

PUBLIC WORKS DEPARTMENT

Brown County

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PAUL A. FONTECCHIO, P.E.
DIRECTOR

September 12, 2018

RE: Rumble Strip Safety Improvements

Dear Neighboring Landowner:

The Brown County Public Works Department will be installing rumble strips starting mid to late September at a number of intersections on the County Highway system. The Department has communicated with the Townships where the rumble strips will be located, and to date, we have received overwhelming support for the installation of these warning devices.

Brown County has seen 15 deaths from January 2015 to June 2018 and many more injury and serious injury crashes as a result of rural intersection crashes where someone failed to stop at a stop sign. Stop condition rumble strips are an effective tool to fight distracted drivers because they produce a noise and vibration to warn the driver of the upcoming stop condition. Additional signs, pavement marking, etc. will not get the attention of a distracted driver. An FHWA study shows a 39% reduction in fatal and serious injury crashes with the use of stop condition rumble strips.

The main concern many landowners have with the installation of stop condition rumble strips is noise, especially at night. Nighttime (as defined by Chapter 39 of the Brown County Code) is from 10 pm to 7 am. Approximately 85% of rural county highway traffic occurs during daylight hours, with 15% at night, and half (7.5% of the total daily traffic) is in one direction that would be hitting the rumble strip at night. The noise duration for a set of three rumble strips for a stop condition is approximately one second for all three strips (two at 55 mph and one at 45 mph). For the 11 rural intersections where stop control rumble strips will be installed this fall (2018), the total night duration of noise generated by these strips ranges from 41 seconds to 173 seconds for the entire night (a period of 9 hours or 32,400 seconds). Expressed as a percentage, this is 0.15% to 0.53% of the entire night.

Often with roadway design and safety features there are competing interests – cost, noise, aesthetics, property acquisition, and safety are a few of the items. With the recent deaths on the County Highway system and the steady increase in distracted driving, the stop control rumble strips are necessary at certain intersections to fight distracted driving and help save lives.

Here are the intersections the Public Works Department plans to install stop control rumble strips this fall (2018).

Intersection	Stop Control	Install the Following
CTH G & CTH Z	2-Way Stop EB & WB	<ul style="list-style-type: none"> • Double Stop Signs EB & WB • Transverse Rumble Strips EB & WB
CTH G & CTH X	2-Way Stop EB & WB	<ul style="list-style-type: none"> • Double Stop Signs EB & WB • Transverse Rumble Strips EB & WB
CTH G & STH 96 at Shirley	4-Way Stop	<ul style="list-style-type: none"> • Transverse Rumble Strips SB
CTH G & STH 96 at Lark	4-Way Stop	<ul style="list-style-type: none"> • Transverse Rumble Strips NB
CTH EE & CTH U	2-Way Stop NB & SB	<ul style="list-style-type: none"> • <i>Keep double Stops currently in place SB</i> • Transverse Rumble Strips NB & SB
CTH T & CTH K	2-Way Stop NB & SB	<ul style="list-style-type: none"> • Double Stop Signs NB & SB • Transverse Rumble Strips NB & SB
CTH D & CTH Z	2-Way Stop EB & WB	<ul style="list-style-type: none"> • Double Stop Signs EB & WB • Transverse Rumble Strips EB & WB
CTH JJ & CTH QQ	2-Way Stop NB & SB	<ul style="list-style-type: none"> • Double Stop Signs NB & SB • Transverse Rumble Strips NB & SB
CTH Z & St. Pats Church Road	4-Way Stop (New Condition)	<ul style="list-style-type: none"> • Single Stop Signs EB & WB, Single Stop Ahead NB & SB, Add All-Way Signs • Transverse Rumble Strips EB & WB
CTH G & Mill Road	4-Way Stop (New Condition)	<ul style="list-style-type: none"> • Single Stop Signs NB & SB, Single Stop Ahead NB & SB, Add All-Way Signs • Transverse Rumble Strips NB & SB
CTH ZZ & STH 32	2-Way Stop	<ul style="list-style-type: none"> • Transverse Rumble Strips EB

If you have any questions about the work, please call me anytime Monday through Friday, 7:30 am to 4:00 pm at (920) 662-2170.

Sincerely,

Paul Fontecchio, P.E.
Public Works Director / Highway Commissioner

Copy: Dave Landwehr, District 12 County Board Supervisor
 Norbert Dantine, District 13 County Board Supervisor
 John Van Dyck, District 17 County Board Supervisor
 Steve Deslauries, District 20 County Board Supervisor
 Town Chairs – Morrison, Glenmore, Holland, Scott, Eaton, Rockland
 Village of Hobart Public Works Department



Rumble Strips in Brown County

Fighting Distracted Driving & Saving Lives

How do rumble strips help?

The “rumble” alerts a motorist that a stop control intersection is ahead or to not stray from their travel lane.

- Centerline rumble strips reduce fatal and head-on crashes by **44%** ↓
- Stop condition rumble strips reduce fatal and serious injury crashes by **39%** ↓



What is a rumble strip? Rumble strips are indentations in the road surface – shoulders, centerlines, and/or ahead of stop signs – that cause noise and vibration when a vehicle drives over them to warn drivers.

Noise at Night. Rumble strips do create noise; however, the amount of time the noise is produced for stop condition rumble strips is a small portion of the entire night – see table below.

Distracted Driving.

“From January 2015 – June 2018 there were 14,579 total crashes in the county, with distracted driving being a factor for almost 20% at 2,726 crashes. In the same timeframe, there were 828 crashes that were alcohol or drug related (3 times as many distracted accidents as OWI). There were 68 total deaths, with 15 of those from 12 crashes at rural intersections where someone failed to stop at a stop sign.”

Brown County Sheriff Captain Dan Sandberg
Chair of the Traffic Safety Commission

Total ADT	Total Seconds*	% of Night Noise Increase	% Night No Noise Increase
500	38	0.12%	99.88%
750	56	0.17%	99.83%
1000	75	0.23%	99.77%
1500	113	0.35%	99.65%
2000	150	0.46%	99.54%
2500	188	0.58%	99.42%
3000	225	0.69%	99.31%

*Note: Number of seconds of noise generated at night (10 pm - 7 am) by vehicles driving over a stop condition rumble strip using 7.5% of ADT in one direction (85% of ADT is during daylight hours). At 55 mph for two fields and 45 mph for one field, the total time to travel over all three fields equals one second. (ADT = Average Daily Traffic)