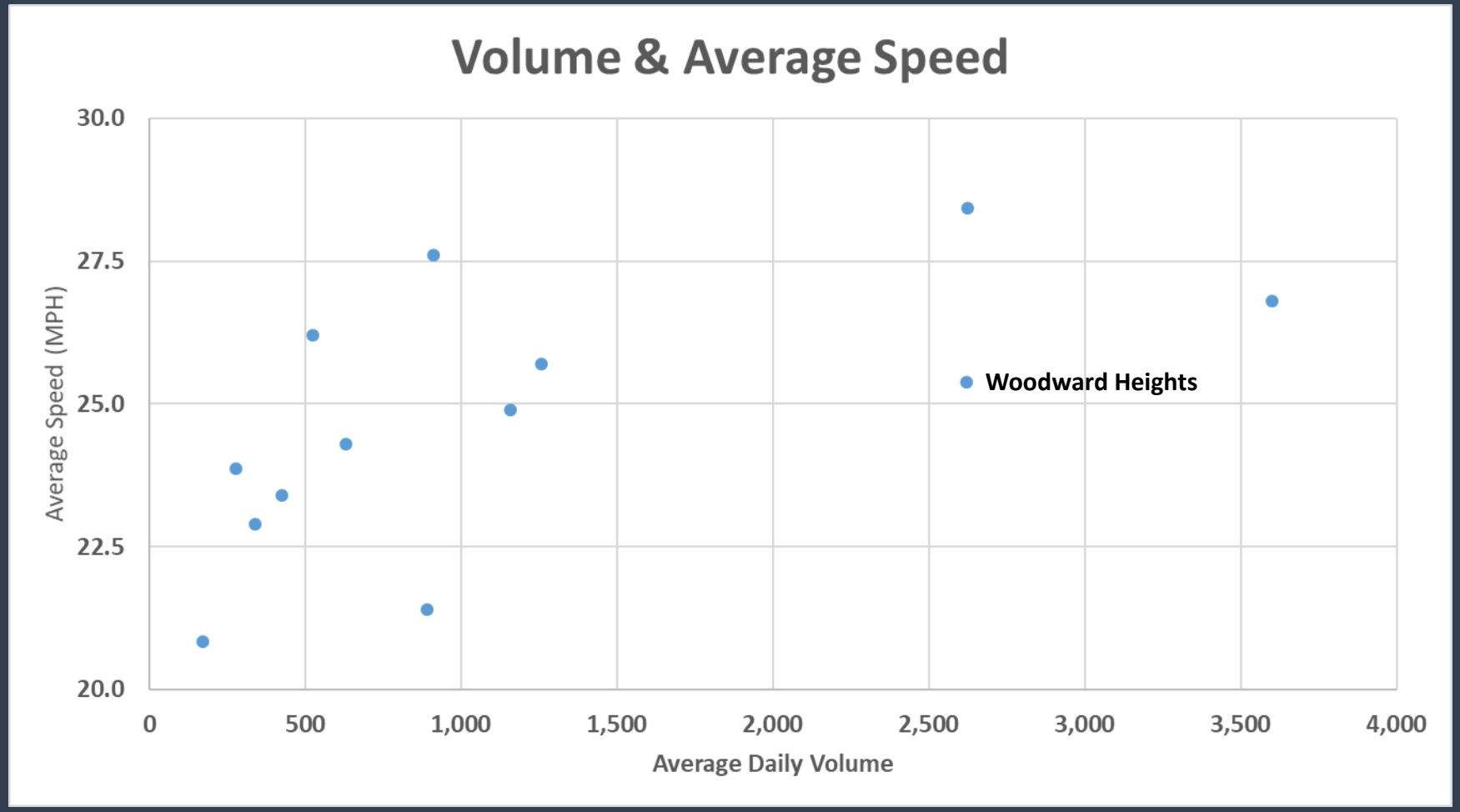
	July 30 – Aug. 5	Aug. 14-19	Aug 26-31
Average Daily Vehicles	2,319	2,707	2,703
Average Speed	23.5 mph	23.0 mph	22.7 mph
85th Percentile Speed	27.0 mph	27.0 mph	27.0 mph
% over 25 mph	29.8%	26.3%	23.5%
% over 30 mph	6.6%	6.4%	5.6%
% over 35 mph	0.9%	1.1%	0.9%

Key Data – Speed Hump Location 3

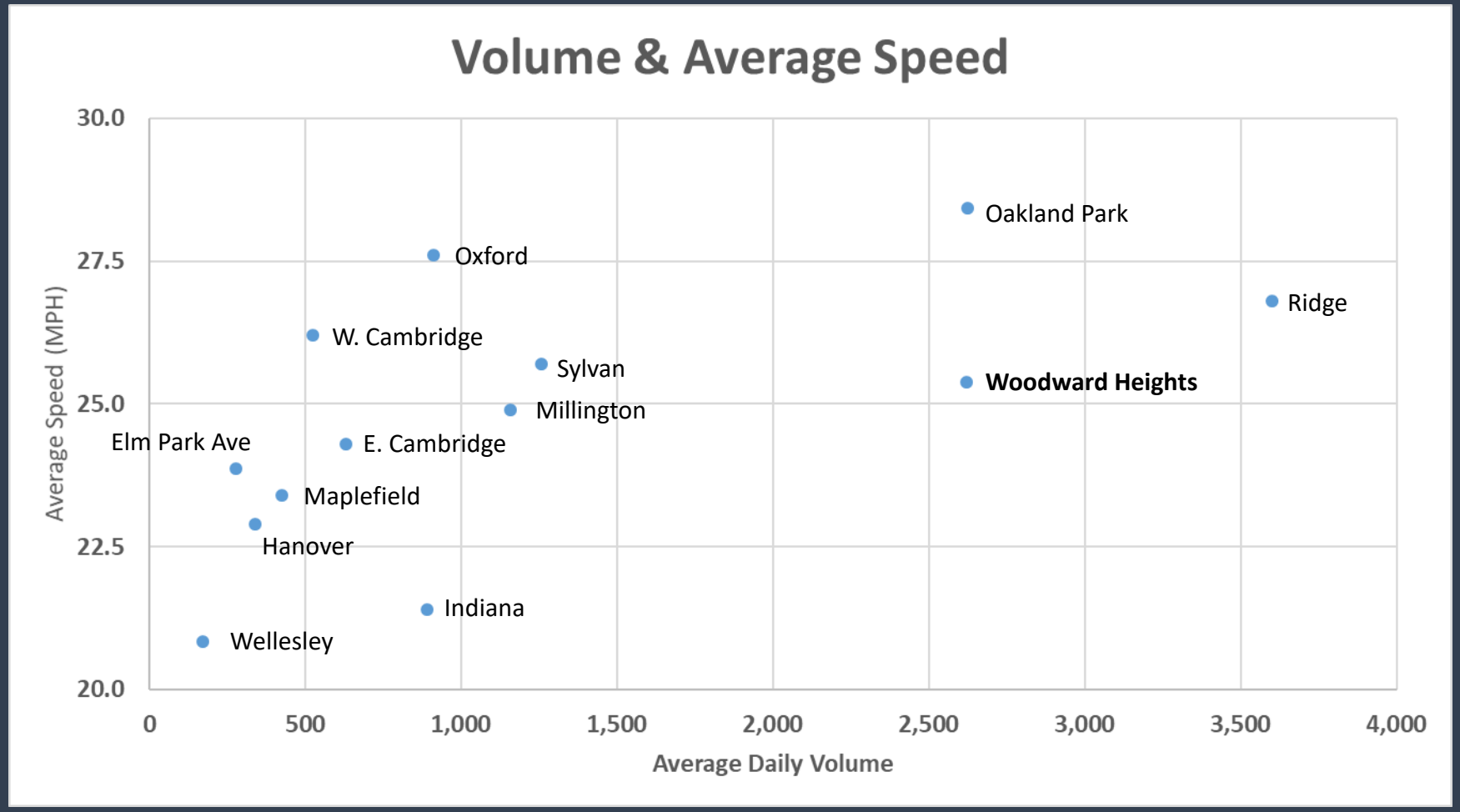
	150 ft. West	600 ft. West (pre)	600 ft. West (post)
Average Daily Vehicles	2,788	2,707	2,703
Average Speed	22.3 mph	23.0 mph	22.7 mph
85th Percentile Speed	26.0 mph	27.0 mph	27.0 mph
% over 25 mph	15.2%	26.3%	23.5%
% over 30 mph	3.8%	6.4%	5.6%
% over 35 mph	0.4%	1.1%	0.9%
Trucks per day	--	45	47

Comparative Data

Volume & Average Speed



Volume & Average Speed



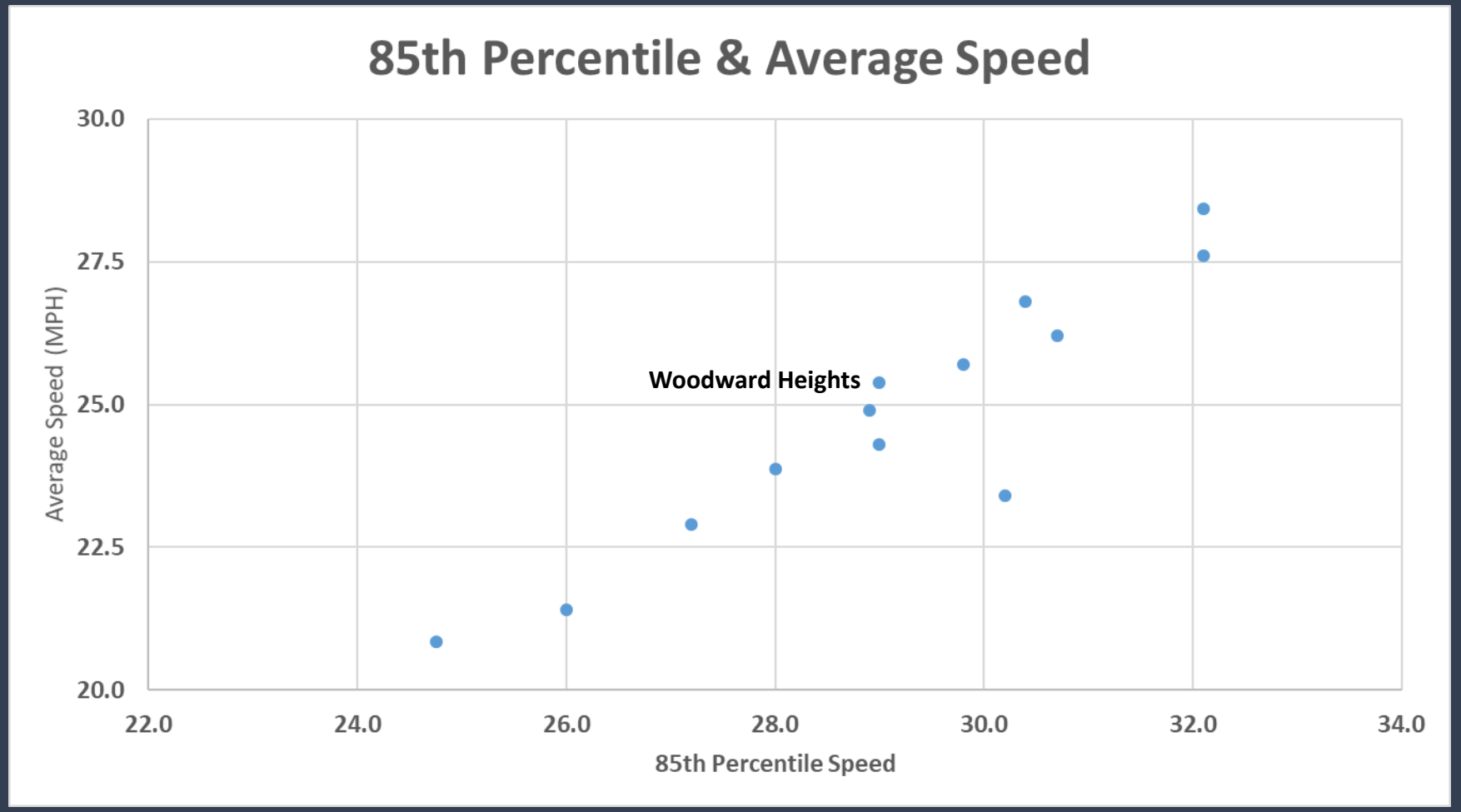
85th Percentile Speed

- The speed at or below which 85% of drivers travel on a given street
  - *Generally, the speed that drivers consider safe and reasonable*
- Design speed of street often equals observed 85th percentile speed

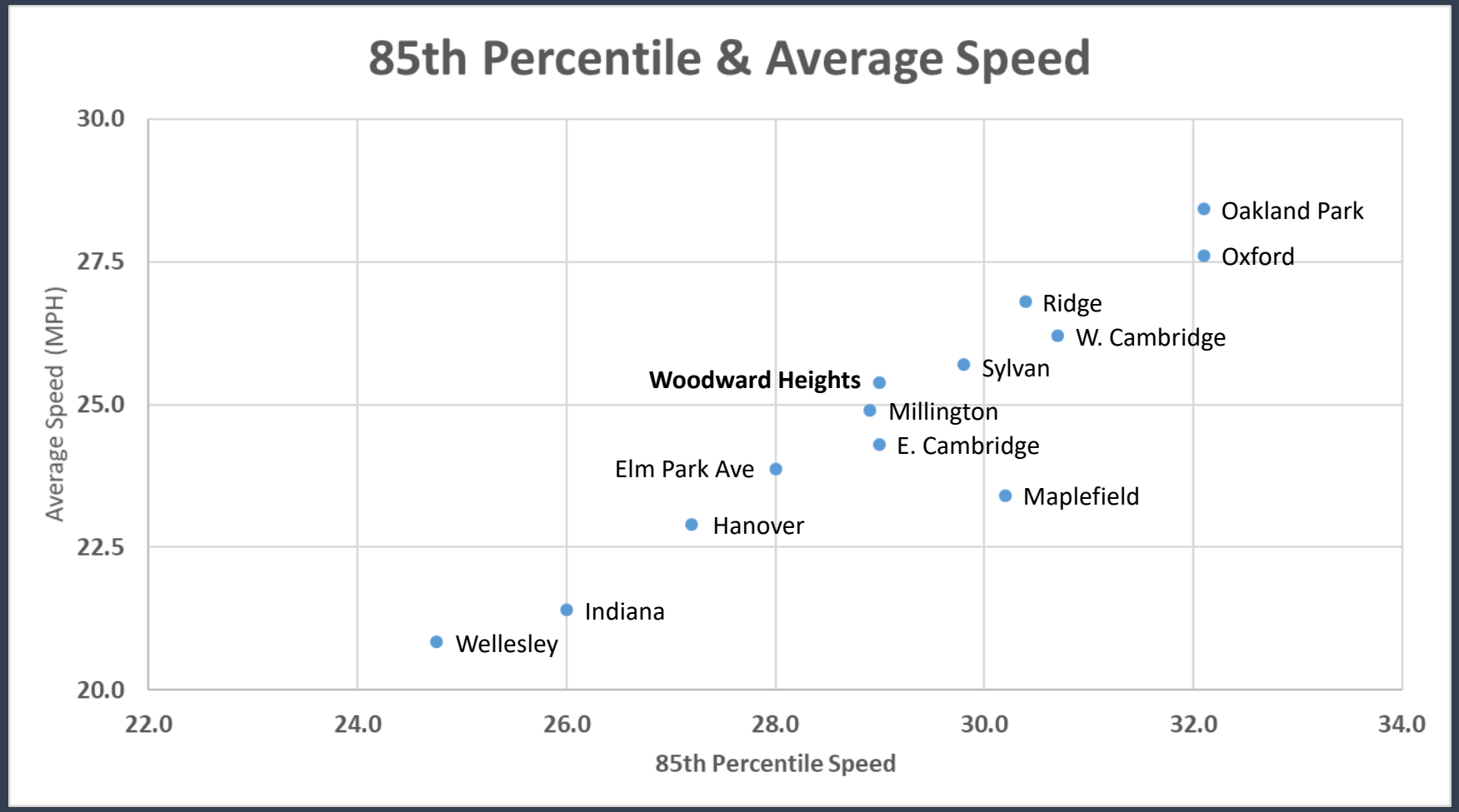
85th Percentile Speed

- Speed limits usually set based on 85th percentile speed
- Most residential streets have a 30 mph design speed, so 85% speeds are usually around 30mph
- Most streets have a design speed 5 mph above the target or posted speed
    - *The theory is that this builds in a "safety buffer" but it just induces higher speeds*

