WORK ZONE TRAFFIC LEGISLATION IN TEXAS

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This report presents the findings from speed studies before and after implementation of the double-fine law in Texas, as well as citation and fine data from those study sites. Also included in the report is an assessment of other legislation that could be enacted to promote work zone safety in Texas. Results of the speed and citation studies indicate that implementation of the double-fine law has had no measurable effect at the work zone study sites examined in this research. Discussions with law enforcement officers in Texas suggest that the provision that workers must be present in order for the fine to be doubled will be difficult to enforce statewide. Based on these and other discussions, the researchers recommend that efforts be taken to eliminate the worker presence requirement from the current law. The report includes other recommendations regarding legislation that should be considered for implementation.

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1. INTRODUCTION

The desire to improve the safety of motorists and workers in various types of work zones has led many states to pass legislation which increases the fines applicable for traffic violations that occur in these zones. Texas Transportation Institute (TTI) Research Report 1720-1 documented that 42 states had passed legislation of this type by 1997 (*1*). Since the publication of that report, two more states have enacted increased work zone fine legislation. Table 1 presents an updated list of increased fine laws nationally. In addition, two states which had failed attempts to increase fines in work zones during the 1997 legislative session are planning to resubmit the proposed bills in 1999.

Although this type of legislation has become very popular, it has been difficult to estimate how effective these laws have been in increasing motorist compliance with traffic control laws and in improving work zone safety. For instance, an analysis of fatal crash data did not find any significant differences between fatal crash frequencies occurring in states which had enacted increased fine laws and those which had not enacted such laws (*1*). Furthermore, discussions with law enforcement and other officials throughout the country indicate that these types of laws are not easily enforced in some cases, and may not always be well supported by the courts. Unfortunately, researchers have not been able to obtain actual field data from the various states to investigate these issues further. Most states did not collect data at the time the law was implemented and did not have a means of going back into their records to obtain this information after the fact.

Table 1. Enhanced Fine Legislation in Work Zones.

State	Chapter/ Section/ Bill No.	Date Enacted	Violations Affected	Workers Must Be Present?	Type of Enhanced Fine	
					Fixed ($)	Multiple of Original Fine
Alabama	none	---				
Alaska	Amend Sec. 28.05.151	Passed 1998[a]	all traffic violations	no		2X
Arkansas	AC Section 27-50-408	1995	speeding	yes		2X
Arizona	none[b]	---				
California	MVC Section 42009	1994	numerous violations specified	yes		2X
Colorado	CRS 42-4-613.	1997	speeding	no		2X
Connecticut	CGS Vol 5. MVC 95-181 Sec. 1	1995	all moving vehicle violations	yes		2X
Delaware	MVC Title 21, Sec. 4105	1990	numerous violations specified	no		no less than 2X for 1st infraction
Florida	FAC Section 318.18	1996	speeding	no		2X
Georgia	CGA Section 40-6-188(a)(b)(c)	1996	speeding	no	$100-$2000, up to 12 mo. jail	
Hawaii	none	---	---			
Idaho	MVC Sec. 49-657	1996	speeding	no	$50	
Illinois	MVC Sec. 5. Sec. 11-605	1996	speeding	yes[c]	$150 min.	

Table 1. Enhanced Fine Legislation in Work Zones.

State	Chapter/ Section/ Bill No.	Date Enacted	Violations Affected	Workers Must Be Present?	Type of Enhanced Fine	
					Fixed ($)	Multiple of Original Fine
Indiana	IC1993, 33-19 Chapter 6 Sec. 14	1993	speeding	no	.50 cents + $25 if ordered by judge	
Iowa	IC 1997, Sec. 805.8, Subsec 6, Sec. 321.1.	1993, 1997[d]	all moving vehicle violations	no		2X
Kansas	KSA 8-2004(c)	1994	all moving vehicle violations	no		lesser of 2X or $100
Kentucky	KRS, Chapter 37, Sec. 2. 189.2325	1996	speeding	yes		2X ($120-$200)
Louisiana	LRS 32:57(G)	1997	speeding	yes		2X
Massachusetts	none	---	---			
Maryland	MVC Sec. 21-802.1	1991	speeding	no	$270	
Maine	MS Sec. 1. 29-a, MRSA 2075, sub-2.	1995	speeding	no		2X
Michigan	MVC Sec. 257.628, 257.629c, add Sec. 601b(1)	1996	all moving vehicle violations	no		2X
Minnesota	MS 1994, Sec. 169.14, Subd. 5d(d)	1994	speeding	yes		larger of 2X or $25
Missouri	RSM Sec. 304.580 [e]	1994	all moving vehicle violations	no	$35	

Table 1. Enhanced Fine Legislation in Work Zones.

State	Chapter/ Section/ Bill No.	Date Enacted	Violations Affected	Workers Must Be Present?	Type of Enhanced Fine	
					Fixed ($)	Multiple of Original Fine
Mississippi	MC Sec. 63-3-516	1998	speeding	yes		2X or $250
Montana	MVC. 61-8-314 (5)(a)	1997	all traffic violations	yes		2X
North Carolina	Section 1. GS 20-141(j2)	1997	speeding	no	$100-$250	
North Dakota	MVL Sec. 39-09-02	1995	speeding	yes	$40+$1/mph when 10 mph+over limit	
Nebraska	RSN Sec. 11, Sec. 60-6, 190(1)(2)	1996	speeding	no		2X ($20-$400)
New Hampshire	VCS Sec. 265:6-a	1994	speeding	yes	$250-$500	
New Jersey	RS, Title 39-Chapter 4-203.5	1993	all moving vehicle violations	no		2X
New Mexico	none[b]	---	---			
Nevada	NRS Sec. 1, Chap. 484 new sec. 1(a)(b) 2, 3(a)(b)(c) (AB 456)	1997	speeding	yes		lesser of 2X or $1000, and/or 6 mos. jail or 120 hrs. community service

Table 1. Enhanced Fine Legislation in Work Zones.

State	Chapter/ Section/ Bill No.	Date Enacted	Violations Affected	Workers Must Be Present?	Type of Enhanced Fine	
					Fixed ($)	Multiple of Original Fine
New York	Vehicle & Traffic Law 1180(f)(g)(3)	1997	speeding	yes		2X
Ohio	RC 4511.79(D)(3)	1991	speeding	no		2X
Oklahoma	47 OS, 1991, Sec. 11-806 (c)	1996	speeding	yes		2X
Oregon	MVC Sec. 11.230 (3)(a)	1995	all moving vehicle violations	no		2X
Pennsylvania	PaCS Sec. 33-3326 (c)	1989	numerous violations specified	yes		2X
Rhode Island	MVC Sec. 31-14-12.1(a)(b)	1996	speeding	no		2X
South Carolina	MVC Sec. 56-5-1535 (A)(B)(C)	1994	speeding	no	$75-200, 30 days jail or both	
South Dakota	MVC Sec. 32-25-19.1	1996	speeding	yes		2X
Tennessee	TCA Sec. 55-8-152(g)(2)	1996	speeding	yes[c]	$250-$500	
Texas	MVC Sec. 472.022(d)	1997	all moving vehicle violations	yes		2X of min. and max. applicable
Utah	UCA Chapter 138, Sec. 41-6-13	1998	speeding	yes		2X

Table 1. Enhanced Fine Legislation in Work Zones.

