Temporary Rumble Strip Evaluation

Devices

- Product vendors contacted HQ Traffic inquiring about providing the devices for evaluation.
- MUTCD allows use in work zones.
- One device is portable and is intended for daily work operations.
- One device is ¼” thick orange removable tape intended for long term operations.

Demonstration Outreach

- HQ Traffic sent out statewide request for interest in using the portable rumble strip product.
- There was no region interest but Pierce County agreed to set up a controlled demo in the yard of their Tacoma facility.
- For the temporary rumble strip tape evaluation, HQ traffic identified a portable signal project in SW region and proposed including the tape in advance of the signal location.

Portable Rumble Strip Demo

- Pierce County closed facility
- 13/16” thick, 12” wide, 11 feet long
- 105 lbs, no fasteners or adhesive needed
- All weather device

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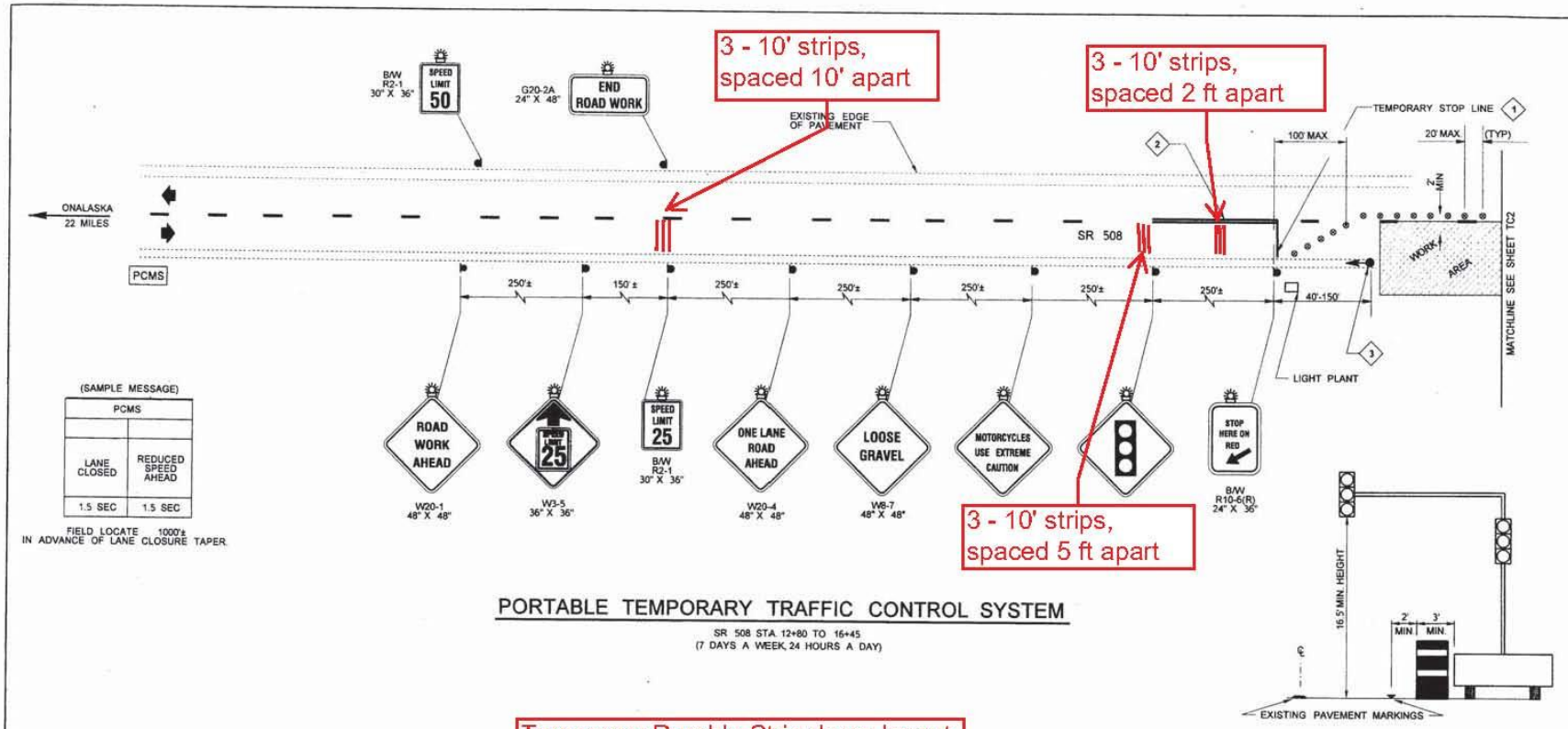
Temporary Rumble Strip Tape

- ¼” thick orange removable tape
- Comes in 50 ft rolls so allows user to cut tape to desired lengths
- Strips were cut to 10 ft lengths for demo
- Manufacturer recommended using adhesive primer since our location will likely include inclement weather.