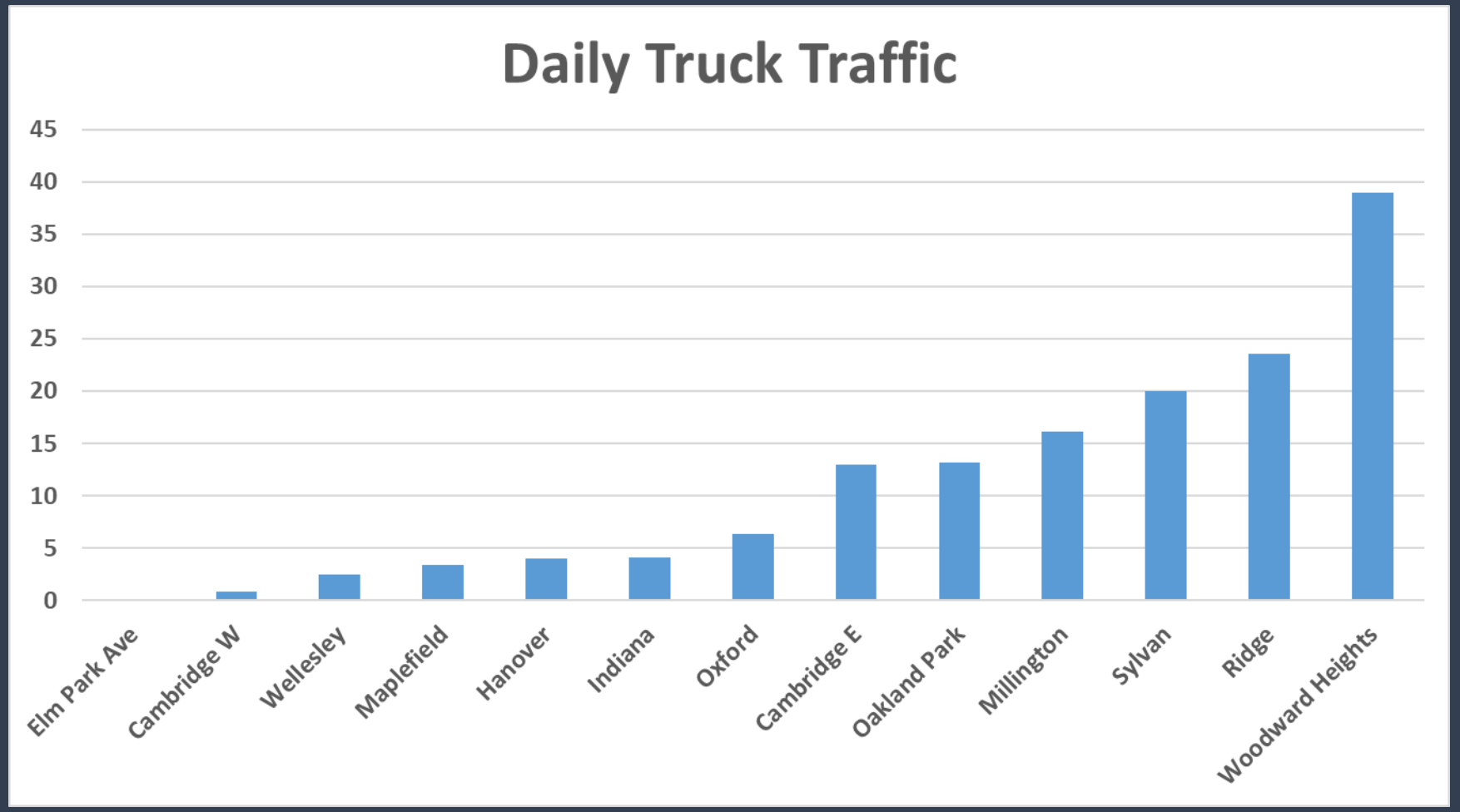
85th Percentile & Average Speed



85th Percentile & Average Speed



Trucks


Daily Truck Traffic
45
40
35
30
25
20
15
10
5
0
Elm Park Ave
Cambridge W
Wellesley
Maplefield
Hanover
Indiana
Oxford
Cambridge E
Oakland Park
Millington
Sylvan
Ridge
Woodward Heights

Truck Takeaways

- Truck volume is 2-3x higher than other collector streets in the City
- Trucks = vehicles longer than 20 ft. as large vehicles
  - *Delivery vans*
  - *Busses*
  - *Dump trucks*
  - *Garbage trucks*
  - *18 wheelers*

Traffic Calming Elements

Pinch Point

Pinch Point

- Estimate $30,000 to implement
- Survey results:
  - *55% Woodward Heights residents = YES*
  - *31% non-Woodward Heights residents = YES*

Indiana Bumpout

Indiana Bumpout

- Estimate $30,000 to implement
- Survey results:
  - *57% Woodward Heights residents = YES*
  - *34% non-Woodward Heights residents = YES*

Bermuda (N) Crosswalk

- Stop sign not warranted
- Traffic is operating safely
- Survey results:
  - *57% Woodward Heights residents = keep stop sign*
  - *53% non-Woodward Heights residents = keep stop sign*
- Residents have reported reduction in noise

Bermuda (S) Speed Hump

- Little measurable impact on speed or volume
- No deterrence of trucks
- Resident feedback:
  - *75% remove*
  - *25% keep*
  - *Noise and vibration is chief complaint*

Decisions

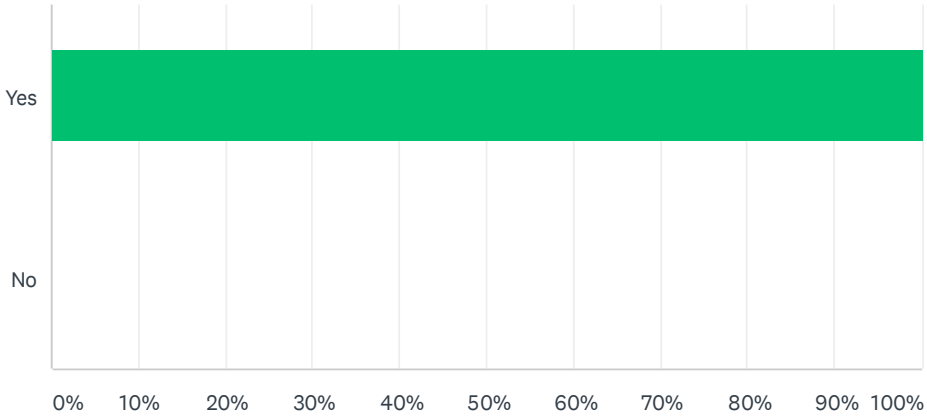
- Pinch point at Woodward alley
- Bump out at Indiana
- Bermuda (N) stop sign
- Bermuda (S) speed hump

Attachment 2

Woodward Heights Resident Survey Responses

Q1 Do you live on Woodward Heights?

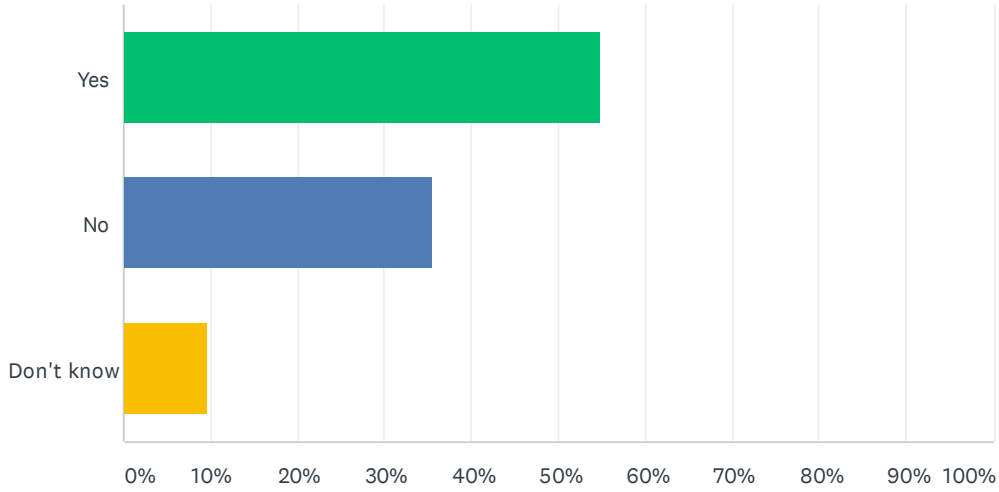
Answered: 32 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	100.00%	32
No	0.00%	0
TOTAL		32

Q2 Should we make the pinch point at the Woodward alley permanent?

Answered: 31 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	54.84%	17
No	35.48%	11
Don't know	9.68%	3
TOTAL		31

Q3 Please share any other comments, suggestions, or input about the pinch point by the Woodward alley.

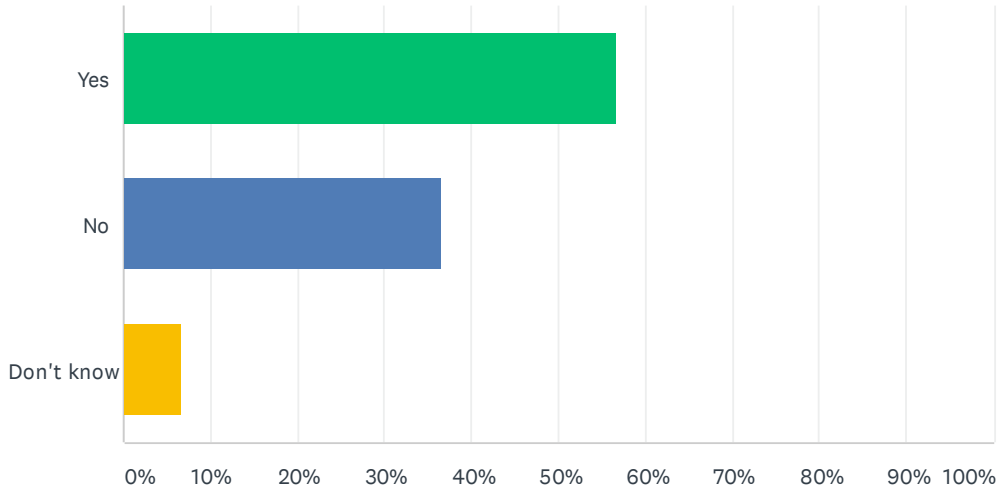
Answered: 16 Skipped: 16

#	RESPONSES	DATE
1	There is already a naturally existing pinch point in this location. By putting a tighter pinch point in this location you are effectively taking away a needed parking space from the front of the apartment building which creates the natural pinch point. In all actuality a traffic backup was caused by narrowing the street on the north side of Woodward Heights. I live across the street from the apartment building and am currently working from home. During my work day I notice the traffic situation through my front windows. This test was done during a time when traffic isn't at its normal level on Woodward Heights. Regeneration hasn't had its normal hours or as high of traffic volume as it normally does in a non-CoVID 19 world. Even with less traffic for Regeneration by putting in the pinch point there were often traffic backups on both Woodward Heights and Woodward. This was especially evident during the hours of 4-7pm. And made worse when there was a traffic stoppage and then restart due to trains. Basically it created a one-way street at that point and the individuals heading west on Woodward Heights would completely block off the eastbound Woodward Heights traffic backing this traffic up onto Woodward. Additionally, the stop sign located at Woodward Heights and Indiana greatly slows the traffic on this this leg of Woodward Heights.	8/28/2020 9:12 AM
2	I suggest the pinch point option should only encroach on the road from the south side and use the natural split line of the road as a communicator for drivers to share the space. The temporary curbs on both sides seem to introduce anxiety as drivers approached simultaneously.	8/21/2020 11:32 AM
3	Pinpoints can work, especially if they are accompanied by STOP SIGNS. At the moment, the pinch points are encouraging cars to race through the intersection in a bid to avoid cars coming from the other direction. The landscaping must be maintained and appropriate for an upscale suburb.	8/20/2020 9:29 AM
4	I felt that many did not slow down or move over when driving through here, and I often felt less safe driving through. I like the idea of slowing traffic, but don't know that I saw that during the test.	8/18/2020 3:41 PM
5	The pinch points look large in the picture & appear to make it only one lane. If they were smaller, I would maybe be okay with them.	8/17/2020 7:56 PM
6	Pinch point at this location causes west-bound traffic on Woodward Heights to shift over too far towards the center of the street, which greatly impedes traffic flow from Woodward to Indiana, and actually causes a backup onto Woodward.	8/17/2020 4:38 PM
7	how do you stop the big trucks from coming down the street, from the cut through off Horton?	8/14/2020 7:37 PM
8	I have noticed near the pinch points, cars slow a lot. Long term I think it will help.	8/14/2020 12:55 PM
9	Only at beginning (off Woodward Ave & possibly at the end of Woodward Heights (Pleasant Ridge) - NOT in between!	8/14/2020 10:24 AM
10	Please put back the stop sign	8/13/2020 7:32 PM
11	Ironically, as I was opening my letter for the survey, the company who installed the temp traffic calming items ran through the stop sign at WWD HTS and Indiana. It almost caused an accident with another car. Please install a sign that says "STOP SIGN AHEAD" or "AREA MONITORED BY POLICE SURVEILLANCE, and/or NO TRUCKS ALLOWED." Speed limit sign of 25 miles would be helpful. Feel free to live at my house for one week before you decide on any changes. The removal of the stop sign at WWD HTS was discussed 23 years ago. I have lived on WWHTS for 25 years and am person screaming at drivers yelled who blow the stop sign speeding or reading their texts. Lastly, please ask the PR Police Chief and his officers to be participate in the ZOOM Meeting on SEPT 8.	8/13/2020 7:29 PM
12	People come off the turn from Woodward going too fast. Going to be a nightmare with people hitting the permanent pinch point imo	8/13/2020 7:15 PM
13	They are dangerous for cyclists who have to bike around them and cars do not pay attention	8/13/2020 6:41 PM
14	The corner of Woodward and Woodward Hgts. is already a total nightmare - with retail, an apartment building, funerals, bus stop, etc. We MUST be able to get off of Woodward onto our street and narrowing at that point would simply back things up more.	8/13/2020 11:44 AM
15	This experiment DID NOT work- the speeds remained the same. Please put the darn stop sign back. We appreciate the thought of this experiment, but the stop sign worked just as well if not	8/12/2020 8:50 AM

	better. This test project makes me want to put my house on the market and leave pleasant ridge - please undo the mistake as soon as possible.	
16	This project has been a major pain and already a headache. As someone who lives right by what used to be the stop sign at Bermuda and Heights, bikers are now going onto the sidewalk because they have been pushed off the road. It is not safe to cross the street with Cars going much too fast/unpredictable to feel comfortable at the former stop sign. As a result, you wait until traffic goes by or cross at another spot without a crosswalk. Likewise, pulling out of your driveway with cars flying down the street...good luck. I am quite unhappy already about the removal of the stop sign. If you make it permanent I will be very, very unhappy. We are new to the neighborhood and have recently put in a lot of work on our house. It sounds silly but we are regretting our decision to move here. Dogs, kids are much more at risk with cars being unpredictable and going much faster. Some obey and go slower but many are flying through to get through the calmers and why not? There is no way of patrolling them to stop. If the speeds are unchanged why not make it safer for pedestrians/walkers/people that live on the street? Why not add another stop sign at the other Bermuda/heights corner by the liquor store? That way there will be back-to-back-to-back stop signs as you know people will go slower, use another route and it will be safer for those using the road for other purposes. A speed hump wouldn't be better either as cars will still go fast and we'll have to hear even more each time they go through. Just put the stop sign back. NOBODY has anything good to say about this that lives on the street. You've lowered the values of our homes and made it more dangerous for what??	8/10/2020 3:48 PM

Q4 Should we make the bumpout on the south side of Woodward Heights at the Indiana intersection permanent?

Answered: 30 Skipped: 2



ANSWER CHOICES	RESPONSES	
Yes	56.67%	17
No	36.67%	11
Don't know	6.67%	2
TOTAL		30

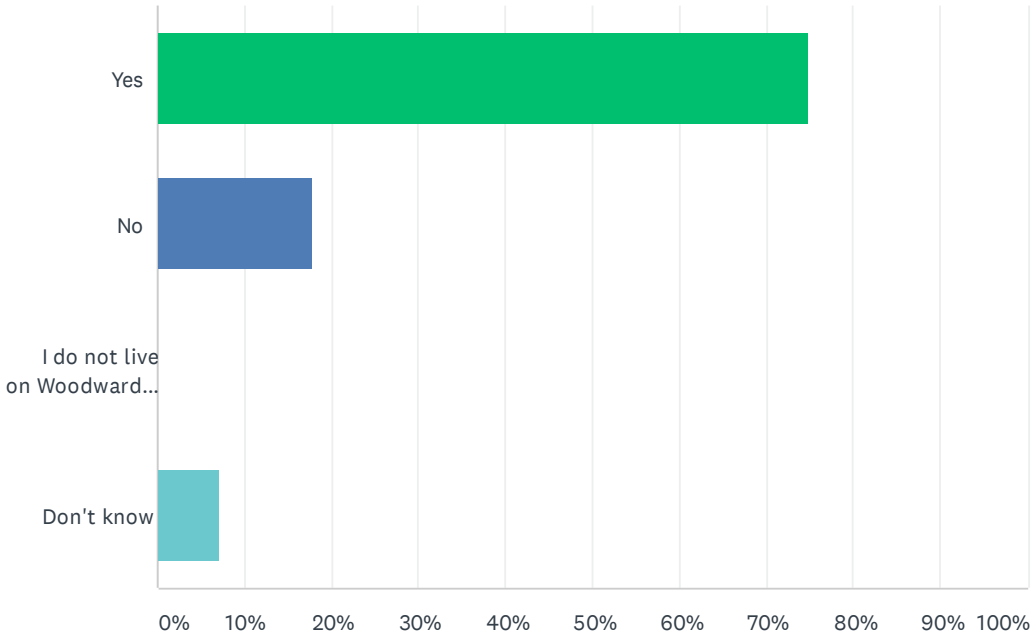
Q5 Please share any other comments, suggestions, or input about the bumpout at the Indiana intersection.