State	Chapter/ Section/ Bill No.	Date Enacted	Violations Affected	Workers Must Be Present?	Type of Enhanced Fine	
					Fixed ($)	Multiple of Original Fine
Virginia	MVC Sec. 46-2-878.1	1992, 1995[f]	speeding	yes	$250 max.	
Vermont	VSA Sec. 16.23, Section 1010	1997	speeding	no		2X
Washington	RCW 46.61 Sec. 1	1994	speeding	no		2X
Wisconsin	WS Sec. 1. 346.60	1995	numerous violations specified	yes		2X of min. and max. applicable
West Virginia	MVC Subsec. 17C-3-4b, 17C-3-4a	1994	numerous violations specified	yes	$200 max., 20 days jail or both	
Wyoming	none[g]	---	---			

[a] Bill passed legislation April 1998, will go into effect April 1999.

[b] Bill was submitted but did not pass in the 1997 legislative session.

[c] Bill requires the use of flashing lights when workers are present, and when the increased fine structure is in effect.

[d] The original bill passed in 1993 with a fine structure of the lesser of the double fine or $100 for a violation occurring within any road construction zone. This was revised in 1997 (HF 704) to eliminate the $100 option, and to expand the work activity to include road construction, maintenance, survey, or utility work.

[e] HB 1028 for a $250 fine for speeding violations failed.

[f] In Virginia the original bill passed in 1992 and applied to only "reduced" maximum speed limits in work zones. This requirement was eliminated in 1995 to allow it to be applied to all maximum speed limits in work zones (even those not reduced from the normal speed limit).

[g] Wyoming has a separate (higher) fine structure for speeding at locations where a speed limit has been established based on an engineering study rather than the blanket speed limits defined in the motor vehicle code. This includes construction zones, school zones, transition zones, etc.

Texas implemented its own version of a work zone double-fine law on January 1, 1998 (see Appendix A). This law doubles the minimum and maximum fines applicable for traffic violations which occur in a work zone where workers are present. Because only limited data were available from other states prior to its implementation, it is not known whether or not this law will have the intended effect on motorists and work zone safety in Texas. Depending on the law's overall effectiveness, opportunities may exist to improve the current wording of the law in a future session of the Texas legislature. Another possibility is that other types of laws that have been implemented in a few other states may have potential benefit within Texas.

This report documents the results of research efforts to assess the double-fine work zone traffic law in Texas, to identify needed improvements in that law, and to recommend consideration of other work zone safety-related laws in Texas. The research efforts included speed studies at selected work zones in Texas to evaluate the effect of the double-fine law upon traffic behavior, discussions with law enforcement officials about characteristics of the current double-fine law, analysis of traffic citation disposition records, and discussions with officials in other states concerning other work zone traffic laws that have been implemented. Based on the results of these activities, several recommendations are presented regarding legislation that should and should not be pursued in future sessions of the Texas Legislature.

2. EFFECT OF THE "DOUBLE-FINE" LAW ON WORK ZONE SPEEDS IN TEXAS

Between November 1997 and May 1998, TTI conducted speed studies at 10 different work zone construction projects in three different districts in order to assess whether the implementation of the work zone double-fine law in Texas had an impact upon a driver's choice of speed. These sites ranged from two-lane, two-way highways to multilane freeways. The sites were identified through contacts with construction personnel in each district. Studies were conducted at each site prior to the initiation of the law (in November and December 1997) and then at the same sites again several months after the law had been implemented (April and May 1998). Researchers measured speeds of at least 125 free-flowing vehicles at each site. At seven of the sites, traffic was measured in both directions of travel. In general, work zone activity at each site was limited to spaces adjacent to the roadway (that is, no temporary lane closures were present to otherwise affect speeds).

SITE DESCRIPTIONS

Table 2 summarizes the roadway characteristics of each of the study sites used in this evaluation. Four of the sites were located on freeway facilities, and the remaining six were on rural to suburban highways. Generally speaking, the traffic control plan at each of the highway sites involved two-lane, two-way operations. Furthermore, traffic volumes were low enough at all of the sites such that the work zone did not create significant congestion and thus influence speeds. Work zone project lengths ranged from 2 to 9 mi. Speed limits at three of the sites were not reduced from upstream speed limits. For the other sites, the speed limits were reduced between 5 and 15 mph.

Data collection personnel attempted to collect vehicle speed samples in each direction of travel, where possible. However, at US 69 and at I-10 in Houston, data were only collected in one direction of travel.

Table 2. Study Site Characteristics.

District	Roadway	Work Zone Speed Limit	Upstream Speed Limit	Roadway Cross-Section	Work Zone Length (mi)
Austin	FM 973	65/60 (R)	65/60 (R)	TLTW upstream and in work zone	3
	US 77	50 (R) 45 (A)	55 (R)	multilane undivided upstream, TLTW in work zone	9
	I-35	65/60 (R)	65/60 (R)	suburban freeway (4-lane) upstream and in work zone	6
Houston	US 59	55 (R)	55 (R)	urban freeway (6-lane) upstream and in work zone	2
	SH 6	40 (R)	55 (R)	TLTW upstream and in work zone	3.5
	I-10	55 (R)	60 (R)	urban freeway upstream and in work zone	5
Tyler	SH 154	55 (R)	70/65 (R)	TLTW upstream and in work zone	5
	SP 502	45 (R)	55 (R) NB 70/65 (R) SB	TLTW upstream and in work zone	2
	US 69	55 (R) 45 (A)	(60) R	TLTW upstream and in work zone	6
	I-20	55 (R)	70/65 (R)	rural-suburban freeway (4-lane) upstream and in work zone	2

(R) regulatory speed limit

(A) advisory speed limit

65/60 65 mph regulatory speed limit for passenger vehicles, 60 mph regulatory speed limit for trucks

STUDY RESULTS

Tables 3 through 5 summarize the results of the speed studies at each of the sites. Overall, it appears that the implementation of the law has not had an appreciable effect upon speeds at the sites examined. According to Table 3, average speeds at four of the nine sites (US 77, I-35, SH 6, I-10) were unchanged between the before and after condition. Changes at the remaining sites included both increases and decreases in average speed between the before and after conditions. At some sites, average speeds increased in one direction but decreased in the other. Only one site, SP 502, experienced a significant reduction in average speed in both directions of travel.

Table 4 presents the 85th-percentile speeds at each study site. This measure is typically taken to indicate the maximum speed the majority of drivers believe to be safe and prudent for conditions. As shown in the table, the trends before and after implementation of the law are similar to those seen in Table 3. Very few consistent changes in this speed value are evident. This speed measure remained unchanged at several of the sites, and yielded both small increases and decreases noted between studies at the other sites. It should also be noted that the 85th-percentile speed was much higher than the posted speed limit at seven of the nine sites, even after implementation of the double-fine law.

As a final indicator, Table 5 presents the percentage of drivers who were exceeding the posted speed limit at each of the study sites both before and after implementation of the law. This percentage did decrease significantly at two of the sites (US 59 and SP 502) but increased in one direction at another site. The remaining sites did not experience any significant changes in this percentage. Perhaps more disturbing is the fact that, at seven of the sites, more than one-half of the motorists were traveling faster than the posted limit. Such numbers emphasize the lack of credibility the motoring public currently gives to posted speed limits in work zones, regardless of whether they are regulatory or advisory limits.

Table 3. Effect of Double-Fine Law on Average Speeds.