Temporary Rumble Strip Tape Installation

- SR 508 Bank Erosion Repair Project
- Temporary signal controls alternating one-way traffic.
- 24 hour Temporary speed reduction in place during project duration.
- Rumble strips were installed as per manufacturers recommendation.



PORTABLE TEMPORARY TRAFFIC CONTROL SYSTEM

SR 508 STA. 12+80 TO 16+45
(7 DAYS A WEEK, 24 HOURS A DAY)

Temporary Rumble Strip demo layout

PORTABLE SIGNAL DETAIL

LEGEND

- TEMPORARY TRAFFIC SIGNAL
- CLASS A SIGN
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- TRAFFIC SAFETY DRUM

NOTES

1. STEADY-BURN WARNING LIGHTS (TYPE C, MUTCD) SHALL BE USED ON CHANNELIZING DEVICES AT NIGHT FOR DELINEATION.
2. LOW INTENSITY FLASHING WARNING LIGHTS (TYPE A, MUTCD) SHALL BE USED ON WARNING SIGNS AT NIGHT FOR DELINEATION.
3. ALL SIGNS ARE BLACK ON ORANGE, 48" X 48" UNLESS OTHERWISE NOTED.

NOT TO SCALE

CONSTRUCTION NOTES

1. TEMORARY STOP LINES SHALL BE ILLUMINATED DUSK TO DAWN & IN CONDITIONS WITH LIMITED SIGHT DISTANCE AS DETERMINED BY THE ENGINEER, PER STANDARD SPEC. 1-10.3(3)K. SEE STANDARD PLAN M-24.60-02. SEE SPECIAL PROVISION "PORTABLE TEMPORARY TRAFFIC CONTROL SIGNAL"
2. SEE STANDARD PLAN M-20.10-01. SEE SPECIAL PROVISION "PORTABLE TEMPORARY TRAFFIC CONTROL SIGNAL"
3. SEE STANDARD SPEC. 9-35.14

FILE NAME	G:\444307\03-Design\Design\SR 508\Davison Road Vicinity\PSE SHEETS\DMD098_DE_TC.dgn				REGION NO.	STATE	FED.AID PROJ.NO.	Washington State Department of Transportation	SR508 DAVISON RD VIC. BANK EROSION REPAIR
TIME	2:15:15 PM				10	WASH	ER-0902(346)		
DATE	5/6/2010				JOB NUMBER				TRAFFIC CONTROL PLANS
PLOTTED BY	demestd				10X311				
DESIGNED BY	D. SPAHR				CONTRACT NO.		LOCATION NO.		
ENTERED BY	W. PUNCH								
CHECKED BY	CHEHALIS AEO								
PROJ. ENGR.	C. NEWELL								
REGIONAL ADM.	B. GERNHART	REVISION	DATE	BY					

P.E. STAMP BOX — DATE — P.E. STAMP BOX — DATE

Plot 18 | PLAN REF NO. TC1 | SHEET 14 OF 17 SHEETS

09/21/2010

09/21/2010

SCHOOL
BUS STOP
AHEAD
09/21/2010

Costs

- Portable rumble strips
- $1,250 per strip

- Temporary rumble strip tape
- $239 for a 50 foot roll ($4.78 per linear foot)

Conclusions

- Portable rumble strips show potential but concerns for use on high speed roadways and impact to motorcycles needs further study, may require the use of supplemental sign. Pierce County has agreed to try a field study in a flagging operation.
- Maryland and Minnesota DOT have published favorable studies of the portable rumble strip use on high speed roadways and approved them for use.
- Temporary rumble strip tape was easy to install, the orange color stands out very well on pavement and provides a good rumble effect to driver.
- Both devices have been evaluated in the past by WSDOT but did not have favorable results. The devices were updated by the manufacturers and resubmitted for evaluation.
- Recommend approving for consideration of future use.