Answered: 13 Skipped: 19

#	RESPONSES	DATE
1	The one at Woodward Heights and South Bermuda has not made any difference.	8/23/2020 6:51 PM
2	We approve of another pinch point at the Indiana section. It would be made more effective it was accompanied by STOP SIGNS at the Bermuda intersection. That way, drivers on Woodward Heights would know that they need to slow down and stop at the Indiana intersection because they had to stop at the Bermuda section. We have witnessed drivers blowing through the stop sign at the Indiana intersection because they no longer had a stop sign at the Bermuda intersection. Again, the city must commit to taking care of this new landscaping. This is not the responsibility of local homeowners.	8/20/2020 9:30 AM
3	I really didn't see a difference here. To me it has the same effect as when a car is parked there, which seems to be frequently?	8/18/2020 3:42 PM
4	Terrible! Not enough room for two cars to pass each other. Removal of stop sign was good, pinch point was AWFUL	8/17/2020 8:01 PM
5	This bump-out caused east-bound traffic to preemptively shift to the center of the road after turning onto Woodward Heights from Woodward. Caused major difficulties at stop sign at Indiana.	8/17/2020 4:41 PM
6	Maybe an optical illusion crosswalk? https://youtu.be/R1SQcXhqefs	8/14/2020 5:02 PM
7	Please think about the bike lane	8/13/2020 7:32 PM
8	Ridiculous idea	8/13/2020 7:17 PM
9	I think consideration should be given to removing the stop sign as well. It is only four more houses to Woodward Ave. for westbound traffic. Also, the temporary bump out on the south side of the street seemed to prove problematic for vehicles heading south on Indiana and turning east onto Woodward Heights, particularly when another car was sitting at the stop sign heading westbound.	8/13/2020 6:47 PM
10	Stop signs would be more effective	8/13/2020 6:42 PM
11	Forget the data - eye witnesses (including myself) know a bump out made it much more dangerous. The test is over - get rid of that junk and put the stop signs back.	8/13/2020 11:45 AM
12	Please stop narrowing the streets and cutting into bike lanes. this is unsafe and unfriendly to bikers and pedestrians	8/12/2020 8:51 AM
13	Just leave it as a stop sign....	8/10/2020 3:48 PM

Q6 If you live on Woodward Heights, have you noticed a difference in traffic with the stop signs being removed?

Answered: 28 Skipped: 4



ANSWER CHOICES	RESPONSES	
Yes	75.00%	21
No	17.86%	5
I do not live on Woodward Heights	0.00%	0
Don't know	7.14%	2
TOTAL		28

Q7 What difference in traffic have you noticed (other than cars no longer stopping at the intersection)?

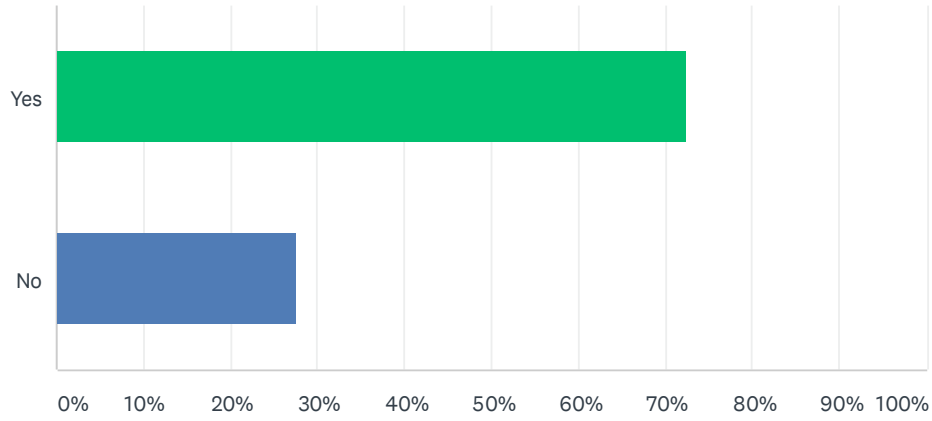
Answered: 26 Skipped: 6

#	RESPONSES	DATE
1	It seems to flow better.	8/28/2020 9:16 AM
2	Confusion. People are stopping for no apparent reason when they come upon the "stop for pedestrian" signs. Confusion may cause drivers to not focus on traffic.	8/25/2020 1:17 PM
3	I think it’s hard to tell, traffic volumes in general seem lower and I think it’s due to covid- less people working outside of the home and school isn’t in session now. Bad time to do a study. But this street is too busy for a residential street, regardless of the stop sign. Heavy traffic, trucks, noise, and speed are all issues.	8/24/2020 10:28 PM
4	While cars and trucks slowed down going thru the pinch they drove faster while approaching and after passing through the pinched intersection.	8/24/2020 9:20 AM
5	Nonce, except that many cars/trucks do not slow down for the speed bump at the east end of the street.	8/23/2020 7:02 PM
6	Traffic slowing at the temporary pinch point	8/21/2020 11:38 AM
7	Some drivers are driving much faster through the Bermuda intersection are carrying the higher speeds into the rest of Woodward Heights. While the data show that speeds have "remained the same," this can be accounted for by the drivers who still expect to encounter a stop sign at Bermuda and are cautiously slowing down for the expected stop sign. If the experiment is made permanent, drivers will gradually become aware that they don't need to stop at the intersection and increase their speeds through the area -- as more reckless drivers have already done. Please give us the specific correspondence with MDOT officials who suggested that this is a necessary change. Also there's no indication that people are slowing down. I don't see much slowing down, some speeding up at key rush hours. As you know, Nine Mile Road changed its traffic patterns by installing barriers and reducing lanes. Obviously, as I was told by a Ferndale police officer, Woodward Heights is a new cut through for Nine Mile drivers at rush hour who wish to avoid those choke points. So again, taking away two stops signs only makes it more convenient for those who want to avoid Nine Mile Road now.	8/20/2020 9:50 AM
8	Auto speeds have increased. Backing out of my driveway is always difficult since I know traffic coming from either direction will not stop. Once they come over the RR Tracks it is a race to Indiana. They will slow if someone is crossing in the cross walk but that is not assured. At least with the stop sign we knew they would stop now it is a waiting game to be sure both directions are clear before backing out onto the street.	8/19/2020 5:40 PM
9	Did not notice a difference.	8/18/2020 3:43 PM
10	Much slower traffic with people not “racing” between stop signs.	8/17/2020 8:03 PM
11	Traffic is WAYYYYYY worse following the removal of the stop sign. Most west-bound vehicles now assume there is no stop sign at Indiana, and we have seen MANY drivers blow through the intersection without stopping. Speed has also increased.	8/17/2020 4:56 PM
12	Cars traveling faster then posted limit	8/16/2020 12:40 PM
13	I think traffic has sped up a lot. From Hilton to Woodward, all you have is one stop sign, which is crazy.	8/15/2020 3:56 PM
14	Better traffic flow	8/15/2020 9:59 AM
15	a lot of cars still stop, I think it will take time for everyone to get used to stop sign gone. when they do traffic will become higher speeds. My home is 58 woodward heights. A lot of drivers do more then 25. I DO like the sign gone. I thought it would take long for me to get out of my driveway, so far I have had only a few times it took more then 4 min.	8/14/2020 7:54 PM
16	excessive speeding	8/14/2020 5:05 PM
17	MOST of all, the NOISE level has dropped dramatically. Most cars slow for the pinch there, but there are just a few that still rip threw. They were the ones running the stop sign in the past.	8/14/2020 1:05 PM
18	Total confusion, even MORE speeding than before, dangerous situations!	8/14/2020 10:41 AM
19	People are going even faster. It is much harder to back out if driveway	8/13/2020 7:35 PM

20	Please cite the law indicating the stop sign should be removed and post for residents to read at the meeting.	8/13/2020 7:32 PM
21	None	8/13/2020 6:48 PM
22	Cars still stop sometimes because they are used to it. Traffic goes even faster than before.	8/13/2020 6:45 PM
23	Cars are speeding and coming very, very close to hitting one bike and/or pedestrian after another.	8/13/2020 12:04 PM
24	Faster speed of traffic and more cars on the road. Please put stop sign back.	8/12/2020 8:53 AM
25	More consistent making it harder to back out of the driveway safely.	8/10/2020 4:25 PM
26	Cars don’t stop, some do but many fly through. The cars tail each other to get through. It is not great pulling out of driveway. Cars parked on street are more at risk of being hit as cars will swerve to get out of way.	8/10/2020 3:50 PM

Q8 Have you crossed Woodward Heights on foot at Bermuda since the stop signs were removed?

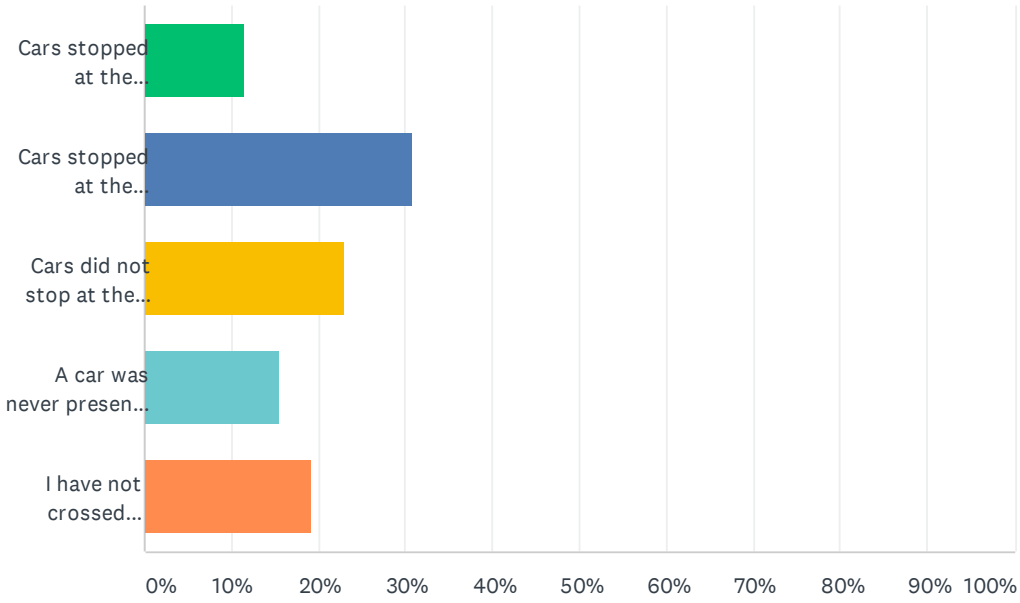
Answered: 29 Skipped: 3



ANSWER CHOICES	RESPONSES	
Yes	72.41%	21
No	27.59%	8
TOTAL		29

Q9 When you were crossing Woodward Heights at the Bermuda crosswalk:

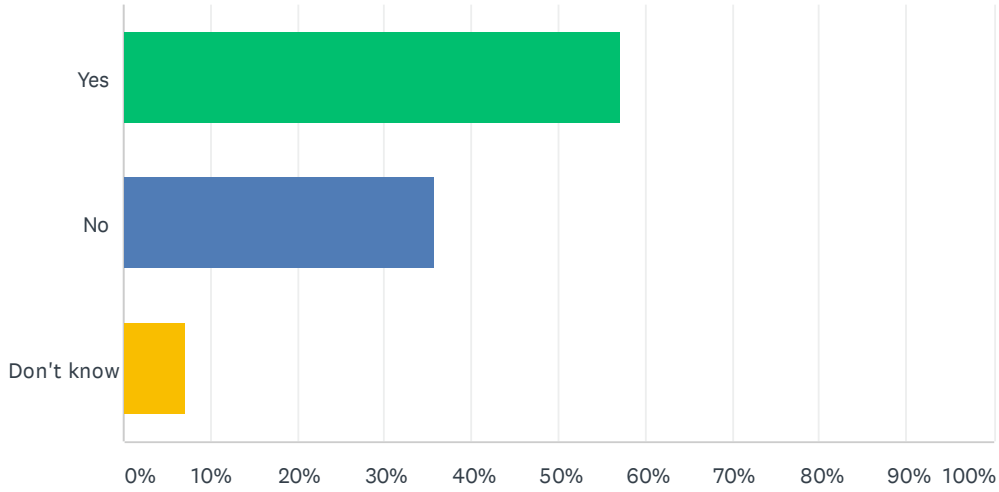
Answered: 26 Skipped: 6



ANSWER CHOICES	RESPONSES	
Cars stopped at the crosswalk for me all of the time	11.54%	3
Cars stopped at the crosswalk for me some, but not all of the time	30.77%	8
Cars did not stop at the crosswalk for me	23.08%	6
A car was never present when I was crossing Woodward Heights at Bermuda	15.38%	4
I have not crossed Woodward Heights on foot while the signs have been up	19.23%	5
TOTAL		26

Q10 Should there be stop signs on Woodward Heights at Bermuda?

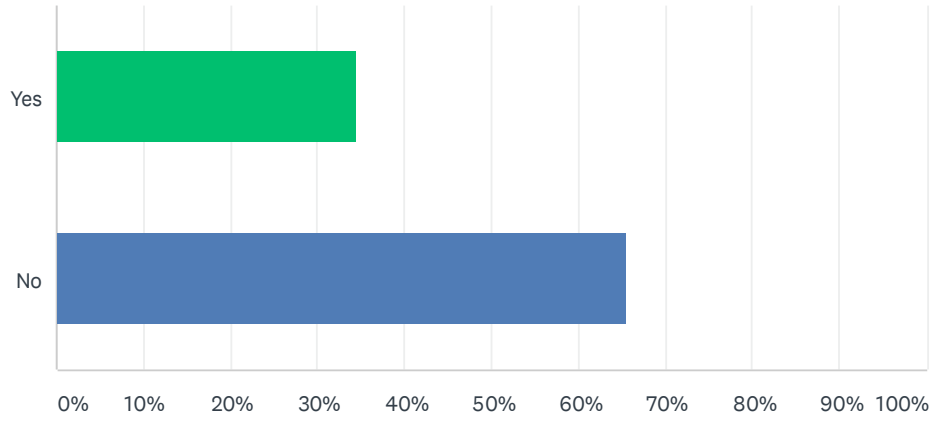
Answered: 28 Skipped: 4



ANSWER CHOICES	RESPONSES	
Yes	57.14%	16
No	35.71%	10
Don't know	7.14%	2
TOTAL		28

Q11 Do you live on Woodward Heights near the Bermuda intersection - between houses 47/48 and and 62/63?

Answered: 29 Skipped: 3



ANSWER CHOICES	RESPONSES	
Yes	34.48%	10
No	65.52%	19
TOTAL		29

Q12 Please share any other comments, suggestions, or input about the Woodward Heights and Bermuda intersection.

Answered: 24 Skipped: 8

#	RESPONSES	DATE
1	Why are we removing the stop sign at Bermuda. Do you not believe that the existence of a real stop sign is a negative ?!?	8/25/2020 1:18 PM
2	I live at 57 WH and have a child. This street is a constant worry. I support speed bumps and anything to reduce traffic volumes and speed	8/24/2020 10:29 PM
3	The entire street needs to be narrowed. At least as narrowed as 9 mile and Ferndale's portion of WH. All trucks need to be stopped. Over 3 trucks per hour during the day on a street marked "No Trucks" is ridiculous.	8/24/2020 9:20 AM
4	If there was a three-way stop at the east Woodward Heights/Bermuda (Ferndale) intersection, this would help slow the traffic and perhaps make it unnecessary for stop signs at the west Bermuda/WH intersection. The traffic continues to speed through the east intersection and does not stop for people, children, etc. at the crosswalk, even with the new bump out, walk sign and now the additional speed bump. This has always been a dangerous and very busy intersection. More traffic control, especially coming into the city from Ferndale, would be greatly appreciated by all residents on Woodward Heights, especially those on the eastern end of the city.	8/23/2020 7:02 PM
5	The artificial humps may slow traffic in a similiar way the artificial pinch point did. The humps do introduce noise pollution as every truck with a trailer crashes over it	8/21/2020 11:38 AM
6	This claim about the stop signs needing to be taken out under "state law" is highly misleading. I have called MDOT about this so-called law and MDOT officials didn't know what I was talking about. I sense this is more about government guidances and complex factors involved in deciding whether stop signs should be there. The stop signs worked in slowing speeds AND creating a safe intersection for pedestrians to cross. On at least two occasions during the experiment, a car nearly hit me and my dog as we were preparing to cross Bermuda because drivers weren't paying attention and didn't pick us up in their peripheral vision. They are carrying their speed into the intersection before making a left or right turn on to Bermuda and are oblivious to pedestrians -- at least on those two occasions. On most occasions as we stood getting ready to cross over Woodward Heights from Bermuda, many cars did not slow down and stop because of our presence. Some were nice and stopped, but it felt like they were anticipating the presence of the old stop signs. We did not feel like being guinea pigs and stepping out into the intersection to see if cars going 30 miles per hour were going to stop in time. In addition, we think the commission should seek the perspective of the police chief and his patrol officers. They have monitored the Indiana and Bermuda intersections for many years and would have invaluable insights into the traffic behavior. They have been monitoring the intersections occasionally during the experiment, and their insights should be taken into consideration by commission members. Pleasant Ridge is supposed to be a "walkable community." Woodward Heights has become a much busier street with trucks and cars because of surrounding growth in Ferndale and a traffic calming shift on 9 Mile that has encouraged drivers to change over to Woodward Heights for what is perceived to be a quicker get through. The commission should KEEP THE STOP SIGNS at the Bermuda intersection AND install the pinch points to slow speeds, increase the walkability of the neighborhood and increase the safety of pedestrians. There has been a noticeable lull in traffic during the summer. When schools start in the fall and other businesses rev up, traffic is going to pick up on Woodward Heights. The pinch points and THE STOPS SIGNS are critical to making the Woodward Heights neighborhood more safe than it would be WITHOUT STOP SIGNS. We appreciate our police department and are thankful for their service.	8/20/2020 9:51 AM
7	I do not understand why you think a stop sign at Bermuda is not required but a stop sign is needed at Indiana. It may not be bad now but as soon as people realize there is no stop sign and no one is in the crosswalk, speeds will increase. It has happened before. It is also difficult coming south on Bermuda to stop at Woodward Heights to turn onto Woodward Heights you have to be sure both sides are clear so you can pull out onto Woodward Heights. I am sure eventually there will be an increase in accidents at this intersection.	8/19/2020 5:40 PM
8	No other comments.	8/18/2020 3:44 PM
9	Please do not bump out or pinch the street. It is already barely wide enough for two cars. Removal of stop sign was smart.	8/17/2020 8:03 PM
10	I think we should permanently remove the Bermuda stop sign. There is no need for it. People typically speed in between that stop sign and the one further up the street. Now I see people	8/17/2020 7:58 PM