District	Site	Speed Limit	Average Speed, mph			
				Before	After	Change
Austin	FM 973	65/60 (R)	SB	59	61	+2*
			NB	61	57	-4*
	US 77	50 (R)	SB	58	57	-1
		45 (A)	NB	58	58	NC
	I-35	65/60 (R)	SB	68	68	NC
			NB	69	68	-1
Houston	US 59	55 (R)	NB	65	62	-3*
	SH 6	40 (R)	EB	45	45	NC
			WB	46	46	NC
	I-10	55 (R)	EB	60	61	+1
Tyler	SH 154	55 (R)	SB	59	57	-2*
			NB	58	57	-1
	SP 502	45 (R)	NB	48	44	-4*
			SB	46	43	-3*
	US 69	55 (R)	SB	60	59	-1
		45 (A)	NB	61	63	+2*
	I-20	55 (R)	EB	53	59	+6*
			WB	54	56	+2*

* change is statistically significant (α=0.05)

(R) regulatory speed limit

(A) advisory speed limit

65/60 65 mph regulatory speed limit for passenger vehicles, 60 mph regulatory speed limit for trucks

Table 4. Effect of Double-Fine Law on 85th-Percentile Speeds.

District	Site	Speed Limit	85th-Percentile Speed, mph			
				Before	After	Change
Austin	FM 973	65/60 (R)	SB	65	69	+4
			NB	68	65	-3
	US 77	50 (R)	SB	64	64	NC
		45 (A)	NB	65	65	NC
	I-35	65/60 (R)	SB	72	73	+1
			NB	73	73	NC
Houston	US 59	55 (R)	NB	70	67	-3
	SH 6	40 (R)	EB	51	57	+6
			WB	49	51	+2
	I-10	55 (R)	EB	66	66	NC
Tyler	SH 154	55 (R)	SB	65	62	-3
			NB	64	64	NC
	SP 502	45 (R)	NB	53	49	-4
			SB	53	46	-7
	US 69	55 (R)	SB	65	65	NC
		45 (A)	NB	66	70	+4
	I-20	55 (R)	EB	58	63	+5
			WB	59	59	NC

(R) regulatory speed limit

(A) advisory speed limit

65/60 65 mph regulatory speed limit for passenger vehicles, 60 mph regulatory speed limit for trucks

Table 5. Effect of Double-Fine Law on Motorist Compliance to Speed Limit.

District	Site	Speed Limit	Percent Exceeding Speed Limit, mph			
				Before	After	Change
Austin	FM 973	65/60 (R)	SB	12	13	+1
			NB	28	29	+1
	US 77	50 (R)	SB	92	85	-7
		45 (A)	NB	89	88	-1
	I- 35	65/60 (R)	SB	75	71	-4
			NB	78	70	-8
Houston	US 59	55 (R)	NB	100	87	-13*
	SH 6	40 (R)	EB	85	78	-7
			WB	86	87	+1
	I-10	55 (R)	EB	78	87	+9
Tyler	SH 154	55 (R)	SB	66	60	-6
			NB	63	62	-3
	SP 502	45 (R)	NB	76	39	-37*
			SB	54	32	-22*
	US 69	55 (R)	SB	74	69	-5
		45 (A)	NB	87	90	+3
	I-20	55 (R)	EB	29	75	+46*
			WB	48	56	+8

* change is statistically significant (α=0.05)

(R) regulatory speed limit

(A) advisory speed limit

65/60 65 mph regulatory speed limit for passenger vehicles, 60 mph regulatory speed limit for trucks

DISCUSSIONS WITH TEXAS DPS

Although citation data from the study sites are not yet available, TTI researchers have also discussed the enforcement of the double-fine law with Texas Department of Public Safety (DPS) officers. The officers did indicate that their old ticket books did not include a special check box to indicate that the citation was issued in the work zone. Although the new tickets will include such a box, an extensive inventory of the old tickets exists. The supply of old tickets will be exhausted before the new tickets are used. In the interim, it is up to the officer's discretion whether to make a note on the ticket to indicate that it was issued in a work zone.

Officers who were contacted did express some concern over the enforcement difficulties associated with the "workers present" component of the double-fine law. Although they were not aware of instances yet where tickets had been dismissed, they were concerned about an officer's ability to testify under oath that he or she knew that workers were present at a site when issuing a citation. Because of the dynamics associated with work activities, officers felt that they could not be sure when work crews were actually present at a work zone unless they had just passed through the zone and seen them. They expected that officers were probably going to be rather conservative in issuing these types of citations because of this clause in the law.

When asked their opinion about how local justices of the peace (JPs) who actually determine fines for citations issued in their jurisdictions have or will implement the double-fine law, officers felt that it would vary widely from location to location. The officers emphasized that the law only doubles the maximum and minimum fines, and does not require the JP to actually double any fine issued. They said that many JPs have a "courtesy letter" that the officers carry to give motorists, which indicates the fines that the JP issues for typical offenses. Analysis of a sample of these courtesy letters and of citation disposition data obtained from the DPS is provided in the next chapter.

3. COURT SUPPORT OF DOUBLE-FINE LAW IN TEXAS

JUSTICE OF THE PEACE COURTESY LETTERS

Analysis Procedure

Many JPs prepare "courtesy letters" that enforcement officers in their jurisdiction hand out to motorists who are cited for a traffic violation. The letter indicates the fine that the JP has set for that violation and typically provides information on how the motorist can pay that fine by mail to avoid appearing in person in court.

Officials with the Texas DPS provided TTI researchers a total of 246 courtesy JP letters collected from DPS area offices across the state. Appendix B identifies those jurisdictions represented. Researchers reviewed each courtesy letter to determine the following:

- whether the letter made any reference to traffic violations occurring within a construction or maintenance zone,
- whether the letter specifically stated that the fines noted for the various violations were doubled (or otherwise increased) if occurring in a construction or maintenance zone,
- whether the letter specified other increased fines (not necessarily a doubling of fines) for violations in construction or maintenance zone, and
- the date that the courtesy letter was written.

Results

A summary of the findings from that review are provided in Table 6. From the data in this table, it is quite evident that the majority of JPs have not explicitly addressed the January 1, 1998, implementation of the double-fine law in Texas in their courtesy letters. Only 12.6 percent of the courtesy letters reviewed specifically mentioned the doubling of fines in work zones. Another 6.5 percent of the letters did indicate that the motorist was to contact the court for specific fine information if the violation occurred in the work zone. Presumably, these fines could be increased above those assessed for the same violation outside of a work zone. However, the researchers did not have data to support or refute this presumption. The

remaining 81 percent of the letters reviewed made no special reference to higher fines or special attention to violations occurring in the work zone. Only about one-third of the letters included a date on them, so it was not possible to determine whether most letters had been written before or after the implementation of the double fine law.

Table 6. Summary of JP Courtesy Letters.

Letter Component	Percent of Letters
Indicates that fines for violations in work zones are doubled	12.6
Indicates that the motorist must contact the judge for fines if the violation occurs in a work zone	6.5
Makes no mention of increased fines in work zones	80.9

The law as written requires that workers be present at the site in order for the higher maximum allowable fine ($400) to be applicable (normally, fines must be between $1 and $200 for most traffic violations). Interestingly, only one of the letters obtained in this sample made any reference to a worker presence requirement in their courtesy letter to motorists. Another interesting fact is that doubling the fines, in many cases, does not cause them to exceed the original $200 maximum that existed before the new law was enacted. Specifically, of those courtesy letters which stated "fines are double in construction zones," only 42 percent of the doubled fines exceeded that original $200 maximum.

DISPENSATION OF WORK ZONE TRAFFIC CITATIONS

Analysis Procedure

TTI researchers identified the beginning and ending control-section/milepoint limits of each construction project analyzed in Chapter 2. TxDOT personnel then converted these limits to the reference marker system utilized by DPS when identifying the location of violations on citations issued. These reference marker limits were then submitted to the Information Research section of DPS, who pulled information for all citations issued within these reference marker limits over a specified period of time. Portions of the citation database requested for each citation record included the following (obviously, not all fields would be filled in for each citation record):

- alleged speed and posted speed limit (if the citation is for speeding),
- citation date,
- route and mile marker location,
- county and court to which the citation is assigned,
- disposition date,
- method of dispensation (fine levied, citation dismissed, defensive driving taken by offender, etc.), and
- amount of fine.