	going a sustained speed.	
11	1) This is an absolute farce of a Calming Survey. There were no recording devices installed on our street to measure the number of vehicles during this period, the speed, or the actual intersections in question. One guy coming out with his laptop on the hood of his car for a half hours does NOT equal a traffic survey. 2) The City Manager has not cited the State law that says this Stop sign should be removed. 3) The Pleasant Ridge police do not support the removal of the Bermuda stop sign, nor were they consulted about this potential step. 4) As previously indicated from Woodward Heights resident protests when this was proposed last year, the citizens who live on this street do not support this stop sign removal. 5) The Bermuda crossing is the main crossing for Pleasant Ridge children attending the Ferndale Middle School one street south of Woodward Heights. The stop sign needs to stay in place for their safety. 6) The number of vehicles disregarding the stop sign at Indiana has GREATLY increased since the removal of the Bermuda stop sign. This includes the City's own truck when it was removing the "calming materials." 6) If the Bermuda stop sign is removed, the Indiana sign becomes the only stop sign between Woodward and Hilton. 7) The improvement the Woodward Heights residents want to see is the removal of trucks cutting through on our street. KEEP THE BERMUDA STOP SIGN.	8/17/2020 4:57 PM
12	Definitely have noticed a difference since stop sign removed. Harder to safely cross street.	8/16/2020 12:41 PM
13	I'd like to see the stop sign put back, along with another one down by the party store. I also would like to have 3-4 speed bumps. And most of all, id like to see the truck traffic disappear, or at least ticket the ones that don't belong on the street.	8/15/2020 3:56 PM
14	figure out so semi trucks cant come down street	8/14/2020 7:55 PM
15	maybe an optical illusion crosswalk? https://youtu.be/R1SQcXhqefs	8/14/2020 5:05 PM
16	I am happy with it gone! It is so much quieter in my house. Who would have thought a stop sign would cause so much noise. Also, now I don't need to guess if a car is going to blow threw the sign when backing out too. PLEASE do not put it back. Howard, 60 Woodward Heights Blvd.	8/14/2020 1:05 PM
17	The whole "traffic calming" project has been (in my opinion) turned into a "pissing" contest (excuse the phrase) between city manager & residents of WHB. It has gone on far too long. I believe that we all have the same goal in mind. Safety! WHB CANNOT be compared to Ridge Rd. or any other street in P.R. - has its own issues & uniqueness. The idea of WHB being a "1/2 mile rd. VS residential street" is not unique to P.R. Lincoln, Catalpa, Marshall, etc are all nearby "1/2 mile rds AND residential streets. They ALL have monitoring, stop signs, lights, etc. In my opinion, we should make WHB a much less desirable & difficult route for undesirable traffic by using ALL means available, I.e. put the light back up (on P.R. side of Bermuda & WHB-Ferndale end), keep stop signs at ALL intersections on the street, post signs and do the best that we can for monitoring. Placing blame & finger pointing are not going to get anything done except postpone any resolution. None of these suggestions are foolproof or will satisfy everyone, but we will have the law behind any undesirable traffic, when need arises. We pay taxes for a wonderful, safe, desirable community and i for one would like to keep it that way.	8/14/2020 10:41 AM
18	I live near the corner store and I find myself having a harder time backing out. With cars parked on the street it makes seeing oncoming traffic very difficult to see and with that stop sign being gone there is nothing slowing down traffic. Even if they rolled through the stop sign they were maybe going 25 mph, now it is like 30/35 mph.	8/13/2020 7:35 PM
19	I believe the traffic calming company has a ties to a PR CIty Council person(s) or official, and they would profit from this project. If you decide to remove the sign, hire another company and prove me wrong.	8/13/2020 7:33 PM
20	The traffic on this street is constant, and cars speed through the first Bermuda intersection (at Ferndale) and keep on going. It is dangerous to pedestrians, runners and cyclists.	8/13/2020 6:46 PM
21	When this subject first arose, we were told that Ferndale had agreed to put stop signs at its WHB/Bermuda corner - at least during the test. Why didn't that happen? It may have helped. The test, however, proved what all of us already knew - we need the stop signs at Bermuda and WHB. This street has been profoundly dangerous since the test began and now we will have to live through a Dream Cruise weekend without the signs - please do not pretend there will be no Cruisers - and the danger will increase. The City wanted to run some tests but it is now time for sanity to prevail. Finally, this particular sign is NOT against Michigan law, which	8/13/2020 12:04 PM

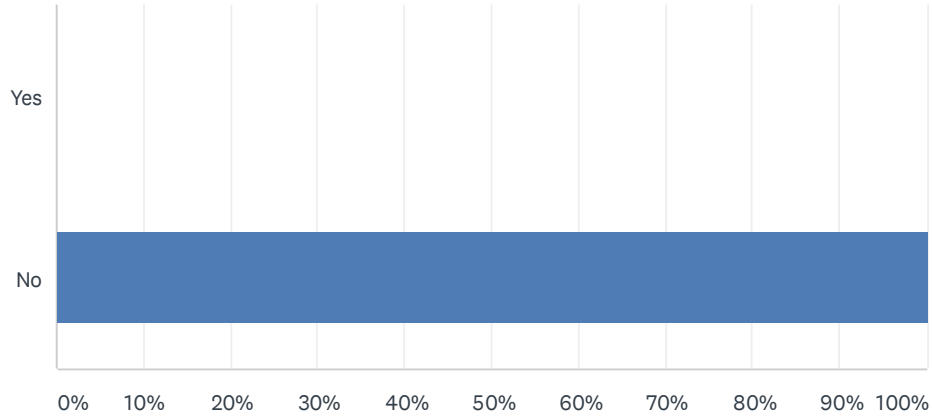
	provides plenty of discretion for when to use a stop sign - including controlling cross traffic that impacts the highest pedestrian crossing. Put them back.	
22	Put the stop sign back now and if anything, add more signs and a speed hump. Please and thank you.	8/12/2020 8:53 AM
23	Like to see a stop sign or other traffic calming at Woodward Hgts and Burmuda at the Ferndale- Pleasant Ridge Border.	8/10/2020 4:25 PM
24	This project has been a major pain and already a headache. As someone who lives right by what used to be the stop sign at Bermuda and Heights, bikers are now going onto the sidewalk because they have been pushed off the road. It is not safe to cross the street with Cars going much too fast/unpredictable to feel comfortable at the former stop sign. As a result, you wait until traffic goes by or cross at another spot without a crosswalk. Likewise, pulling out of your driveway with cars flying down the street...good luck. I am quite unhappy already about the removal of the stop sign. If you make it permanent I will be very, very unhappy. We are new to the neighborhood and have recently put in a lot of work on our house. It sounds silly but we are regretting our decision to move here. Dogs, kids are much more at risk with cars being unpredictable and going much faster. Some obey and go slower but many are flying through to get through the calmers and why not? There is no way of patrolling them to stop. If the speeds are unchanged why not make it safer for pedestrians/walkers/people that live on the street? Why not add another stop sign at the other Bermuda/heights corner by the liquor store? That way there will be back-to-back-to-back stop signs as you know people will go slower, use another route and it will be safer for those using the road for other purposes. A speed hump wouldn't be better either as cars will still go fast and we'll have to hear even more each time they go through. Just put the stop sign back. NOBODY has anything good to say about this that lives on the street. You've lowered the values of our homes and made it more dangerous for what?? I am not arguing about the trucks b/c apparently they are to be patrolled. It is annoying they come through but the stop sign is a non negotiable. Just put it back.	8/10/2020 3:50 PM

Attachment 3

Non- Woodward Heights Resident Survey Responses

Q1 Do you live on Woodward Heights?

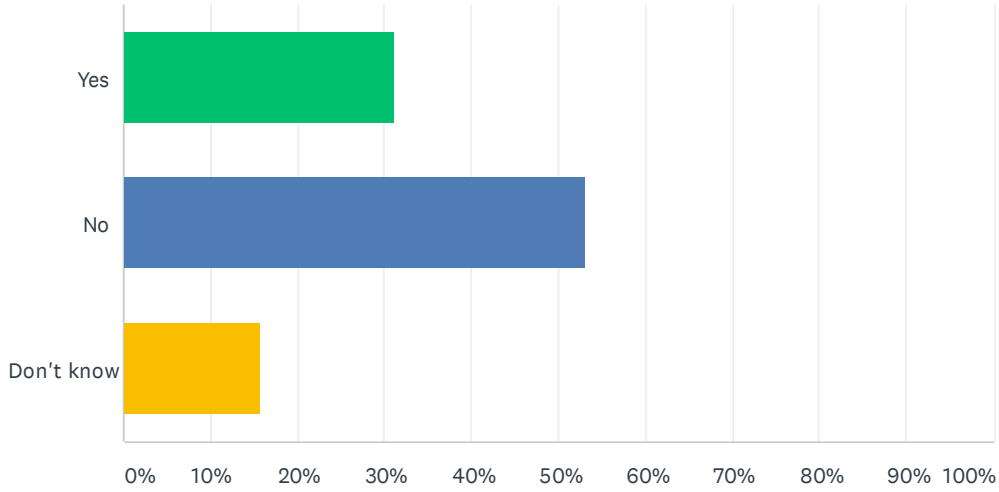
Answered: 38 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	0.00%	0
No	100.00%	38
TOTAL		38

Q2 Should we make the pinch point at the Woodward alley permanent?

Answered: 32 Skipped: 6



ANSWER CHOICES	RESPONSES	
Yes	31.25%	10
No	53.13%	17
Don't know	15.63%	5
TOTAL		32

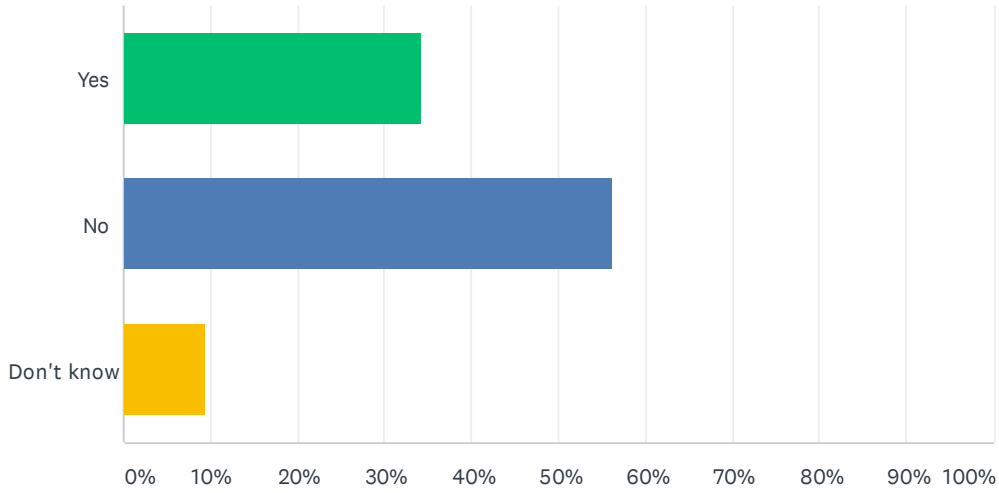
Q3 Please share any other comments, suggestions, or input about the pinch point by the Woodward alley.

Answered: 15 Skipped: 23

#	RESPONSES	DATE
1	Pinch points are Hard for bicyclists to maneuver.	8/27/2020 4:06 PM
2	The stop sign is safer in my opinion. I live right behind Woodward Heights so I'm very familiar with the area. I've seen confusion from drivings approaching because they're used to the stop sign but then don't see it and sort of don't know what to do.	8/24/2020 9:50 PM
3	Speeds were at or under the posted limit, no reports of serious crashes on Woodward Hts, no action necessary	8/24/2020 3:07 PM
4	The pinch point pushes bikers out into traffic, making potential dangerous circumstances.	8/15/2020 12:22 PM
5	I could be wrong, but I assume you're referring to the pinch point behind Ameriprise near Devonshire? The question is not very clear.	8/12/2020 10:59 AM
6	It’s already a very tight turn that requires slowing down to negotiate. Slowing it further could cause accidents on Woodward.	8/11/2020 1:13 PM
7	I think the test materials don’t fully help the residents understand the real impact this will have. It seems very effective.	8/11/2020 11:34 AM
8	It's harder to get 2 car's through the pinch point, so when 2 or more car's turn, it creates a traffic issue on Woodward	8/11/2020 4:20 AM
9	Sounds like it was a big waste of everyone’s time.	8/10/2020 11:14 PM
10	It should be slightly narrower and extend out from both sides of the street	8/10/2020 7:18 PM
11	Pinch points are not a substitute for a stop sign.	8/10/2020 5:22 PM
12	This was so scary for riding your bike. This is a bike route and where it got narrow cars did not care at all.	8/10/2020 4:40 PM
13	Stop signs work well. No need to keep wasting money in new ways to slow down traffic. If it is a huge problem, police writing tickets does wonders.	8/10/2020 4:34 PM
14	As a runner I had cars disobey pedestrian walk. Also, cars cut in at runners. Not enough space for bikes and runners.	8/10/2020 4:25 PM
15	I didn't come off of Woodward, I usually come in off of Hilton.	8/10/2020 3:15 PM

Q4 Should we make the bumpout on the south side of Woodward Heights at the Indiana intersection permanent?

Answered: 32 Skipped: 6



ANSWER CHOICES	RESPONSES	
Yes	34.38%	11
No	56.25%	18
Don't know	9.38%	3
TOTAL		32

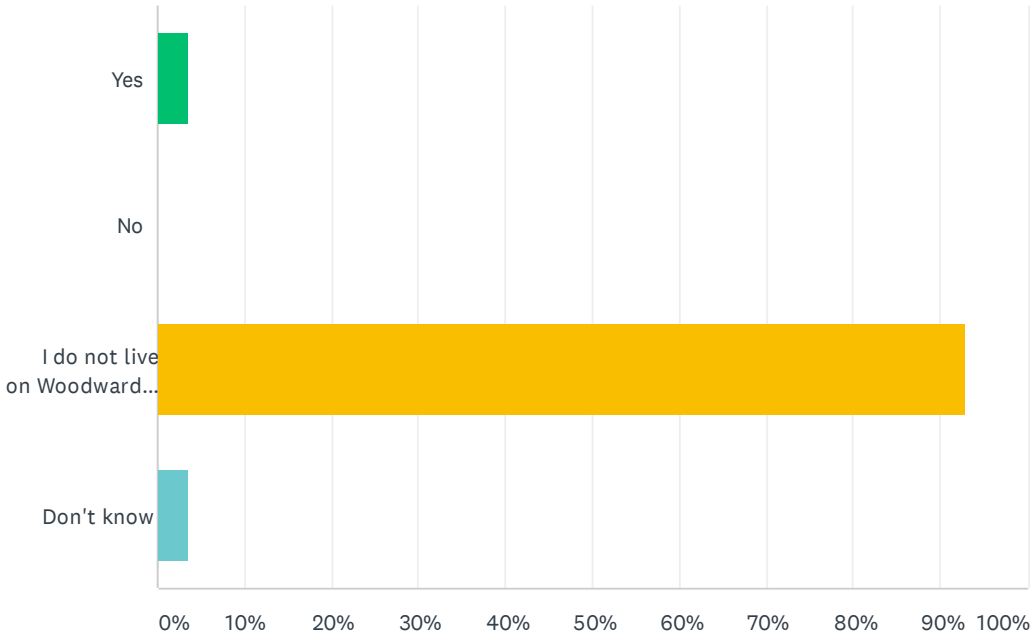
Q5 Please share any other comments, suggestions, or input about the bumpout at the Indiana intersection.

Answered: 14 Skipped: 24

#	RESPONSES	DATE
1	Please realize that bike usage would be impacted. I don't find crossing as a pedestrian a problem at Indiana and Woodward Heights. But I do like the idea of slowing traffic down going East off Woodard	8/27/2020 4:08 PM
2	36 feet? And this would knock it down to 27 feet? Please don't spend money where it's unnecessary.	8/24/2020 3:13 PM
3	The pinch point pushes bikers out into traffic, making potential dangerous circumstances.	8/15/2020 12:23 PM
4	In my opinion, this is an excessive, pointless project. If people are going to run stop signs, they are breaking the law. There should be more stop signs added to Woodward Heights. I'm using the example of Woodward Heights between Hilton near I-75.	8/12/2020 11:02 AM
5	It's far enough from Woodward to have safely slowed down. It reinforces the impression that you are entering a residential area where higher speeds are not appropriate.	8/11/2020 1:18 PM
6	I think it'll be very effective and helpful.	8/11/2020 11:35 AM
7	The intersections are becoming increasingly dangerous for drivers.	8/10/2020 11:15 PM
8	Cuts off the bike lane. Parked cars already constrict traffic a lot	8/10/2020 8:48 PM
9	Bump outs would ideally extend from both sides of the road. Add a raised crossing to make the crossing more visible to drivers and force traffic to slow down.	8/10/2020 7:20 PM
10	Bumpouts again are not a substitution for stop signs.	8/10/2020 5:23 PM
11	Again... it is a bike route.. the cars did not care and it made it very unsafe to use the bike route.	8/10/2020 4:41 PM
12	These things don't help. Only cause more confusion with distracted drivers.	8/10/2020 4:35 PM
13	Had cars disobey pedestrian walk signs.	8/10/2020 4:26 PM
14	The road is too narrow for any permanent structure of the like	8/10/2020 3:22 PM

Q6 If you live on Woodward Heights, have you noticed a difference in traffic with the stop signs being removed?

Answered: 28 Skipped: 10



ANSWER CHOICES	RESPONSES	
Yes	3.57%	1
No	0.00%	0
I do not live on Woodward Heights	92.86%	26
Don't know	3.57%	1
TOTAL		28

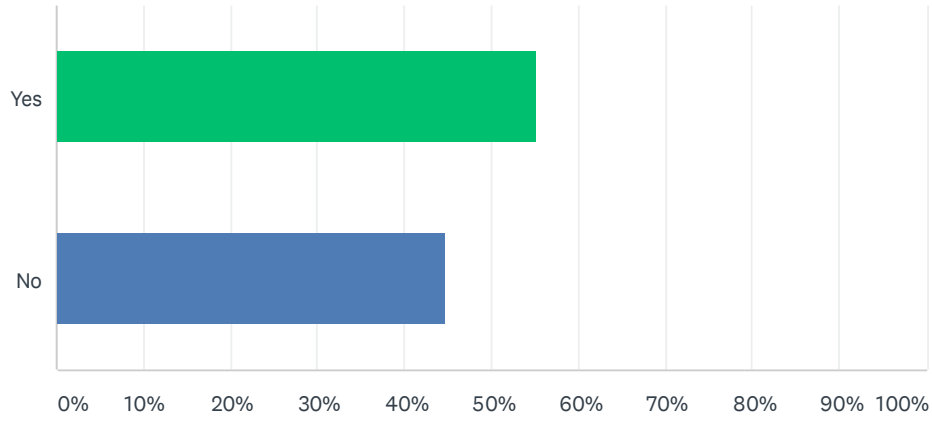
Q7 What difference in traffic have you noticed (other than cars no longer stopping at the intersection)?

Answered: 11 Skipped: 27

#	RESPONSES	DATE
1	No difference in traffic. The drivers do appear to be relieved to get out of the traffic control nonsense on Wood Hts in Ferndale.	8/24/2020 3:17 PM
2	Cars are flying down the street without the stop sign.	8/18/2020 2:33 PM
3	It is not safe biking on Woodward heights where stop sign was removed. Walking across street is much more stressful too.	8/17/2020 12:26 PM
4	I do not live on Woodward Heights, but I travel on Woodward Heights by bicycle, on foot, and by vehicle.	8/12/2020 11:03 AM
5	No noticeable difference.	8/11/2020 1:21 PM
6	People slow due to the new Obstacles in the road.	8/11/2020 11:38 AM
7	So nobody stops now, that’s the only difference	8/11/2020 6:46 AM
8	Traffic is faster here with out the signs	8/10/2020 4:43 PM
9	Cars speeding	8/10/2020 4:36 PM
10	Less room for bikes and runners.	8/10/2020 4:28 PM
11	Confusion on what to do at those intersections because there should be a stop. If the test went longer I’m quite sure you’d notice traffic speeds much higher once drivers got used to having no signs	8/10/2020 3:24 PM

Q8 Have you crossed Woodward Heights on foot at Bermuda since the stop signs were removed?

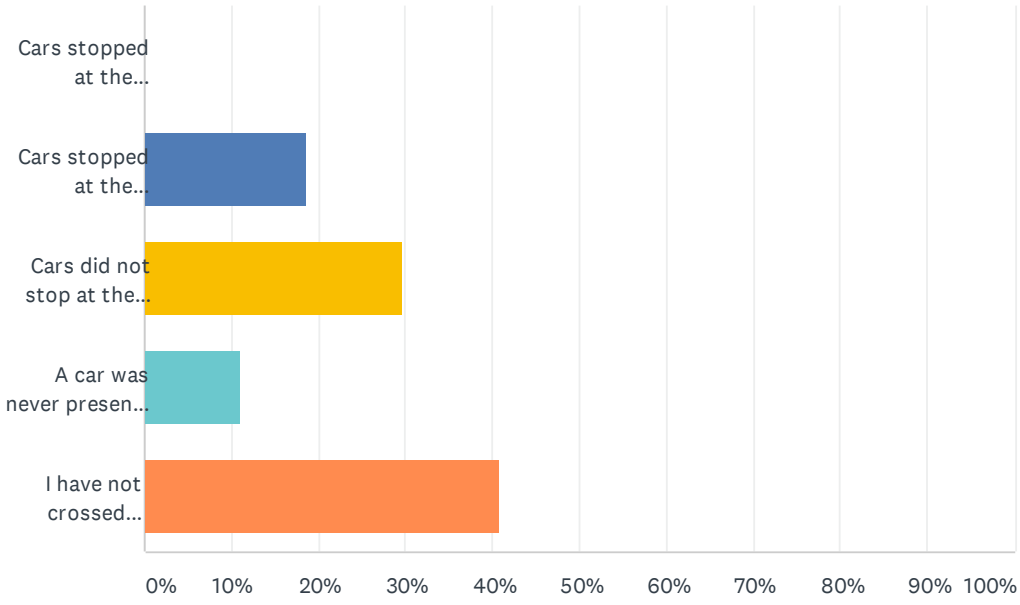
Answered: 29 Skipped: 9



ANSWER CHOICES	RESPONSES	
Yes	55.17%	16
No	44.83%	13
TOTAL		29

Q9 When you were crossing Woodward Heights at the Bermuda crosswalk:

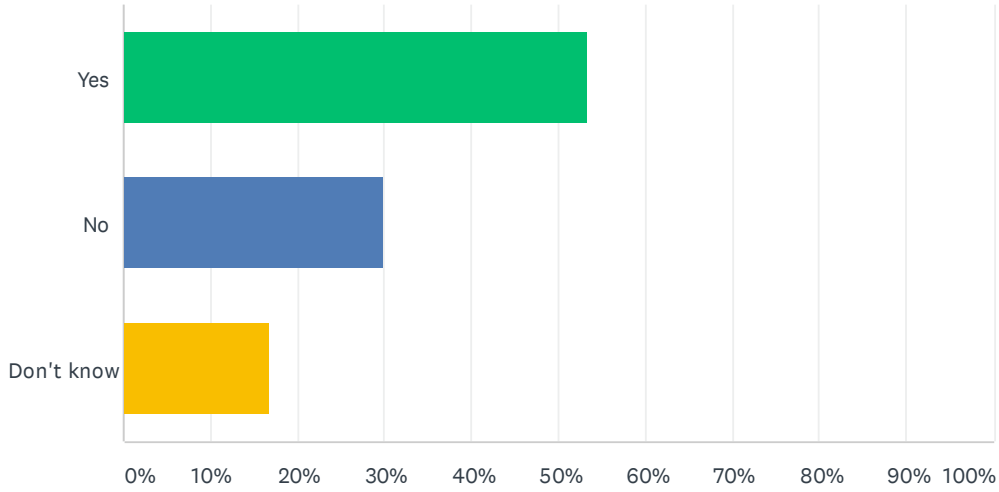
Answered: 27 Skipped: 11



ANSWER CHOICES	RESPONSES	
Cars stopped at the crosswalk for me all of the time	0.00%	0
Cars stopped at the crosswalk for me some, but not all of the time	18.52%	5
Cars did not stop at the crosswalk for me	29.63%	8
A car was never present when I was crossing Woodward Heights at Bermuda	11.11%	3
I have not crossed Woodward Heights on foot while the signs have been up	40.74%	11
TOTAL		27

Q10 Should there be stop signs on Woodward Heights at Bermuda?

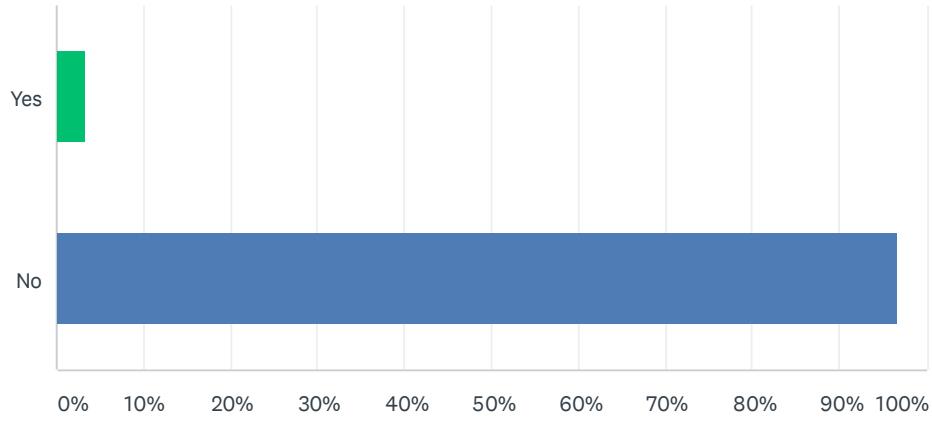
Answered: 30 Skipped: 8



ANSWER CHOICES	RESPONSES	
Yes	53.33%	16
No	30.00%	9
Don't know	16.67%	5
TOTAL		30

Q11 Do you live on Woodward Heights near the Bermuda intersection - between houses 47/48 and and 62/63?

Answered: 29 Skipped: 9



ANSWER CHOICES	RESPONSES	
Yes	3.45%	1
No	96.55%	28
TOTAL		29

Q12 Please share any other comments, suggestions, or input about the Woodward Heights and Bermuda intersection.

Answered: 16 Skipped: 22

#	RESPONSES	DATE
1	I like the idea of “pinching” that intersection on Bermuda. I often walk Bermuda to go to 9 mile and back. I live north of Woodard Heights on Maywood	8/27/2020 4:11 PM
2	Walking down Woodward heights is a lot less safe with the speeds. Maybe add an additional stop sign by Heights market?	8/18/2020 2:33 PM
3	It is safer with a stop sign at that intersection.	8/17/2020 12:26 PM
4	There seems like there are more cost effective ways to achieve the desired results without making the permanent changes proposed.	8/15/2020 12:31 PM
5	Agree that it’s unnecessary and annoying, noisy, and wasteful of fuel. With traffic speeds staying OK, no reason to keep it.	8/11/2020 1:22 PM
6	Thanks for the study!	8/11/2020 11:38 AM
7	Looks like a solution in search of a problem.	8/10/2020 11:18 PM
8	Don’t eliminate the bike lane	8/10/2020 8:50 PM
9	Again.. the stop signs help keep bikers safe.. otherwise people are flying through this intersection.. And Yes I bike over here regularly.	8/10/2020 4:44 PM
10	More police writing tickets to slow down drivers/	8/10/2020 4:37 PM
11	Many drivers don’t care. Will run over people in the cross walks.	8/10/2020 4:29 PM
12	As much as a walk way would look nice cars don’t stop for those in it. I prefer a stop sign	8/10/2020 4:21 PM
13	This test is not an accurate represntation of how the drivers will behave in the long-term. Once the stop signs are gone for a longer period and people forget/don't falsely pause at the intersection, drivers will be anticipating the open space through to the train tracks (heading east), and their speeds will be higher. Crossing Woodward Heights is tough enough in that area. It doesn't need to be worse.	8/10/2020 4:16 PM
14	I drive Woodward Hts a couple of times a week and never thought the speed of drivers was an issue. Not like Oakland Park and Oxford! Speeders on those streets are crazy! Looking forward to the test on those streets. Thank You!!	8/10/2020 4:13 PM
15	.	8/10/2020 3:24 PM
16	The pinchpoints there seemed to confuse people. I like not having the stop signs up because traffic flows better.	8/10/2020 3:16 PM

TRANSPORTATION IMPROVEMENT ASSOCIATION
100 E. Big Beaver Rd., Suite 910, Troy, Michigan 48083
Office (248) 334-4971 • Fax (248) 475-3434
www.tiasafety.us

Attachment 4

November 13, 2018

DRAFT DRAFT DRAFT DRAFT DRAFT

Mr. James Breuckman
City Manager
City of Pleasant Ridge
23925 Woodward Avenue
Pleasant Ridge, Michigan 48069

RE: Woodward Heights and Bermuda Avenue / Bermuda Street

Dear Mr. Breuckman:

At your request, the Transportation Improvement Association (TIA) conducted an evaluation for the Woodward Heights Boulevard and Bermuda Avenue / Street intersections. The objective was to determine if all way stop control is appropriate at the present location or either intersection. Our evaluation included 24 hour vehicular approach counts, an examination of the crash history, and a field visit of the site.

TRAFFIC VOLUMES

In September of 2018, 24-hour traffic volumes counts were collected for Woodward Heights Boulevard and Bermuda Avenue and Bermuda Street (see Figure 1). The daily traffic on Woodward Heights Boulevard.is approximately 3,600 vehicles per day. Bermuda Avenue has a daily volume of approximately 250 vehicles.

Bermuda Street has a daily traffic volume of 1,850 vehicles. During the school dismissal period, an hourly directional flow of 109 vehicles (northbound) is experienced. On Woodward Heights the corresponding hourly flow is 95 vehicles eastbound and 164 westbound. Based on counts at University High, 10 pedestrians are expected to cross north-south across Woodward Heights during that hour.

CRASH HISTORY

The three-year crash history (2015-2017) was examined for the intersections. During this time period three (3) crashes are reported in the vicinity of the intersection Bermuda Avenue intersection. One of the crashes appears to be mis-located and belongs at Bermuda Street (a westbound left turn / sideswipe). The remaining crashes included one (1) rear end crash and one collision with an eastbound bicycle in the crosswalk.

Bermuda Street has two (2) crashes reported. One crash appears to be mis-located as it was east of the railroad crossing towards Horton Street. The other crash is a rear end crash where an eastbound left turn vehicle was hit.

The total appears that there are two (2) crashes at each intersection over the three year period. The bicyclist crash was an injury crash and the remaining were property damage only.

SITE OBSERVATION

A field visit of the site was conducted in October of 2018. The general site conditions and surrounding property were noted as follows:

- The Bermuda Avenue Intersection is a tee intersection, with all-way stop control. Bermuda Street intersection is a tee intersection with one way stop control (northbound).
- Both roadways are two way roads with parking allowed on both sides.
- Adequate sight distance exists at the Bermuda Avenue intersection. The northbound approach of Bermuda Street has limited sight distance to the right due to a zero lot line building on the southeast corner.
- ADA compliant crosswalk ramps are present on the north and west legs of the Bermuda Avenue intersection. A marked crosswalk is present on the west leg of Bermuda Street.

CONCLUSION

The total daily entering volume is greater than 2,000 units thus traffic control (stop or yield) is needed for the intersection(s). Neither intersection meets the minimum volume criteria laid out in MMUTCD 2B.07, which requires 300 vehicles per hour and 200 vehicles per hour, needed for 8 hours on the major and minor streets respectively. Additionally, the crash history does not have five (5) crashes in a 12-month period (or is expected to have at Bermuda Avenue).

If the optional criteria were also reviewed for both intersections. The daily traffic imbalance in approach volumes indicate it is not met has the improved operational characteristics. Certainly in the case of Bermuda Avenue, where the volume is greatly less than that on Woodward Heights.

The examination of hourly volumes at Bermuda Street do have some semblance of balance during the school dismissal hour. In that case the eastbound and northbound volumes are similar, with northbound vehicular and non-motorized volume exceeding eastbound volume (119 versus 95).

The sight distance restriction on the northbound approach of Bermuda Street is inadequate when a vehicle is stopped at the stop bar. Vehicles need to roll forward, encroaching on the east-west crosswalk, to gain visibility to the right. While this is expected behavior for the motorist it does create a conflict with pedestrians.

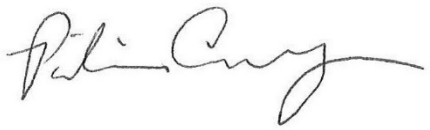
RECOMMENDATIONS

The all way stop control should be removed and one way stop control (southbound) installed at Bermuda Avenue. Pedestrian crossing assemblies (warning sign with down arrow) should be installed for the west leg of Woodward Heights Boulevard**.**

All way stop control should be installed at the Bermuda Street intersection. Additionally, stop bars and crosswalk pavement markings should be installed at the intersection.

If you have any questions, or if we can be of any further assistance, please don't hesitate to contact us at (248) 334-4971. Thank you for your continued commitment to public safety.

Respectfully,



PATRICK M. CAWLEY, P.E., PTOE
Chief Operating Officer
Transportation Engineering

Section 2B.06 STOP Sign Applications

Guidance:

01 *At intersections where a full stop is not necessary at all times, consideration should first be given to using less restrictive measures such as YIELD signs (see Sections 2B.08 and 2B.09).*

02 *The use of STOP signs on the minor-street approaches should be considered if engineering judgment indicates that a stop is always required because of one or more of the following conditions:*

- *A. The vehicular traffic volumes on the through street or highway exceed 6,000 vehicles per day;*
- *B. A restricted view exists that requires road users to stop in order to adequately observe conflicting traffic on the through street or highway; and/or*
- *C. Crash records indicate that three or more crashes that are susceptible to correction by the installation of a STOP sign have been reported within a 12-month period, or that five or more such crashes have been reported within a 2-year period. Such crashes include right-angle collisions involving road users on the minor-street approach failing to yield the right-of-way to traffic on the through street or highway.*

Support:

03 The use of STOP signs at grade crossings is described in Sections 8B.04 and 8B.05.

Section 2B.07 Multi-Way Stop Applications

Support:

01 Multi-way stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multi-way stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multi-way stop control is used where the volume of traffic on the intersecting roads is approximately equal.

02 The restrictions on the use of STOP signs described in Section 2B.04 also apply to multi-way stop applications.

Guidance:

03 *The decision to install multi-way stop control should be based on an engineering study.*

04 *The following criteria should be considered in the engineering study for a multi-way STOP sign installation:*

- *A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.*
- *B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.*
- *C. Minimum volumes:*
  1. *The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and*
  2. *The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but*
  3. *If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.*
- *D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.*

Option:

05 Other criteria that may be considered in an engineering study include:

- A. The need to control left-turn conflicts;
- B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
- C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
- D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

Attachment 5

TRAFFIC AND SAFETY INFORMATIONAL SERIES

FREQUENTLY ASKED QUESTION #13

WHY CAN'T WE HAVE STOP SIGNS TO REDUCE SPEEDING ALONG MY STREET?

One of the complaints that people have in residential areas is that vehicles constantly speed by the front of their house. They are concerned about the safety of their children. These residents frequently request the erection of additional stop signs. The addition of a stop sign, however, usually does not solve the problem.

WHY DON'T WE JUST INSTALL ANOTHER STOP SIGN?