Researchers requested all citation records for each study section over two consecutive six-month periods; from July through December 1997 (immediately prior to implementation of the double-fine law), and from January through June 1998 (immediately after implementation of the law).

It is important to note that DPS traditionally did not record information on whether or not citations were issued in a construction or maintenance zone. In fact, the old tickets issued by the officers do not even have a place where he or she can check that the citation occurred in a work zone. Once the double-fine law was passed, DPS did revise their ticket format to include a box to check if the citation occurred in a work zone. However, the agency had a

large inventory of old tickets still warehoused and planned to deplete that inventory prior to printing and utilizing the new ticket format. Consequently, officers in the field must make a special handwritten notation on the back of the citation if they wish to indicate that it was issued in a work zone.

DPS officials have estimated that they write approximately 2000 citations per year (of the approximately one million citations they issue) which are noted as occurring in work zones. Unfortunately, they do not cross-reference the information on work zone citations that they maintain with the disposition database utilized in this analysis. Consequently, researchers could not examine the fine structure and other characteristics of those citations which DPS identifies as occurring in work zones. However, as will be seen in the following section, many of the citations issued statewide in work zones are not denoted as such.

Results

Table 7 presents a summary of the total number of citations issued at each site in the before and after analysis time periods, along with the approximate citation rate at that site (citations per mile per year). The data is weighted heavily by activity on I-35 in Travis county north of Austin, where approximately 60 to 70 percent of all citations examined herein were issued. Also shown in Table 7 is the percent change in citation activity between the before and after periods. Considerable variation is evident on a site-by-site basis. However, citation activity overall was relatively consistent between the two time periods, with only about 5 percent fewer citations being issued overall in the after period.

Table 7. Citation Frequency at Each Study Site.

Site	Citations Before (#/mi/yr)	Citations After (#/mi/yr)	Change
SH 6	63 (48.5)	59 (45.4)	-6%
I-10	20 (22.2)	22 (24.4)	+10%
SH 19	7 7.0)	6 (6.0)	-14%
I-20	41 (34.2)	14 (11.7)	-66%
I-35	840 (101.8)	734 (89.0)	-13%
US 69	115 (27.7)	164 (39.5)	+43%
US 77	32 (4.3)	47 (9.6)	+124%
SH 332	108 (154.3)	101 (144.3)	-6%
FM 973	3 (3.0)	2 (2.0)	-33%
SS 502	2 (2.0)	5 (5.0)	+150%
US 59	12 (9.2)	15 (11.5)	+25%
SH 288	4 (8.0)	5 (10.0)	+25%
TOTAL	1236 (35.0)	1174 (32.7)	-5%

For many of the citations, only the citation date and location were available (DPS either had no other data on that citation or had not yet been able to enter it into the database). Because of the relatively small number of citations issued at many of the study sites and the even smaller number of those citations for which complete data were available, researchers combined the data into one set in order to assess overall trends in citation disposition before and after implementation of the double-fine law. For those citations with complete data available, Table 8 illustrates the overall trends regarding the eventual disposition of citations (for all study sites combined). Review of the data in Table 8 indicates small but statistically significant changes between the before and after time periods. Whereas 65 percent of motorists pled guilty to the citations received in the before time period, 54 percent did so in the after period. The number of violations which were dismissed also fell slightly between the before and after period (from 15 percent down to 10 percent). These small decreases in the after period were offset by a small increase in the percentage of citations for which motorists took defensive driving (and subsequently had their tickets dismissed). In the before period, 20 percent of citations were dispensed in this manner; in the after period, 36 percent were dispensed this way. A test of independence indicates that the method of disposition did differ significantly between the before and after time period ($X^2 = 9.22 > X^2_{(0.05,2)} = 5.99$).

Table 8. Disposition Methods of Work Zone Citations.

Disposition Method	Before Period (n=260)	After Period (n=80)
Pled Guilty	65%	54%
Citation Dismissed	15%	10%
Motorist Took Defensive Driving	20%	36%

($X^2 = 9.22 > X^2_{(0.05,2)} = 5.99$, disposition methods differ between the before and after periods)

Information on fines issued was also less complete than TTI researchers had hoped. Whereas a controlled comparison by citation type and site (i.e., jurisdiction) would have been the preferable approach, available data only allowed for site comparisons at I-35 in Travis County and US 69 in Harris County. Furthermore, these comparisons could only be made for (1) all citation fines combined, and (2) speeding citations (differentiation among the degree of the speeding was not possible, unfortunately).

Table 9 shows average fines before and after implementation of the double fine law for the following categories:

- all citations at I-35 and US 69,
- speeding citations only at I-35 and 69,
- all citations at all sites combined, and
- speeding citations only at all sites.

No statistically significant differences in average fines were detected at either site analyzed individually. With all citations combined, researchers did detect a significant decrease in average fine between the before and after periods. However, when only speeding citations were considered, the averages were again not significantly different. It is important to realize that many of the citations issued in these construction zones may not have been candidates for the double fine law (since information on whether workers were present is not included in the citation database). Nonetheless, it is very clear from the available data that the law had no effect in increasing fines for citations that were issued within the construction sites examined in this analysis.

Table 9. Comparison of Fines before and after Double-Fine Law Implementation.

Site	Before Period	After Period	Change
I-35			
all citations	$157.15	$118.25	-25%
speeding citations	$124.95	$102.38	-18%
US 69			
all citations	$93.33	$110.81	+19%
speeding citations	$88.78	$103.54	+17%
All Sites			
all citations	$156.46	$111.47	-29%*
speeding citations	$124.94	$104.82	-16%

* Average fines significantly different between the before and after periods (combined $\alpha = 0.05$ for all comparisons)

4. IMPLEMENTATION CONSIDERATIONS WITH WORK ZONE TRAFFIC LEGISLATION

Throughout this project, TTI researchers have had a dialogue with officials in several states regarding the implementation of their double-fine or other traffic laws specifically applicable to work zones. The following issues were of key interest to researchers:

1. Which states, with a worker presence requirement in their double-fine law, have eliminated or attempted to eliminate that requirement through subsequent legislation? How successful were these attempts?

2. Why were other laws relating to work zones (such as failure to obey a flagger, endangerment of a highway worker, etc.) enacted? How successful have they been? What administrative and technical requirements exist for implementation?

Researchers investigated the following laws or components of laws:

- worker presence requirement of the increased fine laws,
- minimum fine levels specified in the increased fine laws,
- worker/flagger safety laws (reckless endangerment of a highway worker, failure to obey a flagger),
- setting regulatory speed limits without a commission minute order,
- using increased fines to pay for additional enforcement, and
- video radar enforcement.

WORKER PRESENCE REQUIREMENT

Upon additional review of state legislation and contacts with various officials, TTI researchers could not find a state with a worker presence requirement in the double-fine law that had (as yet) rescinded that requirement. However, officials in two states (New York and

Pennsylvania) have continued to voice concerns over enforcement problems of their laws which require workers to be present, and would like to see that requirement removed. At the same time, states without the workers present requirement in the double-fine law have not initiated new legislation to add that requirement to the law books.

Two states which require workers to be present have also established requirements to notify motorists that workers are present through the use of a flashing light assembly (Illinois and Tennessee). Tennessee law requires a light to be present in order for the double fine to be valid, whereas the Illinois Department of Transportation (DOT) chose to implement this light as a policy decision by the department in order to assist both motorists and enforcement in knowing when the law is in effect. Presently, this approach does appear to be working in these states, although no citation or other corroborating data were available. However, other states which have considered a similar technology have noted that the lights represent a significant additional expense and require the development of specific operational policies for their use.

MINIMUM FINES REQUIRED

Texas is one of only two states (Wisconsin is the other) with increased fine legislation that specifies only that the minimum and maximum allowable fines be doubled, rather than a fixed increase or a doubling of the actual fine imposed for the violation. It is interesting to note that minimum fines specified by law in Wisconsin are much higher than those in Texas, as shown in Table 10. Whereas Texas law generally allows a higher maximum fine to be set against a motorist who commits one of the violations shown, the minimum fines allowed to be set are much lower than required by Wisconsin law. For example, the minimum fine specified for a speeding violation in a work zone in Wisconsin is $60, compared to the $2 minimum fine for Texas.

Table 10. Comparison of Wisconsin and Texas Minimum and Maximum Fines.

Wisconsin Statutes Location	Wisconsin		Corresponding Texas Double-Fine Requirement
	Violation	Double Fine	
346.17(5)	346.04(1) or (2) failure to obey official traffic control devices or fleeing from an officer	$40-$200	$2-400
346.22(1)(b)	346.18 (6) failure to obey yield sign	$40-$200	$2-400
346.43(1)(b)3	346.37 or 346.39 failure to obey signal or flashing beacon	$40-$200	$2-400
346.49(1)(c)	346.46 (1) failure to obey stop sign or intersection stop	$40-$200	$2-400
346.60(3m)	346.57(2),(3),(4)(d) to (h) or (5) failure to obey speed limit	$60-$1200	$2-400
346.65(5m)	346.62(2) to (4) reckless driving negligently causing bodily harm	(2) $600-$4,000 30 days-1 year imprisonment	$2-400

OTHER WORKER/FLAGGER SAFETY LAWS

Three states (Washington, Oregon, and Montana) have made reckless endangerment of highway workers a specific offense in their vehicle code. These laws basically indicate the following:

> "a person who drives a vehicle in a roadway construction zone in such a manner as to endanger or be likely to endanger any persons or property, or who removes, evades, or intentionally strikes a traffic safety or control device is guilty of reckless endangerment of roadway workers" (excerpted from the Washington Vehicle Code).

Another provision of the law allows a citation to be issued on the basis of a report from a highway worker (that is, the law enforcement officer does not have to witness the offense in order to write a citation for it).

Two states (Oregon and Utah) also have passed laws which make it a specific offense for failing to obey a flagger or peace officer in construction or maintenance zones. These laws also do not require a law enforcement officer to witness the infraction in order to issue the citation.

TTI researchers have had discussions with officials in each of these states to try and determine the rationale behind enactment of these types of laws. Interestingly, none of the states indicated that these laws were an attempt to counter or address a specific type of problem that was occurring in work zones. Instead, they were initiated primarily because they were perceived by officials as increasing the emphasis of worker and flagger safety in work zones. Interestingly, the first state to enact such legislation (Washington) did so in part because of efforts by a widow of a highway worker who had recently been killed in a construction zone. Her concerns over work zone safety led to the development of an overall work zone safety program in that state. Her outcries for harsher penalties for those who drive unsafely in work zones and cause crashes that injure workers were a major force in the submission and passage of the reckless endangerment of a highway worker law. That law was replicated the following year in Oregon, along with the failure to obey a flagger law. Again, sentiments for families of workers recently killed in work zones was a contributing factor to the enactment of those laws. Other states who enacted these laws simply felt that they were positive steps towards increased protection of workers.

Officials in all of the states contacted about these laws indicated that they were not being heavily enforced at this time. As one official put it, these events are not a major problem and happen only on rare occasions. Apparently, the laws are not intended to be utilized as part of day-to-day enforcement operations in work zones, but rather as a means of invoking additional punishment upon motorists who are involved in a crash that injures highway workers.

SETTING REGULATORY SPEED LIMITS IN WORK ZONES WITHOUT A COMMISSION MINUTE ORDER

TxDOT speed zoning procedures currently allow engineers responsible for construction projects to adjust posted regulatory speed limits between the normal speed limit for that roadway and a lesser speed limit approved by the Commission when work activity is present and slower speeds are believed to be warranted. However, it is the researcher's understanding that a commission minute is still required prior to the beginning of the project to authorize that the lower regulatory limits can be posted when determined to be appropriate by the engineer. While the current process does provide speed limit flexibility during construction projects, it does not allow lower regulatory speed limits to be posted at maintenance work zones that are often short in duration and offer minimal advance notice. Unfortunately, these are the types of work zones that often require workers to be out next to high-speed traffic without the protection of longitudinal barriers or large buffer spaces. Because this type of work zone is so temporary, most motorists passing through it do not have prior knowledge of what is going on or what they are expected to do to negotiate the zone.

Although work crews are allowed to post lower advisory speeds for these types of conditions, enforcement officials acknowledge that they do not usually enforce advisory speed limits. Furthermore, the lack of ability to post lower regulatory speed limits for maintenance activities creates a perceptual inconsistency in work zone speed limits in general. For example, two work zones (one a short-term construction activity and one a maintenance activity) on the same roadway may involve the same general traffic control strategy (such as a single-lane closure). From the motorist's perception, very little difference will be evident in the two work zones. However, the construction zone could have a lower speed limit posted while it is in place, whereas the maintenance zone will have only an advisory speed posted, if anything.

Researchers have had discussions with officials in other states who have enacted legislation which allow DOT personnel to post lower regulatory speed limits for maintenance work zones. Minnesota was one of the first to implement such a law. The law specifies the magnitude by which the posted speed limit can be reduced (the legislation adopted by Maine

follows a similar approach). Their experiences with the law have been positive, based on limited before-after speed data. Other states have written their laws to allow a default work zone limit to be valid on a given type of roadway, regardless of whether it is a construction or maintenance activity. The engineer is then allowed to use that limit or not in the work zone depending on conditions.

USING FINES TO PAY FOR ADDITIONAL ENFORCEMENT

Both Kentucky and Indiana have adopted legislation which directs the additional funds collected by the double-fine law to be specifically used for work zone enforcement. The project in Kentucky started with borrowed money totaling $10,000. About 40 projects have been funded since the program's inception (about two years ago). The project has always been in the black and is currently making money (about $30,000 are available right now). It is estimated that this activity requires about 20 percent of one person's time to administrate in that state.

Work zones on interstates (800 centerline miles) and four-lane controlled access parkways (500 centerline miles) are the focus of the program, although work zones on some two-lane roads have been approved. To determine which projects are funded, the process is as follows:

1. The district engineer sends an e-mail to headquarters requesting implementation of the program for construction or maintenance zone in the following fiscal year.
2. The e-mail is forwarded to three people who decide whether the request should be honored.
3. If approved, the state police and the highway patrol (two separate agencies) are informed of the work zone limits, times, and bi-weekly schedules.
4. The enforcement agencies are responsible for developing an enforcement. The officers are paid overtime rates ($33/hour) and bill the DOT in 200-hour blocks.

5. Before enforcement begins, the DOT places courtesy calls to the district judge and county attorney, and usually sends a representative to make a public appearance and provide a story about work zone safety results to the local papers.

One related problem that has been noted with the law in Kentucky is that the local elected county judge (Kentucky has 120 counties) has the authority to send the violator to traffic school to dismiss the points and the fine (Kentucky operates on a point system for retaining driving privileges). The DOT is considering an attempt to modify the legislation to continue to let attendance at traffic school eliminate the loss of points, but have the fine still remain if the violation occurs in a work zone.