A stop sign is an inconvenience to motorists. Because of this, stop signs should only be placed if they meet a *Manual on Uniform Traffic Control Devices* (MUTCD) warrant. Stop signs are frequently violated if unwarranted. Before warrants are even considered, however, less restrictive measures (such as a yield sign) are usually considered. In certain cases, the use of less restrictive measure or no control at all will accommodate traffic demands safely and effectively.

Warrants for a stop sign

Because a stop sign is an inconvenience to through traffic, it should be used only where needed. A stop sign may be warranted at an intersection where one or more of the following conditions exist:

- intersection of a less important road with a main road where application of the regular right-of-way rule is hazardous;
- street entering a through highway or street;
- unsignalized intersection in a signalized area;
- other intersections where a combination of high speed, restricted view, and serious accident record indicates a need for control by the stop sign.

A yield sign can also be considered where a full stop is not necessary. Existing sign installations should be reviewed to determine whether the use of a less restrictive control or no control at all could accommodate the existing and projected traffic flow safely and more effectively.

WHERE SHOULD A STOP SIGN BE INSTALLED?

Stop signs should be installed/located where the vehicles are to stop or as near to that point as possible. The sign may also be supplemented with a stop line and/or the word STOP on the pavement. A yield sign is erected in the same manner. Where there is a marked crosswalk, the stop or yield sign should be erected approximately four feet in advance of the crosswalk line.

When only one stop or yield sign is used on an intersection approach it should be on the right side of the roadway. At wide intersections, however, violations of the yield or stop sign may be reduced by the erection of an additional sign on the left side of the approach. If two lanes of traffic exist on an approach, at least one stop sign should be visible to each lane of traffic.

CAN STOP SIGNS CONTROL SPEED?

Many studies have shown that stop signs are not an effective measure for controlling or reducing midblock speeds. In fact, the overuse of stop signs may cause drivers to carelessly stop at the stop signs that are installed. In stop sign observance studies approximately half of all motorists came to a rolling stop and 25 percent did not stop at all. Stop signs can give pedestrians a false sense of safety if it is assumed that all vehicles will come to a complete stop at the proper location. A study conducted by Beaubien also showed that placing stop signs along a street may actually increase the peak speed of vehicles, because motorists tend to increase their speed between stop signs to regain the time spent at the stop signs.

WHAT CAN WE DO INSTEAD OF INSTALLING A NEW STOP SIGN?

There are many alternatives to stop signs. For example, a concept called *traffic calming,* the combination of physical controls and community support, might be a good alternative for some communities. Calming measures can be installed as part of an areawide traffic management plan or on a single street and involve local law enforcement, emergency and maintenance officials, engineers, and the community.

Some communities also start interneighborhood programs to address the problem of the speeding and safety in their neighborhood areas. Often times, the true problem stems mostly from drivers that live in the neighborhood. By simply raising awareness of the issue, drivers in the neighborhood may adjust their driving and decrease their speeds.

Unfortunately, there is no general solution to the problem of speeding traffic. There will always be drivers that speed through residential areas. It is important for residents in a neighborhood to be aware of this issue.

For more information

For more information, please contact _____.

TRAFFIC AND SAFETY INFORMATIONAL SERIES

FREQUENTLY ASKED QUESTION #13

Can we have stop signs placed at intersections in our neighborhood to reduce speeding?

We get many complaints from people in residential areas about cars speeding in their neighborhoods. They often ask us to install more stop signs. This concern is very understandable. Unfortunately, adding stop signs may not be the best solution. In fact, you may be surprised to learn, adding stop signs can sometimes make the problem worse. Here is why:

Stop signs don't always slow traffic
Strange as it may seem, installing stop signs may not result in reduced traffic speeds. Studies have shown that stop signs are not effective at controlling drivers' speeds between intersections. In fact, motorists sometimes drive even faster between stop signs to make up for time "lost" while stopped—actually increasing peak speeds and potentially making neighborhoods more dangerous.

Installing stop signs can do more harm than good
Too many stop signs may also actually discourage good driving habits. Studies have shown that if stop signs are overused or are located where they don't seem to be necessary, some drivers become careless about stopping at them. This can be especially dangerous for pedestrians and bicyclists who may have a false sense of safety from the existence of a stop sign.

Other solutions
Fortunately, there are other ways to encourage traffic to slow down. Sometimes even a simple neighborhood awareness program can be effective.

For more information
For more information, please contact _____.

TRAFFIC AND SAFETY INFORMATIONAL SERIES
FREQUENTLY ASKED QUESTION #14

WHY CAN'T WE HAVE A FOUR-WAY STOP TO REDUCE ACCIDENTS?

Four-way stop signs are not always the answer to reducing intersection crashes. Crash analysis is very complicated and usually identifies multiple causes. Stop signs delay drivers, and many times the drivers become impatient. Impatient drivers may cause crashes. Not all four-way stop intersections are dangerous, but they must be warranted and other less-restrictive options should be considered before they are installed.

WHAT IS REQUIRED FOR THE INSTALLATION OF FOUR-WAY STOP CONTROL?

The addition of four-way stop control is an inconvenience to all the drivers using the intersection. For this reason, three warrants have been developed and are listed in the *Manual on Uniform Traffic Control Devices* (MUTCD). A multiway stop control installation may be warranted at an intersection if any of the following conditions exist:

1. Traffic signals are warranted and urgently needed, and the multiway stop signs are an interim measure that can be installed quickly to control traffic while arrangements are being made for the signal installation.

2. A crash problem, as indicated by five or more reported accidents of a type susceptible to correction by a multiway stop installation in a 12-month period. Such accidents include right- and left-turn collisions as well as right-angle collisions.

3. Minimum traffic volumes. (a) The total vehicular volume entering the intersection from all approaches must average at least 500 vehicles per hour for any eight hours of an average day; and (b) the combined vehicular and pedestrian volume from the minor street or highway must average at least 200 units per hour for the same eight hours, with an average delay to minor street vehicular traffic of at least 30 seconds per vehicle during the maximum hour; but (c) when the 85-percentile approach speed of the major street traffic exceeds 40 miles per hour, the minimum vehicular volume warrant is 70 percent of the above requirements.

A four-way stop installation should only be used when traffic volumes on the intersecting roadways are approximately equal. However, if volumes are particularly large a traffic signal may be more appropriate (see informational series answer to "What is the harm in installing an unwarranted traffic control device?" for signal warrant). Investigating the warrants listed above will require an extensive traffic engineering study. This study may indicate whether or not a multiway stop control installation is appropriate.

WON'T CRASHES BE REDUCED IF A STOP SIGN IS INSTALLED?

One of the multiway stop control warrants is crash related. If an intersection meets this requirement (see above) and it has approximately equal approach volumes, a multiway stop control installation may be warranted for safety purposes. However, the overall results of the traffic engineering study and the professional judgement of the engineer should also be considered. In fact, research has shown that under certain conditions other traffic control

measures may be more effective and safer than the addition of a multiway stop sign (other options are discussed below). A study conducted by the city of Irvine, California, indicated that simply improving intersection visibility can sometimes be a successful approach to crash reduction at intersections.

WHAT CAN BE DONE OTHER THAN TO ADD STOP SIGNS?

Every intersection has unique characteristics. A thorough analysis of the traffic, safety, and geometric characteristics of an intersection is required to provide the validity of certain traffic control measures at a specific location. The following are some of the less restrictive alternatives that can be considered at an intersection before the installation of a multiway stop sign or traffic signal:

- install warning signs and/or flashing beacons along the major roadway to warn users approaching the intersection;
- relocating the stop line(s) to improve sight distance and visibility at the intersection;
- installing a flashing beacon at the intersection to supplement the existing stop signs;
- adding one or more lanes on a minor roadway approach to reduce the number of vehicles per lane on the approach;
- installing roadway lighting to reduce the frequency of accidents at night;
- restricting one or more turning movements;
- limiting the number of driveways in close proximity to an intersection, since unexpected movements from these driveways could cause vehicles on the street to suddenly stop.

Four-way stop signs are needed in certain situations, and careful studies must be made before any installation is approved. There are countermeasures available (see above) that do not include the addition of stop signs. The ultimate goal is to provide a safe intersection for vehicles, pedestrians, and bicyclists.

For more information

For more information, please contact _____.

TRAFFIC AND SAFETY INFORMATIONAL SERIES
FREQUENTLY ASKED QUESTION #14

Wouldn't installing a four-way stop reduce accidents at an intersection?

Adding four-way stop signs may seem like it would slow drivers down and make the streets safer, but additional stop signs do not necessarily increase safety. In fact, in some cases, especially when they are not really needed, the overuse of signs can lead to them being ignored by drivers. Therefore, traffic engineers make careful decisions concerning the use of four-way stop signs. Here are some of the factors they consider:

Too many signs can lead to ineffectiveness
Studies have shown that when stop signs are placed at intersections where they are not really needed, some motorists become careless about stopping. Moreover, overuse of four-way stop signs can contribute to the number of frustrated and impatient drivers on the streets, and these drivers may start driving recklessly.

Where four-way stop signs are used
Four-way stop signs are often used at the intersection of two roadways that contain similar traffic volumes. The intersection must, however, meet at least one of the following conditions:

- a traffic signal is going to be installed and the intersection needs a temporary solution to control the traffic;
- within 12 months at least five crashes have occurred at the intersection that could have been prevented by stop signs;
- relatively high volumes and/or high major-street vehicle speeds exist.

Other solutions may provide just as much safety
To make travel efficient and safe, four-way stop signs are usually installed only where they are absolutely necessary. Before four-way stop signs are installed, other solutions should be considered. Here are a few examples:

- Relocate the line where vehicles stop to improve visibility at the intersection.
- Limit the number of driveways in close proximity to an intersection since unexpected movements to/from these driveways sometimes cause drivers to suddenly stop or swerve, resulting in crashes.
- Install flashing lights before or at the intersection to warn drivers or to supplement existing stop signs, respectively.
- Install roadway lighting to reduce the frequency of crashes at night.

For more information
For more information, please contact _____.

TRAFFIC AND SAFETY INFORMATIONAL SERIES

FREQUENTLY ASKED QUESTION #15

WHAT IS THE HARM IN INSTALLING AN UNWARRANTED TRAFFIC CONTROL DEVICE?

Installing stop signs or traffic signals where they are not needed can cause significant disruption of traffic flow and increase intersection delay for drivers. The induced delay increases travel time and annoys drivers, and the additional starts and stops result in increased fuel consumption and the consequent production of carbon monoxide, nitrous oxide, particulate matter, and other pollutants.

WHAT IS THE HARM IN INSTALLING A STOP SIGN?

Two-way stop signs assign the right-of-way at an intersection. The warrants for the installation two-way stop signs in the *Manual for Uniform Traffic Control Devices* (MUTCD) are listed below. Because a stop sign causes substantial inconvenience to motorists, it should be used only where warranted. It may be warranted where the following conditions exist:

1. the intersection of a less important road with a main road where the applications of the normal right-of-way rule is hazardous;
2. a street entering a through highway or street;
3. an unsignalized intersection in a signalized area;
4. other intersections where a combination of high speed, restricted view, and serious accident record indicates a need for control by the stop sign.

The amount of delay created by the stop sign depends on both major and minor street flows. The gaps in the major flow traffic stream must be adequate to allow the stopped traffic to execute the through, right, or left movement through the intersection. The term “critical gap” is often used to describe the median gap accepted by drivers for specific turning maneuvers and roadway characteristics. According to the 1997 *Highway Capacity Manual*, typical critical gaps are 6.2 to 6.9 seconds for right turns from a minor roadway and 7.1 to 7.5 seconds for left turns from a minor roadway. Left-turning movements take longer, and left-turning drivers must cross more traffic streams. Additional delay for minor street vehicles is also determined by the vehicle arrival rate. The arrival rate of vehicles on the minor street is related to how long drivers will wait in the queue to get to the stop line.

The delay times at stopped approaches can become excessive if either major or minor flow is high. The advantage of a two-way stop is that the major flows do not have to stop and they incur almost no delay at the intersection (i.e., the majority of the traffic does not have to stop).

Four-way stop control is often controversial as it can often confuse motorists and can cause more average delay than other types of control. The multiway stop sign should only be used where the volume on all approaches to the intersection is approximately equal and the traffic volumes are relatively low. However, the four-way stop sign alternative can be quite useful in unusual situations where two-way stop control has not solved the safety problems but where signalization is not yet warranted.

WHAT IS THE HARM IN INSTALLING TRAFFIC SIGNALS?

Justification of signal installation requires considerable data collection and analysis. The following data need to be collected and analyzed:

- traffic volumes by approach and movement for the 16 highest hours in a day,
- pedestrian counts in crosswalks,
- intersection approach speed distributions,
- collision diagrams for recent crashes, and
- condition diagram for the intersection.

The MUTCD lists 11 warrants for the placement of traffic signals. These warrants are summarized below (please refer to the MUTCD for details). If none of these warrants are met, a traffic signal should not be placed. In addition, the fulfillment of a warrant or warrants also does not in itself justify the installation of a signal. Please

1. *Minimum vehicular volume*. The volume of intersecting traffic must be above a certain value.
2. *Interruption of continuous traffic*. The traffic volume on a major street is so significant that the traffic on the minor street cannot safely merge, enter, or cross the major street.
3. *Minimum pedestrian volume.* The volume of pedestrians crossing a major street exceeds a certain value.
4. *School crossing.* At an established school crossing, a signal can be placed if it is shown that there are not enough gaps in the traffic for the children to safely cross.
5. *Progressive movement.* To maintain the proper grouping of vehicles and to effectively regulate the group speed.
6. *Accident experience.* When less restrictive remedies and enforcement has failed to decrease the accident rate below levels expected with signalization.
7. *Systems warrant*. A common intersection that serves a principle network for through traffic flow.
8. *Combination of warrants.* If warrants 1 and 2 are each satisfied by 80 percent of the stated values, a signal placement could be justified.
9. *Four-hour vehicular volume.* The traffic volumes on the major and minor streets exceed a certain value for each of any four hours on an average day.
10. *Peak hour delay*. The minor street traffic suffers major delay in entering or crossing the major street for only one hour of an average weekday.
11. *Peak hour vehicular volume.* The traffic volumes on the major and minor streets exceed a certain value for only one hour of the day.

Installing a traffic signal at a low-volume intersection can significantly increase crashes and delays. Again, the increase in delay and stops then translates into higher fuel consumption, increased travel times, and higher point source pollution. The length of delay is directly related to a number of factors. Cycle length is one factor, for example, that is influenced by traffic volumes and the need to safely accommodate pedestrians. The pedestrian crossing time constraints could significantly increase the necessary cycle lengths. Although traffic signals can reduce the total number of collisions at an intersection, research has shown that certain types of crashes (e.g., rear-end collisions) may actually increase after a signal is installed. For this reason, the type and number of crashes at an intersection should be considered before the installation of a signal.

Traffic signals can represent a positive public investment when justified, but they are costly. A modern signal can cost $80,000 to $100,000 to install. In addition, there is the cost of the electrical power consumed in operating a signalized intersection 24 hours a day (which can average about $1,400 per year).

It is important to carefully consider whether a traffic control device is needed before rushing to an implementation decision. The costs and benefits must be carefully evaluated, and a careful analysis and engineering study must be completed.

For more information

For more information, please contact _____.

TRAFFIC AND SAFETY INFORMATIONAL SERIES

FREQUENTLY ASKED QUESTION #15

What is the harm in installing traffic signs and signals that aren't really needed?

It may surprise you to learn that adding more stop signs or traffic signals along a roadway does not necessarily slow drivers down or increase safety. In fact, in some cases, especially when they are not really needed, the overuse of signs and signals can lead drivers to ignore or not properly obey them.

Too many signs can lead to ineffectiveness
Studies have shown that when stop signs are placed at intersections where they don't appear to be needed, motorists become careless about stopping.

Too many traffic signals can negatively impact traffic flow
Installing traffic signals where they are not needed can create traffic congestion, add travel time, and frustrate drivers, who may start driving impatiently.

Other options can provide safety
To make travel efficient and safe and to help ensure the proper observance of stop signs and traffic signals, they are usually installed only where they are absolutely necessary. Other solutions—for example, a yield sign—may also provide enough safety, without any detriment to traffic flow.

For more information
For more information, please contact _____.

TRAFFIC SAFETY AND INFORMATIONAL SERIES
FREQUENTLY ASKED QUESTION #16

WON'T A TRAFFIC SIGNAL REDUCE ACCIDENTS?

Traffic signals are not always the answer to reducing crashes at intersections. Crash analysis is very complicated and multiple causes for a crash are usually identified. For this reason, the solution to a safety problem at a particular intersection is not always obvious, and the placement of any type of traffic control device must be considered carefully. The incorrect installation or placement of a traffic signal can actually result in additional crashes at an intersection.

WHAT ARE THE WARRANTS FOR A TRAFFIC SIGNAL?

Traffic control signals should not be installed unless one or more of the signal warrants contained in the *Manual on Uniform Traffic Control Devices* (MUTCD) are met. Among other things, these warrants are related to intersection vehicular and pedestrian volumes, crash history, and the presence of a school crossing. However, fulfillment of a warrant or warrants does not in itself justify the installation of a signal. A comprehensive engineering study should also be done to indicate that the installation of a traffic signal would improve the overall safety and/or operation of the intersection. If the study indicates otherwise, a traffic signal should not be installed even though one or more of the warrants are met.. A complete listing of the 11 signal warrants in the MUTCD is included in the answer to the "What is the harm in installing an unwarranted traffic control device?" question within this informational series.

WHAT CONTRIBUTES TO INTERSECTION CRASHES?

According to the US Department of Transportation's 1994 *Technical Report on Intersection Crossing Path Crashes*, intersections controlled with traffic signals represent approximately one-third of all intersection crossing path crashes. Most of the crashes related to traffic signals are rear-end collisions. The Iowa Governor's Traffic Safety Bureau has published several fact sheets containing information about crashes. The major contributors to crashes are summarized below:

- *Young drivers* are major contributors to crashes in Iowa. In 1996, although 16 and 17 year olds only represented 3.5 percent of Iowa's licensed drivers, they contributed to 11 percent of all at-fault drivers in vehicle crashes.

- *Alcohol* is a major contributing factor of traffic fatalities and the leading cause of death among people 1 to 34 years of age. In 1998, there were 2,626 Iowa alcohol-related traffic injuries and approximately 17,000 operating-under-the-influence (OWI) arrests.

- *Speeding* ranks just behind alcohol and stop light/stop sign violations as a contributing factor to fatal crashes in Iowa. When a vehicle is traveling at a faster speed, a much greater distance is required to make the same driving decisions as when traveling at a slower speed.

- *Red light running* also results in a large number of crashes at signalized intersections. For example, in 1998 there were 89,000 red light running crashes in the United States that resulted in 80,000 injuries and 986 deaths.

WHAT CAN BE DONE TO REDUCE THESE CRASHES?

The goal of an intersection crash analysis is to develop countermeasures that should lead to a reduction in crashes. However, no two intersections are the same. Each intersection has its own unique characteristics that must be studied and analyzed in detail. The traffic engineer observes the site, uses proper analysis techniques and his or her background and experience to identify solutions.

Signalization may not eliminate the crash concerns at an intersection. It may change the type of crashes or simply shift them to another location. The installation of a traffic signal (especially an unwarranted signal) can cause excessive delay. Violation of these types of signals can contribute to crashes or result in a diversion of traffic to parallel residential streets.

The evaluation of an intersection and its characteristics may indicate that measures other than a traffic signal could result in adequate and less intrusive intersection safety improvements. Some countermeasures that might be considered for crash reduction have been identified by the Institute of Transportation Studies in the fourteenth edition of the *Fundamentals of Traffic Engineering.* The countermeasures at an intersection include

- prohibiting a turning movement,
- providing turn lanes,
- installing or improving warning signs,
- improving roadway lighting,
- providing a stop sign,
- installing or improving pedestrian crosswalk,
- improving skid resistance for wet-weather accidents,
- creating truck escape ramps,
- providing rumble strips to improve drift-off-road accidents, and
- correcting the roadway curve.

WHAT ABOUT INSTALLING A TRAFFIC SIGNAL?

The installation of a traffic signal (or four-way stop control) must be preceded by a thorough engineering study to determine whether the location meets minimum signalization warrants. Traffic signals, when warranted, can produce a more orderly movement of traffic, increased intersection capacity, a reduction in certain types of crashes (especially right-angle collisions), nearly continuous movement along a route, and an interruption of traffic to permit other traffic or pedestrians to cross. However, improperly installed or unwarranted traffic signals can produce excessive delay, disobedience of the signal indications, increased use of minor roadways (to avoid signals), and an increase in certain types of crashes (especially rear-end collisions). There are 11 warrants for signal installation (see informational series answer to “What is the harm in installing an unwarranted traffic control device?” for signal warrants). A traffic signal should only be installed if the intersection meets one or more of these warrants.

There is only one traffic signal warrant related to the crash history of an intersection. This warrant requires that remedies less restrictive than a traffic signal be considered first, that there be at least five reportable crashes in a year that could be corrected by a traffic signal, and that certain minimum volume levels be met.

For more information

For more information, please contact _____.

TRAFFIC SAFETY AND INFORMATIONAL SERIES
FREQUENTLY ASKED QUESTION #16

Wouldn't installing a traffic signal reduce the number of accidents at an intersection?

It may surprise you to learn that adding traffic signals would not necessarily increase safety at an intersection. In fact, in some cases, especially when the traffic signals do not seem to be needed, some drivers may begin to ignore them or run yellow lights in an attempt to avoid delays. Therefore, officials in your area make careful decisions concerning the use of traffic signals. Here are some of the factors they consider:

Too many traffic signals can negatively impact traffic flow
Installing traffic signals where they are not needed can create traffic congestion, add travel time, and frustrate drivers, who may start driving impatiently and make inappropriate decisions. To make travel efficient and safe and to help ensure the proper observance of traffic signals, they are usually installed only where they are absolutely necessary.

Where traffic signals are installed
At least one of 11 conditions must be met for a traffic signal to be installed. The conditions include high vehicle and/or pedestrian volumes, a record of severe crashes, and school crossings where there is not enough of a gap in traffic flow for children to cross safely.

Other solutions
Many crashes at intersections are not caused by a lack of a traffic signal. Inexperienced drivers, drunk drivers, and speeding are often the cause. Therefore, traffic signals do not always offer increased safety at an intersection. Other solutions that might be considered include providing turning lanes, installing warning signs, improving roadway lighting, and installing a pedestrian crosswalk.

For more information
For more information, please contact _____.

TRAFFIC AND SAFETY INFORMATIONAL SERIES

FREQUENTLY ASKED QUESTION #20

WHEN DO INTERSECTIONS RECEIVE STOP SIGNS (TWO-WAY AND FOUR-WAY) AND SIGNALS?

Traffic control devices are present to safely assist and guide drivers. Several people believe that many of our traffic problems would be solved by the addition of a stop sign or traffic signal. Some would even like a traffic signal or a stop sign at every intersection. In fact, there are situations in which the absence of a stop sign or traffic signal actually provides a safer situation.

Based on the *Manual on Uniform Traffic Control Devices* (MUTCD*)*, traffic control devices should meet five basic requirements. They should

- fulfill a need;
- command attention;
- convey a clear, simple meaning;
- command respect of road users; and
- give adequate time for proper response.

WHAT IS THE APPROPRIATE USE AND PLACEMENT OF STOP SIGNS?

The stop sign is a regulatory sign used to stop traffic. It is a red octagon that has a white border and large white letters that read "STOP." At multiway stop intersections, a small plate is placed below the stop sign to inform the driver of how many approaches are required to stop.

Because stop signs inconvenience drivers, they should only be used where they are strictly warranted. The following warrants for the placement of stop signs are found in the MUTCD:

1. the intersection of a less important road with a main road where application of the normal right-of-way rule is unduly hazardous;
2. a street entering a through highway or street;
3. an unsignalized intersection in a signalized area;
4. other intersections where a combination of high speed, restricted view, and serious accident record indicates a need for control by the stop sign.

There are also locations where the use of stop signs should be avoided. Every time a stop sign is considered, a less restrictive method such as a yield sign should first be considered.

WHAT DETERMINES THE PLACEMENT OF A MULTI-WAY STOP SIGN?

The multiway stop sign may improve the safety of an intersection. Normally, it is used at the intersection of two roads that contain similar traffic volumes. A three-way stop is used at intersections that have only three approaches (e.g., a T-intersection). According to the MUTCD, the warrants for placing multiway stop signs are as follows:

1. where traffic signals are going to be placed soon and the intersection needs a temporary solution to control the traffic;
2. an intersection that has several crashes (≥ 5 correctable accidents in 12 months);
3. when an intersection has the following traffic volumes: (a) the total volume of traffic entering the intersection from all approaches must average at least 500 vehicles per hour for any eight hours of an average day; (b) the combined vehicular and pedestrian volume that enters the intersection from the minor street must average at least 200 units per hour for the same eight hours, with an average delay to the minor street traffic of at least 30 seconds per vehicle during the maximum hour; (c) the 85th percentile approach speed (this is the speed at or below which 85 percent of the vehicles travel on a given roadway) of the major street traffic exceeds 40 miles per hour, and the minimum vehicular volume warrant is 70 percent of the above requirements.

WHY CAN'T WE PLACE A TRAFFIC SIGNAL AT EVERY SCHOOL CROSSING?

The fourth MUTCD warrant for traffic signalization explains traffic signal placement with regard to school crossings. If a traffic study shows that the number and length of gaps in the traffic flow are not adequate to allow the children to cross safely, then a traffic control signal may be warranted. When the gaps are sufficient, the addition of a traffic control device may not be necessary. A crossing guard or school crossing sign at the crosswalk with warning signs at the approaches can also help control traffic during peak traffic flow times.

When traffic control signals are installed entirely because of this warrant, the MUTCD notes the following:

- Pedestrian indications shall be provided for each crosswalk established as a school crossing.
- At an intersection, the signal normally should be traffic-actuated. As a minimum, it should be semi-actuated, but full actuation with detectors on all approaches may be desirable. Intersection installations that can be fitted into progressive signal systems may have pretimed control.
- At nonintersection crossings, the signal should be pedestrian-actuated, parking and other obstructions should be prohibited for at least 100 feet in advance of and 20 feet beyond the crosswalk, and the installation should include suitable standard signs and pavement markings. Special police supervision and/or enforcement should be provided for a new nonintersection location.

WHAT DETERMINES THE PLACEMENT OF TRAFFIC SIGNALS?

The warrants for the placement of traffic signals are found in the MUTCD. Please refer to the informational series answer for the question, **"**What is the harm in installing an unwarranted traffic control device?**"**

For more information

For more information, please contact _____.

TRAFFIC AND SAFETY INFORMATIONAL SERIES

FREQUENTLY ASKED QUESTION #20

When do intersections receive stop signs and signals?

It may surprise you to learn that adding stop signs or traffic signals would not necessarily slow drivers down or increase safety at an intersections. In fact, in some cases, especially when the signs or signals do not seem to be needed, some drivers may begin to ignore them. Therefore, officials in your area make careful decisions concerning the use of stop signs and traffic signals. Here are some of the factors they consider:

Too many signs can lead to ineffectiveness
Studies have shown that when stop signs are placed at intersections where they are not really needed, motorists become careless about stopping. Installing traffic signals where they are not needed can also create traffic congestion, add travel time, and frustrate drivers, and these drivers may become impatient and make unsafe maneuvers.

The use of signs and signals should be restricted to locations where they will be effective
Signs and signals are only effective and should only be used when they meet the following four requirements. They should (1) fulfill a need, (2) convey a clear, simple meaning, (3) command attention and respect, and (4) give adequate time for drivers to respond.

Locations must have one or more of the following the conditions for two-way stop signs to be installed:

- an intersection of a minor and a major road, where the application of the normal right-of-rule would be hazardous;
- a street enters a highway;
- an unsignalized intersection in a signalized area;
- there is high-speed traffic, it is hard to see, and there is a previous crash record.

Four-way stop signs are often used at the intersection of two roadways that contain similar traffic volumes. The location must have at least one of the following conditions:

- a traffic signal is going to be installed and the intersection needs a temporary solution to control the traffic;
- within 12 months at least five crashes have occurred at the intersection that could have been prevented by stop signs;
- relatively high volumes and/or high major-street vehicle speeds exist.

At least one of 11 conditions must be met for a traffic signal to be installed. The conditions include high vehicle and/or pedestrian volumes, a record of severe crashes, and school crossings where there is not enough of a gap in traffic flow for children to cross safely.

Other options
To make travel efficient and safe and to help ensure the proper observance of stop signs and traffic signals, they are installed only where they are absolutely necessary. Other solutions—for example, a yield sign—should be considered first and may be more appropriate.

For more information
For more information, please contact _____.

IOWA STATE UNIVERSITY

A Study on Speed Humps

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Karen [illegible]
September 1997

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EXECUTIVE SUMMARY

Until the 1970s, residential traffic problems were not a significant issue. In the past decade, however, there has been research regarding the impacts of high traffic volumes on the quality of life in residential neighborhoods. Speed humps are a geometric roadway design feature with the purpose of slowing traffic in residential neighborhoods. (They are self-enforcing and often called "sleeping police officers".)

Speed humps are three to four inches high and 12-22 feet long. (Design features are in Appendix A) They are found on public residential roadways. To avoid driver discomfort, the vehicle must slow down to a speed of 15-20 mph while traveling over them.

The question of installing speed humps or any other residential traffic control device usually comes from residents who are concerned about safety in their neighborhoods. Before installation, however, research and data collecting concerning current speeds, stop sign obedience, pedestrian activity need to qualify the traffic problems.

Speed humps are designed for public residential roadways that have two lanes or less at a posted speed limit of 30 mph or less, and 85th percentile speeds of 31-34 mph. Roadways that carry traffic volumes of 600-5000 vehicles per day are good candidates for speed hump installation.

Speed humps should be placed so that vehicles do not approach at high speeds. They should also be placed on property lines and near street lights. To be effective, speed humps should be placed in series at 200-600 foot intervals. Speed humps should not be placed on curves, transit routes, or major emergency response routes.

When designed and installed properly, speed humps will reduce vehicle speeds to 15-20 mph at the hump and 25-30 mph between humps in a series.

Before installation, the following should be done:

1. Traffic engineering studies to determine if the route in question is a good candidate for speed humps.
2. Enforce existing laws and ordinances regarding speed limits, revising if necessary.
3. Educate residents on the causes of the speeding problem and possible solutions.
4. Install traffic control devices (regulatory, warning, and guide messages) in conformance with the MUTCD.
5. Consider legal liability. Speed humps are not addressed in the Manual for Uniform Traffic Control Device and public agencies have been held liable for damage and/or injury resulting from speed humps. It is important to document justification for all decisions made concerning installation and to review state and local laws to identify regulations pertaining to roadway design, roadway maintenance, traffic control, and other elements that might be related to the use of speed humps or other geometric design features.
6. If the problem is not solved with the above strategies, consider using speed humps.

If designed, installed, and maintained properly, speed humps can be a safe, effective method of reducing vehicle speeds through residential areas.

INTRODUCTION

Until the 1970's, residential traffic problems were not a significant issue. In the past decade, however, research regarding the impacts of high traffic volumes on the quality of life in residential neighborhoods and higher speeds has been done. Research has concluded that poorly designed street layouts, underdesigned arterial roadways, increased vehicle ownership, longer trip lengths, and smaller household size contribute to this problem. There are several solutions to this problem all with the purpose of slowing traffic down and eliminating through traffic. New residential roadways are being designed in curvilinear fashion with cul-de-sacs and cities are implementing designs such as raised intersections and speed humps in established neighborhoods.

Speed humps are not an official traffic control device and are not addressed in the Manual of Uniform Traffic Control Devices (MUTCD) but are instead a geometric pavement design feature. Their main purpose is to slow vehicles to speeds under 30 mph. They are self-enforcing and often called "sleeping police officers". When driving over them at higher speeds, the driver feels discomfort.

BACKGROUND

Speed humps differ from speed bumps. Speed bumps are 3-4 inches high and 1-3 feet long and have typically been used in parking lots and on private roads. To pass over speed bumps without doing damage to the vehicle or causing discomfort, the driver must slow down almost to a complete stop. The effects of speed bumps are diminished by passing over them at excessive speeds in a vehicle with loose suspension.

Speed humps are 3-4 inches high and 12-22 feet long (see Appendix A). They are found on residential roadways. To avoid driver discomfort, the driver slows to a speed of 15-20 mph. Unlike speed bumps, at excessive speeds, the effects of speed humps are increased sometimes to the point of acting like a bump and jolting both the driver and their cargo.

Speed humps were originally developed in Great Britain by the Transport and Road Research Laboratory (TRRL). Extensive research was conducted on test tracks in a laboratory with vehicles traveling at various speeds over various hump sizes and shapes. The parabolic shaped speed hump used throughout Europe, Australia, and New Zealand was developed by TRRL. After extensive research, it was found that the ideal speed hump is 12 feet long and 3-4 inches high.

In the United States, the Federal Highway Administration (FHWA) began testing the TRRL speed humps in 1979 in St. Louis and concluded that they were safe to continue with public street testing. In 1983, the

Subcommittee of California Traffic Control Devices supported, via a public report, the use of speed humps on public streets. Speed humps are now being used in Florida, California, Oregon, and other locations.

Australia developed an alternative to the original TRRL speed hump. The Australian Road Research Board designed the "flat-topped" hump which is 22 feet long and 3-4 inches high. The flat-top section is made of brick paving and has asphalt or concrete ramps. This design is more aesthetically pleasing and it reduces the pavement deformation problems associated with asphalt humps.

DESIGN METHODOLOGY

The question of adding speed humps or any other residential traffic control device usually results from residents who are concerned about traffic safety in their neighborhoods. Because of general increased traffic flow, more traffic naturally moves through residential neighborhoods. Due to poorly designed roadways, it is easy for cars to use local streets as shortcuts between collectors and arterials. In addition, drivers often do not obey the residential speed laws, which are generally lower than on collectors and arterials.

Installing street humps is not a small project nor does it have a small impact. Nothing should be implemented, or even considered, unless there is strong urging from residents along the affected roadway. Even then, there are a number of things that should be evaluated and implemented before installation.

1. Traffic engineering studies of the area need to be done to determine if the path in question is a good candidate for speed humps utilizing the criteria mentioned earlier. These studies include safe sight distance, pedestrian activities, vehicle classification, traffic count, speed studies. Current land use, school routes, "as built" plans, other control devices, and stop sign compliance should also be examined.

2. If the traffic engineering studies show that there is a prevailing problem, the next step should be to enforce existing laws and ordinances regarding speed limits, revising them if necessary.

3. The third strategy is to educate residents on the causes of the speed problem and the potential solutions to it. They should be well informed on the advantages and disadvantages of each possible solution. This can be done in a number of ways including town meetings, flyers, posters, and door to door education.

4. Installation of traffic control devices, including regulatory, warning, and guide signs, in conformance with the Manual on Uniform Traffic Control Devices, is the next step.

5. Consider legal liability. Review the current laws and regulations regarding speed humps. Courts have held the installing agency liable for damage and personal injuries resulting from speed humps.

6. If none of the above strategies alleviates the speed problem, then speed humps should be considered. The plan, however, should not be implemented until other alternatives have been explored, all groups affected are informed and/or consulted concerning the matter, and traffic engineering studies have been conducted and conclude that there is a need for speed humps.