The Indiana law also allocates a set portion of the fines from work zones to go back to the DOT for enforcement. These are only applied to state patrol-issued citations. Fine distribution from other enforcement jurisdiction issued citations is decided upon at the local levels. During the winter season, the district engineers from the six districts of the DOT submit reports requesting the additional enforcement on projects they have scheduled for the upcoming construction season. The reports are reviewed, and priority is given to interstate facilities. Typically, six to eight contracts are awarded annually. These contracts generate about $300,000 in fines for the following years' contracts. During some years, the money has been supplemented with Federal Highway Administration (FHWA) highway safety money, bringing the total to over $500,000.

VIDEO RADAR ENFORCEMENT

South Dakota DOT submitted legislation in 1998 to authorize the use of photo radar equipment to identify vehicles violating reduced speed zones in highway work zones. However, legislators felt that photo radar would violate individual privacy rights, and the bill failed. Nonetheless, the DOT has purchased two video laser speed detection units and are using the laser devices for regular work zone enforcement activities. An officer controls the unit and captures the speed and video image. An officer still must stop the vehicle in order to issue a citation. They have experimented with the use of the device to send out warning

letters. It is hoped that this video component of the device will eventually eliminate the need for an officer to appear in court when a citation is contested (by providing photographic evidence of the vehicle and its speed). However, officials have not yet actually attempted this in court at this time.

5. WORK ZONE LEGISLATIVE RECOMMENDATIONS FOR TXDOT

SUMMARY OF RESEARCH FINDINGS

As noted in Chapter 2, the results of the field studies indicated that the double-fine law had little effect on traffic speed characteristics in the work zones examined in this research. Changes in average speed after law implementation (relative to the before law condition) ranged from a 4 mph decrease at two sites to a 6 mph increase at another. Average speeds were statistically unchanged at six of the 10 sites. Similar trends were evident when considering the 85th percentile speed of traffic at these sites. In terms of motorist noncompliance with the posted speed limits at the study sites, significant reduction in noncompliance were only noted for two of the 10 sites. At another site, however, noncompliance increased significantly. Noncompliance with the posted speed limit was unchanged between the before and after periods at seven of the 10 sites. What is also disturbing about this last performance measure is the fact that more than two-thirds of the motorists were exceeding the posted speed limit at seven of the 10 sites examined.

The lack of a consistent speed-reducing effect after implementation of the double-fine law is understandable, especially when one also considers the degree to which it has (or rather, has not) altered enforcement efforts and activities in the courts. As was illustrated in Chapter 3, a review of courtesy letters provided by many JPs statewide suggested that fewer than 20 percent have specifically addressed the potential for issuing higher fines for citations occurring in work zones. Part of the reason may lie with the issue pertaining to the requirement that workers be present in order for higher fines (generally above $200) to be assessed. Only one of the 246 letters reviewed actually made mention of the workers presence requirement.

A comparison of citation frequency, disposition methods, and fines levied before and after implementation of the double-fine law found very few changes. Whereas citation frequency overall was approximately the same before and after implementation, a significantly higher proportion of motorists opted for defensive driving training as opposed to pleading guilty and paying the fine. Fines issued for work zone citations were generally

unchanged, especially for the speed-related citations which are perhaps of greater concern to contractors and TxDOT personnel. In other words, no evidence was found to suggest that higher fines were being assessed as a result of the implementation of the double-fine law.

Ongoing discussions with other transportation and law enforcement officials outside of Texas throughout 1998 continued to highlight the difficulties associated with the worker presence requirement of double-fine laws in work zones. Another problem identified included the relatively small minimum fine that is established by the current law. On the other hand, several transportation agencies have successfully had legislation passed which allows the agency representative to establish regulatory speed limits in work zones without having to be approved by a transportation commission or similar governing board. These agencies report good success in tailoring speed limits to represent actual work zone conditions and changes to those conditions as they occur.

LEGISLATIVE RECOMMENDATIONS

Given the results of the research just described, TTI researchers have identified four interim recommendations regarding work zone legislation that they believe should be pursued in Texas in the future:

1. Eliminate the worker presence requirement from the double-fine law.
2. Increase the minimum fines for a violation that is cited within a work zone.
3. Modify the double-fine law to require a fine or greater court costs to be assessed on motorists who receive a violation in a work zone and who take a defensive driving class to have the ticket dismissed.
4. Develop legislation to allow a reduced regulatory speed limit to be posted in certain maintenance work zones.

The following sections describe the rationale behind these recommendations, and summarize the advantages and disadvantages associated with each one.

Recommendation #1: Eliminate the Worker Presence Requirement from the Double-Fine Law

TTI researchers recommend that priority be given to eliminating the requirement that workers be present in a construction or maintenance work zone in order to double the applicable fine. As written, the law places an extra burden upon law enforcement officers to verify worker presence in order to issue citations. Experiences in other states suggest that this burden, coupled with the already difficult task of issuing citations in these areas due to restricted lateral widths and presence of work equipment, can lead to less active enforcement activity in work zones. Obviously, this is counterproductive to the goal of improving work zone safety. Furthermore, the field study data suggest that the double-fine law will not have a significant effect upon motorist behavior unless it is effectively enforced.

Advantages of Eliminating the Requirement

- Removal of the worker presence requirement will simplify enforcement of work zones.
- Removal of the requirement implies that concern exists for motorist behavior in all types of work zones, not just those where workers are present.

Disadvantages of Eliminating the Requirement

- Removal of the worker presence requirement requires a change to the law just passed in the last legislative session. Researchers do not know whether this has any political ramifications in the legislative process.
- Removal of the requirement could give the perception to some that worker safety is not as great a concern in Texas as it was last year. It will be necessary to articulate to legislators and industry officials that the removal of the requirement is not to decrease emphasis on worker safety, but to increase it by making it easier to enforce work zones.

Other Considerations

- If the double-fine law is not changed to eliminate the worker presence requirement, TxDOT should consider implementation of dynamic flashing lights and signs (similar to those used in Tennessee and Illinois) upstream of each work zone where workers are present. These flashing lights would be attached to signs notifying both the public and law enforcement that fines are double and that workers are ahead. While not eliminating the need for enforcement to verify the presence of workers at a site, this assembly can provide some assistance as long as it is implemented properly and consistently. In addition, the presence of a flashing light and sign would also emphasize to motorists that workers are present downstream and that it is important for them to comply with the posted speed limit and other traffic laws. Of course, such a system does represent a significant additional expense to TxDOT and contractors as well as an increase in time and attention that must be devoted to traffic control at each site.

Recommendation #2: Increase the Minimum Fines for a Violation that is Cited Within a Work Zone

As discussed in Chapter 4, the current double-fine law only specifies that the fine for a violation in a work zone must be at least $2 (violations occurring outside of work zones must be at least $1). Texas is the only state where the double-fine law implies such a small minimum fine. There is currently little legal incentive in the new law for the local JPs to significantly raise fines for offenses occurring in work zones.

Advantages of Increasing the Minimum Fine

- An increase would guarantee that a significantly higher fine will be assessed against a motorist who violates a traffic law in a work zone.
- An increase or rewording of the current law would also allow TxDOT and contractors to post on signs in the work zone the minimum fines that will be imposed for violations occurring in the work zone. This technique is used by several other states as an additional deterrent against violations.

Disadvantages of Increasing the Minimum Fine

- This recommendation will require a change to the law just passed in the last legislative session. The political ramifications of this on the legislative process are unknown at this time.
- Increasing the minimum fine reduces some decision-making authority of local JPs. This change may be seen as bureaucratic and heavy-handed by local governments.

Other Considerations

- The minimum fines in work zones in Wisconsin (the other state that doubled the minimum and maximum fines in work zones) are $60 for speeding and $40 for other minor traffic offenses.

Recommendation #3: Modify the Double-fine Law to Require a Fine or Greater Court Costs to Be Assessed on Motorists Who Receive a Violation in a Work Zone and Who Take a Defensive Driving Class to Have the Ticket Dismissed

Drivers in Texas who have not taken a defensive driving class in the last two years can do so to dismiss most types of traffic violations, even those issued in a work zone. In fact, citation disposition data discussed in Chapter 3 suggest a greater number of motorists who were issued citations in the work zones studied in this analysis opted to take a defensive driving course in the post-implementation period of the double-fine law. Although it could not be verified that these motorists chose to take defensive driving to avoid a higher fine, it does illustrate that the double-fine law will not have any threat of increased penalty for those motorists who choose to take this training. Texas legislators should consider a change in the double-fine law that still requires a higher fine or court costs (in terms of a surcharge or similar technique) to be paid if the violation occurs in a work zone, even if the motorist elects to take a defensive driving course and has the ticket subsequently dismissed. As an alternative, the law could be changed to prohibit citation dismissal via a defensive driving course if the violation occurred in a work zone. TTI recommends the first option because less public opposition is expected.

Advantages to Altering the Defensive Driving Allowance for Work Zone Violations

- Changing the law in this manner would extend the spirit of the double-fine law to all motorists, not just those who cannot or do not take defensive driving to dismiss a citation.

Disadvantages to Altering the Defensive Driving Allowance for Work Zone Violations

- Changing the law regarding the defensive driving dismissal option could increase the number of traffic citations challenged in the court system.
- Elimination of the defensive driving dismissal option could increase some motorists' insurance premiums.

Recommendation #4: Develop Legislation to Allow TxDOT Officials to Establish Reduced Regulatory Speed Limits in Construction and Maintenance Work Zones Without a Commission Minute Order

Speed limits in construction zones can be adjusted in real time according to conditions once commission minute approval is obtained to do so for a given project. Unfortunately, this approach does not allow lower limits to be posted at maintenance or utility work zones where little lead time is available to submit a commission minute order request. Likewise, unforseen changes in a construction project which necessitate a speed limit different than that adopted by the commission will currently have to be re-approved before it can be posted. Advisory speed limits may be posted but are not generally enforced. Several states have adopted legislation that allows a lower regulatory speed limit to be posted in a work zone (including maintenance activities) without a commission minute order, and have generally been pleased with the results. Similar legislation should be pursued for Texas.

Advantages of TxDOT Officials Setting Work Zone Regulatory Speed Limits

- Adoption of this type of law would promote more consistency between construction zone and maintenance zone speed limits for certain types of traffic control strategies (such as temporary lane closures).

- Adoption of this type of law could also help place emphasis on the need for reduced speeds at locations where workers are typically out next to traffic without traffic barriers or other protection (i.e., maintenance operations).

Disadvantages of TxDOT Officials Setting Work Zone Regulatory Speed Limits

- Adoption of this type of law has the potential for misapplication of reduced speed limits by contractors or other personnel.
- Adoption of this type of law would require work crews to install additional advance signing which would slightly increase setup and take down time at each work zone.

LAWS NOT RECOMMENDED

TTI researchers recommend that three other laws that have been implemented in other states not be pursued in Texas at this time. The first of these is the payback legislation adopted in Kentucky and Indiana which uses all or part of the fines collected via the double-fine law to pay for additional enforcement (*1*). Because most local municipalities and counties in Texas rely on traffic fines (including those issued in work zones) for a significant portion of their operating revenue, it is believed that significant opposition to splitting fine revenues will result. More definitive legislation designating how fines will be increased in work zones would first be required before any type of payback legislation could be considered. In addition, there will be start up administration costs (extrapolation from Kentucky data suggests these would need to be at least $25,000 in Texas) to TxDOT to implement such a law to manage the funds and determine appropriate disbursements.

The second and third laws not recommended for implementation in Texas are the endangerment of a highway worker and failure to obey a flagger violations (*1*). Discussions with other states indicate that these laws have been implemented primarily to allow stiffer penalties to be imposed on motorists who have crashes in work zones that injure workers, rather than to reduce crash potential, reduce vehicle speeds, or otherwise improve overall work zone safety. It appears both laws would be very difficult to implement effectively and

would not necessarily be expected to have a significant deterrent effect or safety impact unless heavily publicized and pushed very hard in court cases.

6. REFERENCES

1. Ullman, G.L., P.J. Carlson, N.D. Trout, and J.A. Parham. *Work Zone-Related Traffic Legislation: A Review of National Practices and Effectiveness.* Research Report FHWA/TX-98/1720-1. Texas Transportation Institute, College Station, Texas. September 1997.

APPENDIX A:

DOUBLE-FINE LAW IN WORK ZONES

TRC 472.022 OBEYING WARNING SIGNS

(d) An offense under this section is a misdemeanor punishable by a fine of not less than $1 or more than $200, except that if the offense is committed in a construction or maintenance work zone when workers are present, the offense is a misdemeanor punishable by a fine of not less than $2 or more than $400.

(e) In this section:

(1) "Barricade" means an obstruction:

(A) placed on or across a road, street, or highway of this state by the department, a political subdivision of this state, or a contractor or subcontractor constructing or repairing the road, street, or highway under authorization of the department or a political subdivision of this state; and

(B) placed to prevent the passage of motor vehicles over the road, street, or highway during construction or repair.

(2) "Construction or maintenance work zone" means a portion of a highway or street:

(A) where highway construction or maintenance is being undertaken, other than mobile operations as defined by the Texas Manual on Uniform Traffic Control Devices; and

(B) that is marked by one or more signs indicating that it is a construction or maintenance work zone.

(3) "Warning sign" means a signal, marking, or device placed on a barricade or on a road, street, or highway under construction or repair by the department, a political subdivision of this state, or a contractor or subcontractor to warn or regulate motor vehicular traffic. The term includes a flagger deployed on a road, street, or highway by the department, a political subdivision of this state, or a contractor or subcontractor to direct traffic around or on the road, street, or highway under construction or repair.

TRC 542.404 FINE FOR OFFENSE IN CONSTRUCTION OR MAINTENANCE WORK ZONE

(a) If an offense under this subtitle, other than an offense under Chapter 548 or 552 or Section 545.412 or 545.413, is committed in a construction or maintenance work zone when workers are present:

(1) the minimum fine applicable to the offense is twice the minimum fine that would be applicable to the offense if it were committed outside a construction or maintenance work zone; and

(2) the maximum fine applicable to the offense is twice the maximum fine that would be applicable to the offense if it were committed outside a construction or maintenance work zone.

(b) In this section, "construction or maintenance work zone" has the meaning assigned by Section 472.022.

TRC. 729.004. FINE FOR OFFENSE IN CONSTRUCTION OR MAINTENANCE WORK ZONE

(a) This section applies to an offense under Section 729.001 for a violation of Subtitle C, other than Chapter 548 or 552 or Section 545.412 or 545.413.

(b) If an offense to which this section applies is committed in a construction or maintenance work zone when workers are present:

(1) the minimum fine applicable to the offense is twice the minimum fine that would be applicable to the offense if it were committed outside a construction or maintenance work zone; and

(2) the maximum fine applicable to the offense is twice the maximum fine that would be applicable to the offense if it were committed outside a construction or maintenance work zone.

(c) In this section, "construction or maintenance work zone" has the meaning assigned by Section 472.022.