Speed humps are designed for residential roads that have two lanes or less at a posted speed limit of 30 mph or less, and 85th percentile speeds of 31-34 mph. Local roadways that carry traffic volumes of 600-5000 vehicles per day are good candidates. Traffic volumes less than 600 do not typically impact neighborhoods enough to require speed humps. Speed humps will not have a significant positive effect on roads with volumes greater than 5000 vehicles per day. Roads with high volumes need other traffic control devices to alleviate problems.

Location

The first speed hump in a series should be placed 50-200 feet from a small radius curve or stop signs assuring that vehicles are not approaching at high speeds. If installed on a street with a significant gradeline, the first hump in a series should be placed at the top of the grade.

If possible, speed humps should be placed on property lines for noise abatement. Although the overall noise level along a hump controlled section of roadway is not increased significantly, the noise of a vehicle traversing a hump can increase. Humps can also be placed on property lines for aesthetic reasons. Humps should be placed near street lights to increase nighttime visibility.

To be effective along a section of roadway speed humps should be placed in series at 200-600 feet intervals when considering the geometries of the roadway. (Please see Appendix B) On a flat, straight roadway, research has shown that 275 foot intervals are ideal for maintaining speeds of 25 mph. The following equation was developed by the California Subcommittee of the California Traffic Control Devices Committee to determine spacing between humps:

$H_s = 0.5[2(V_{85})(V_{85})-700]$

Where H_s = optimal spacing between 3" humps (ft)

and V_{85} = the desired 85th percentile speed (mph) between humps

Each speed hump or series of humps must have accompanying warning signs in accordance with MUTCD. (Please see Appendix C)

Each speed hump must be painted with a pattern that makes them visible to drivers and provide a safe and reasonable sight distance. (Please see Appendix D)

Speed humps should not be placed on sharp curves (either vertical or horizontal). If the curves are too sharp, it can result in lateral and/or vertical forces on the vehicle when traversing the speed hump. Speed humps should not be placed on a vertical curve with less than the safe stopping sight distance. Placing humps on horizontal curves increase the risk of losing control of a vehicle because it will not approaching perpendicular to the hump.

Standard speed humps are 12 feet long which is longer than the average wheel base length for cars (10 ft). This allows the car to maintain control while passing over the hump and omits "bottoming out". Vehicles with a wheel base longer than 12 feet will experience the same effect as a speed bump (jolting of cargo and passengers). If traffic volumes consist of more than 5% long wheel base vehicles, speed humps should not be installed. Because the wheel base length of most buses is greater than 12 feet, speed humps should not be placed on transit routes.

Speed humps should not be placed on major emergency vehicle response routes. In Britain, fire department and ambulance drivers reported having to slow down to 10 mph when crossing each hump to avoid damage to on board equipment, thus increasing emergency response time.

Speed humps along a street can divert traffic to a nearby route. If traffic engineering studies show that the diverted traffic may cause equal or greater problems on a nearby route, speed humps should not be installed.

EXPECTED RESULTS

Research has shown that speed humps, when designed and installed properly, reduce vehicle speeds to 15-20 mph when traversing speed humps and 25-30 mph in between properly spaced speed humps. When traversing a speed hump, the vehicle experiences a gentle rocking motion that increases with speed. This enables the speed humps to be self-enforced because the vehicle occupants will experience discomfort when passing over a hump at higher speeds and a jolting when passing over at excessive speeds.

Although speed humps have been proven to be effective at reducing speeds, there are drawbacks. Installed speed humps have actually been removed in response to resident complaints. The major complaints have been aesthetics of having speed humps and the increased noise level at each hump although the net noise change throughout the controlled strip is insignificant.

Although they are the most important group, more than just the residents are affected by the installation of speed humps. Other groups such as emergency service providers, street maintenance providers, school

districts, transit operators, refuse collection agencies will be affected and should, therefore, be informed and consulted concerning the installation of speed humps.

Bicyclists and Motorcyclists

Bicyclists and motorcyclists will have the most direct physical impact of all travelers passing over the speed humps. It should be noted that if the hump has a length that is shorter than the wheel base of a bicycle (3.5 feet), the hump should be no higher than 2 inches so that the toes of a bicyclist do not strike the humps.

Liability

Speed humps are not addressed in the Manual for Uniform Traffic Control Device but are instead geometric roadway design features. If not installed properly and property damage or personal injury occur, the installing agency may be held liable. In fact, many California courts have held public agencies liable for damage and/or injury resulting from both speed humps and speed bumps. It is prudent to document justification for all decisions made concerning installation. It is also important to review state and local laws to identify regulations pertaining to roadway design, roadway maintenance, traffic control, or other elements that might be related to the use of speed humps or other geometric design features.

FEEDBACK FROM IOWA

City	Favorable		Unfavorable	
Ames			x	residents don't want
Cedar Rapids			x	
Council Bluffs	x	Citizen requests		
Iowa City	x	Have a strip installed		
Sioux City	x	Citizen requests		
West Des Moines			x	Diverts traffic to other routes

CONCLUSION

The procedure for installation begins with the residents' request and continues with traffic engineering studies to determine the need for speed humps. These studies include but are not limited to: safe sight distance, pedestrian studies, vehicle classification, traffic count, and average speed. Current land use, school routes, "as built" plans, other control devices, and stop sign compliance should also be examined.

If it is determined that speed humps are the best solution for a roadway, then the installation can begin. The humps installed should follow the design criteria. They should be 12 feet long and 3-4 inches high (see Appendix A), have accompanying warning signs in accordance with MUTCD (see Appendix C), and be painted with a pattern that makes them visible to drivers and provide a safe and reasonable sight distance (see Appendix D).

If designed, installed, and maintained properly, speed humps can be a safe, effective method of reducing vehicle speeds through residential areas.

BIBLIOGRAPHY

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Attachment 7

WOODWARD HEIGHTS SPEED HUMP RESIDENT FEEDBACK

The City solicited feedback from residents who live within 200 feet of the temporary speed hump (addresses 77 through 82). Following is a summary of the input we received:

I would like the speed hump removed. Like many people, I work from home now and the added noise of cars crashing over the humps and cars accelerating doesn't seem to be work it considering the decent average speed of traffic.

Perhaps if we feel the need to enhance pedestrians safety, we could explore a permanent crossing system of pedestrian summoned lights. Can we stage a policeman at the intersection to observe if drivers are failing to yield to pedestrians?

Thank you for maintaining a safe place for us here.

---

* The noise is terrible. Every 15-20 seconds a car bangs and crashes over the speed bump. If a delivery van, truck, or landscape trailer goes over it at anything over 10 mph it sounds like a car crash. Additionally, the EXTRA noise of squeaking brakes as cars approach, and peeling out and revving engines as people pull away is very disturbing. The speed bump is a sound-and- noise-causing quality of life issue for the residents near the speed bump.

* I believe the speed bump is dangerous. The other day in the rain I went over the speed bump while turning into Bermuda and my car skidded sideways because of of it unsettles the car in the middle of the turn. The placement of the speed bump in the intersection is unsafe.

* The placement of the speed bump at the BEGINNING of the long 25mph street section doesn't make sense. People may slow down for the speed bump but they speed up right after and there are no more stop signs or speed bumps the rest of the way to Woodward Ave. All you're doing with the placement at Bermuda is slowing cars down at the start of the street. (Or the very END of the street for cars traveling eastbound from Woodward). If a speed bump is necessary (it isn't!) it should be places in the middle of the stretch from Bermuda to Woodward. I've never seen a speed bump placed on the end of the street. It makes no sense.

* After speaking with you and learning that the avg speed of cars at the intersection of WW Heights and the westernmost Bermuda intersection is 25.4 mph, it seems that eliminating the stop sign and adding a pinch-point has had the desired effect of slowing traffic without all of the noise and safety issues that exist because of the speed bump.

* A dangerous thing happened several times to me over the last few days and my wife mentioned it too: Because of the placement of the speed bump right at the intersection, when you slow down to 5 mph to go over the bump while traveling eastbound, northbound cars at Bermuda mistakenly think you have a stop sign because you are slowing almost to a stop and they pull right out. I almost got T-boned

twice today and there has been quite a bit of honking today. I'm guessing for the same problem. It's just really a lousy location for a speed bump any way you look at it.

I would encourage you to remove the horrible speed bump and if absolutely necessary, add curb bump-outs at both Bermuda intersections. There is already enough noise in this street, we don't need the added noise from the stop-accelerate and crash-bang of cars going over a speed bump.

I feel the speed hump makes living here much louder but that's only with trucks that are not supposed to come this route anyway, why are we letting dual gravel haulers come through daily during the week pretty much when this is a no truck route, lack of enforcement allows this to continue. This road should be known locally as the road less traveled by outsiders for sheer enforcement alone but our officers would rather sit under 696 and catch speeders coming south and going north on Woodward, my perception is our residential streets should be their top priority. **I think with trucks being enforced as a no go, the hump should stay**. As I write this a dual hauler just slammed over the hump🤦

We should also build out the curb at the crosswalk to the East like by the hump imho.

I feel overall traffic seems to have slowed but gotten louder.

---

1) **Not permanent unless there are no other options**

2) Yes, the speed hump is noisy, especially the big heavy trucks, landscapers and others with trailers (everything in their trailer bounces and bangs!) I have lived on this corner for over 25 years. Traffic at this intersection has been an issue since the traffic light was removed. The speed hump HAS slowed some traffic down, mostly driving east. The traffic driving INTO the city is the real problem as they do not slow down soon enough, if at all.
    a. The best option would be to have a stop sign placed in Ferndale at the intersection. This would force people to stop before coming into the city and help slow the traffic down. Also, many drivers do not stop even for people in the crosswalk (I watch it from my porch/yard daily). Additionally, a stop sign would keep drivers from speeding around the corner onto Bermuda and up onto my lawn, especially in the winter when they take the turn too fast on slippery roads. I had a car one winter run into my fence! (fortunately not my house)
    b. IF you decide to keep a speed hump, it needs to be moved over closer to the south side as drivers going east are driving half on the hump and half on pavement. Maybe there could also be a "slow down-speed hump ahead" sign placed in Ferndale in addition to the one on the north side.

Living on the border as long as I have, I understand all of the issues in two cities working together, especially on an intersection issue. (I still wish the street light was there!) But I think it is possible and definitely necessary.

Attachment 8 - Resident Email Feedback

Note that resident email addresses have been removed from the below emails.

From: John Allen < >
Sent: Thursday, July 23, 2020 11:09 AM
To: James Breuckman <citymanager@cityofpleasantridge.org>
Subject: Woodward Heights traffic calming

Good morning Mr. Breuckman.

I'm writing you about Woodward Heights traffic. I've observed plenty of it since purchasing my home (14 Woodward Hts., directly behind the stop sign at Indiana and WH) in 1992.

I do realize the limitations that the City is operating under, as Woodward Heights is a "half mile" road and a link between Woodward and the newly designated (but long existing) Iron Ridge area. And while I'm not sold on the traffic calming measures popping up on the street in recent days, I'm willing to keep an open mind during your demonstration period. Efforts at controlling the speed and volume of traffic over the years has almost exclusively focused on police enforcement, with little attention to design and layout. Shifting the balance for a while might (or might not) improve the situation.

That said, I do have one observation/concern: the daily disregard of the no parking zone at the corner of Woodward and Woodward Hts. This is generally a problem only when the used clothing store at the corner is open. Invariably, the owners of these parked cars seem to arrive and depart from the store, although to be fair it's also a problem when a larger funeral visitation is underway at Wessels.

When cars are improperly parked in this area it is extremely difficult and dangerous to turn right onto Woodward Hts from Woodward. Because of the backup on Woodward and the general congestion, I've seen or experienced many direct or near miss rear end accidents. Worse yet, pedestrians existing their cars and heading into the store become obstacles and dangers to other drivers and themselves.

I'm afraid that placing an "entrance gateway pinch point" just east of the Woodward alley will only exacerbate the congestion and worsen an already dangerous situation and serve to undermine whatever the City hopes to achieve with the demonstration project.

I'm suggesting that the parking issue be addressed. Please consider purchasing a bucket of paint to apply to the curb in the no-parking zone from Woodward Ave to the alley. Please have someone from the City or the DDA bring the issue to the attention to the store owner. There is a City owned free lot less than a block away. They should encourage their customers to use it. Finally, because enforcement has a role play whether we like it or not, the PR PD should consider issuing some parking tickets.

Hopefully these simple actions can increase the chances of success for the trial project.

Feel free to respond by email. Or use my cell XXX- XXX-XXXX

Thank you.

From: courtney goodfellow < >
Sent: Thursday, July 23, 2020 6:30 PM
To: James Breuckman <citymanager@cityofpleasantridge.org>
Subject: Woodward Heights

Hello,

I wanted to send an e-mail with my displeasure in the removal of the stop sign on Woodward Heights. I have lived at 72 Woodward Heights for 12 years, and I am disappointed and saddened that PR decided to remove a stop sign that they deemed unnecessary on our street. I have two children under the age of 9 on the Autism Spectrum and when we go on daily walks and I have to hold their hands until we get over to another street because of the high speeds on WWH. Why is it so crucial to have this stop sign removed, did it cause some type of hazard?

If PR is concerned about the safety of their citizens, I truly hope that they return the stop sign. I know that the street was surveyed for 30 mins today and observed people following the speed limit, however I live here, and I am home, and I see people flying down this street all day every day.

I usually keep my opinions to myself regarding our community, however this stop sign removal impacts the safety of my family and I feel that I needed to voice my concerns.

I look forward to your response.

Courtney Goodfellow

From: RUSSELL STABILE <>
Sent: Monday, July 27, 2020 12:34 PM
To: James Breuckman <citymanager@cityofpleasantridge.org>
Subject: Re: Woodward Heights update

Jim, I live at 59 Woodward Heights, which is two houses from the stop sign. I've lived on the street for 45 years and been retired the last 14 years. So my point is, I'm home most of the time, and I can see the traffic patterns on the street. Tom may get a little carried away at times, but I agree with him on the amount of semi- trucks, and the increased speed going through the intersection. Over a two-week period, about a month ago, I counted seven semi's coming down our street. None of them were delivery trucks or had any kind of company name on them. Also, I have noticed a speed increase, once cars realized that the stop sign was gone. I also think there could be more of a police presence, which I think would help immensely. I think the police do a fine job in the city, but their presence would help mitigate some of the concerns on the street. I'm not here to get in a pissing contest, but the only people being affected by the changes, are the people that live on the street. I'm willing to go through the trial period, and then we can exchange ideas. Thx, Russ Stabile

From: Michele Varady < >
Sent: Monday, July 27, 2020 6:30 PM
To: James Breuckman <citymanager@cityofpleasantridge.org>
Subject: Re: Woodward Heights update

Hello James,

I live at 54 Woodward Heights, residing on the property where the "Stop Sign" for westbound Woodward Heights traffic previously existed. When the Stop Sign was present, I have had to occasionally pick up litter thrown from passerby vehicle windows onto my lawn; BUT NOW without the Stop Sign…I am experiencing frustration and near miss accidents from vehicles flying down the street at an accelerated speed, while I am trying to pull out of my driveway. When pulling out of my drive, it is difficult to see traffic coming down Woodward Heights, due to vehicle street parking that tends to block a clear view for both directions. The Stop sign at least cautioned drivers to slow down between Indiana and Bermuda, enough, to prepare for a stop. Now, people are flying down Woodward Heights. Not all drivers are doing this but more than enough to cause an accident. We have loud and heavy, house vibrating trucks, increased traffic flow that is using Woodward Heights as a shortcut, and now…. we have the "Woodward Heights Speedway".

I really don't understand why the City won't allow and support what the residents of Woodward Heights in Pleasant Ridge request and require for us to feel safe and uphold our tax paying property as a pleasant place to live. This traffic situation is extremely aggravating, especially bearing witness to how little the traffic flow at one time, used to be. This once was a pretty quiet street, in comparison to today.

Tom Hendrickson has provided you with more than enough documentation over time, for you to not deny the "wrongdoing" that is happening here.

Michele Varady

From: Howard Smith < >
Sent: Wednesday, September 2, 2020 5:32 PM
To: James Breuckman <citymanager@cityofpleasantridge.org>
Subject: Woodward Heights Blvd.

Hello everyone; I just want to give my thoughts on the traffic calming on Woodward Heights Blvd., now that some time has passed from the stop signs being removed, along with crosswalk signs being installed.

The stop signs removed did NOT make faster traffic. The crosswalk signs really seem to help slow cars, at the intersection, and cars do stop for pedestrians. I don't think concrete needs to be poured there, as what's there currently seems to work great. My house is so much quieter with the stop signs removed! I HOPE you don't put them back. As far as the speed bump goes, I don't think it made any change in speeds, or trucks cutting threw. Sometimes I hear cars pounding over it, all the way to my house (60 Woodward Heights Blvd.), so I can only imagine residents living close to it might want to see it gone. In

my "opinion", the most effective calming measure done so far, is the white stripe that was painted onto the street last fall, that has since worn away.

No matter what's done, as far as traffic calming goes, there are always going to be a few cars ripping through. I do notice it's the same few cars that really speed threw, an older white Subaru station wagon and a newer black Mustang are two of the fastest cars.... maybe after they get two or three speeding tickets on our street, they will slow down... I do think the police patrolling our street has helped a lot too, and hope our street is still patrolled for years to come.

As far as the trucks cutting through our neighborhood street, I think a "TRUCKS NO RIGHT TURN" sign might help a little, for trucks going North on Woodward Ave. wanting to turn East onto Woodward Heights Blvd. I KNOW it won't stop all the trucks, but if it stops a few, it will help. Anything that helps is good!

One last note. I see a black 2000ish 4 door Malibu drive down the street slowly (15 to 20mph) almost every day late in the afternoon, with the driver shouting F---- You to anyone with a Black Lives Matter sign in their yard. This concerns me. I will try to get a plate number off the car, but I don't want him to see me doing that, as someone that does that could be dangerous.

I hope my input helps.

Thank you, Howard