APPENDIX B:

TEXAS JUSTICE OF THE PEACE COURTESY LETTER DATA

Multiple responses from the same district were treated separately. Judge name appears in () when applicable. Respondents are listed first by whether or not they responded and secondly, in alphabetical order.

References to Work Zones:

- Justice courts of Atascosa County-Disregard warning sign at construction $70.
- Justice courts of Brazos County-Construction zone violations must contact judge.
- Justice courts of Calhoun County-Disregard warning signs in construction zone $75 (No other mention of WZ).
- Justice courts of Camp County-Disregard warning signs (construction zone, etc.) $102.
- Justice courts of Cass County-For violations in a construction zone contact the court.
- Justice courts of Childress County-Disregard warning sign $75.
- Justice courts of Cottle County-Disregard warning sign at construction $85.
- Justice courts of DeWitt County-Moving violations committed in a "Construction or Maintenance Work Zone": Contact proper court for fines.
- Justice courts of Dimmit County-Speeding construction zone $130 (after January 1, 1998 fine doubles).
- Justice courts of Goliad County-Moving violations committed in a "CONSTRUCTION OR MAINTENANCE WORK ZONE" Contact proper court for fines.
- Justice courts of Hale County (Phillips)-Effective January 1, 1998, fines for offenses committed in a construction or maintenance work zone are subject to double.
- Justice courts of Hays County-Speeding in school zone or construction/maintenance zone $50 plus $9 for every mile over the limit; Other

traffic offenses in construction/maintenance zone $150 (speeding usually $50 plus $3 for every mile over the limit)

- Justice courts of Hudspeth County, Pct. 3-Construction/work zone --fines double.
- Justice courts of Johnson County-Construction zone violations - double fine.
- Justice courts of Kendall County-Speeding violations in construction zone contact judge.
- Justice courts of Kerr County-Speeding violations in construction zone contact judge.
- Justice courts of La Salle County-Effective January 1, 1998, Traffic fines DOUBLE for offenses committed in a construction zone while workers are present.
- Justice courts of Lampasas County-ALL TRAFFIC ISSUED IN CONSTRUCTION ZONE WITH WORKERS PRESENT-CONTACT JUDGE (stamped on letter).
- Justice courts of Lavaca County-Moving violations committed in a "Construction or Maintenance Work Zone": Contact proper court for fines.
- Justice courts of Llano County-Work zone violations - must contact judge.
- Justice courts of Madison County (Madisonville)-Fine amounts doubled in a construction zone.
- Justice courts of McLennan County-Note: All fines are doubled if citation issued in a construction zone.
- Justice courts of Medina County-Any offense committed in a construction zone contact the court.
- Justice courts of Midland County Pct. 1,2,4-Note: All fines are doubled if citation issued in a construction zone.
- Justice courts of Moore County (Brown)-Speeding construction zone, double the appropriate above fine (1-10 over $65; 11-15 $75; 16-20 $85; 21-25 $105; 26+ $165).
- Justice courts of Navarro County-Court must be contacted for fine amounts on the following: any traffic offense in a work zone (six other items listed to contact court

including school zone, school bus, motorcycle helmet, exhibit. accel, speed > 25 over, overwt. or any CDL violation).

- Justice courts of Nueces County-Effective January 1, 1998 - Fines for construction zone violations double.
- Justice courts of Parmer County-Speeding/road construction contact the judge.
- Justice courts of Palo Pinto County-Construction zone - contact court.
- Justice courts of Potter County, Pct. 1-All fines for offenses committed in a construction or maintenance work zone will be doubled effective 1-1-98.
- Justice courts of Rockwell County (Jones)-Beginning January 1, 1998, fines in construction zones will double except for inspection, seatbelt, and child restraint violations.
- Justice courts of Rockwell County (Karr)-Beginning January 1, 1998, fines in construction zones will double except for inspection, seatbelt, and child restraint violations.
- Justice courts of Rusk-Traffic offenses in construction zone - fines are doubled.
- Justice courts of Shelby County-NOTICE: Fines double in construction zone. Effective January 1, 1998.
- Justice courts of Sherman County, Pct. 1,2,4-Beginning 1-1-98 Fines will be double for violations occurring in a construction zone.
- Justice courts of Sherman County, Pct. 3-Beginning 1-1-98 fines will be double for violations occurring in a construction zone.
- Justice courts of Swisher County-Speeding in Construction up to $400 + court costs.
- Justice courts of Tyler County-NOTICE: All fines are double if citation issued in a construction zone as of 1-1-98. However, contact the court for first time assessment.
- Justice courts of Waller County (#1)-Fines are doubled for violations in construction zone when workers are present.

- Justice courts of Waller County (#2)-After January 1, 1998, all fines in construction zones double.
- Justice Courts of Williamson County-Contact court for construction and school zone or offenses not listed.
- Justice courts of Wood County-Contact the appropriate court for charges or fines not listed. Including fines for any offense that occurred in a school zone or construction zone.

Districts with No Work Zone Reference:

- Garcia, Laredo
- JP of Eagle Pass, TX
- Justice courts of Anderson County
- Justice courts of Andrews County
- Justice courts of Angelina County
- Justice courts of Aransas County
- Justice courts of Armstrong County
- Justice courts of Austin County, JP #1,2
- Justice courts of Austin County, JP #3
- Justice courts of Austin County, JP #4
- Justice courts of Bandera County
- Justice courts of Bee County
- Justice courts of Bell County Pct. 2
- Justice courts of Bell County Pct. 3
- Justice courts of Bell County Pct. 4
- Justice courts of Bexar County
- Justice courts of Blanco County
- Justice courts of Bosque County
- Justice courts of Bowie County

- Justice courts of Brewster County
- Justice courts of Briscoe County
- Justice courts of Brooks County
- Justice courts of Brown County
- Justice courts of Burleson County
- Justice courts of Burnet County
- Justice courts of Caldwell County
- Justice courts of Callahan County
- Justice courts of Cameron County
- Justice courts of Castro County
- Justice courts of Chambers County
- Justice courts of Cherokee County
- Justice courts of Coke County
- Justice courts of Coleman County
- Justice courts of Collin County
- Justice courts of Colorado County, Pct. 1,2,4
- Justice courts of Colorado County, Pct. 3
- Justice courts of Comal County
- Justice courts of Comanche County
- Justice courts of Cooke County
- Justice courts of Coryell County
- Justice courts of Crockett County
- Justice courts of Culberson County Pct. 1
- Justice courts of Culberson County Pct. 3
- Justice courts of Culberson County Pct. 4
- Justice courts of Dallam County
- Justice courts of Dawson County
- Justice courts of Deaf Smith County, Pct.1
- Justice courts of Del Rio (Barrera)

- Justice courts of Del Rio (Brockwell)
- Justice courts of Del Rio (Meave, Jr.)
- Justice courts of Del Rio (Weddle)
- Justice courts of Duval County
- Justice courts of Eastland County
- Justice courts of Ector County
- Justice courts of Edwards County
- Justice courts of El Paso County, Pct. 6
- Justice courts of Ellis County
- Justice courts of Erath County
- Justice courts of Falls County
- Justice courts of Fannin County
- Justice courts of Fayette County, Pct. 1,2
- Justice courts of Fayette County, Pct. 3
- Justice courts of Fayette County, Pct. 4
- Justice courts of Fisher County
- Justice courts of Foard County
- Justice courts of Fort Bend County
- Justice courts of Franklin County
- Justice courts of Freestone County
- Justice courts of Frio County
- Justice courts of Gaines County
- Justice courts of Galveston County, Pct. 8
- Justice courts of Gillespie County
- Justice courts of Glasscock County
- Justice courts of Gonzalez County
- Justice courts of Gregg County
- Justice courts of Grimes County
- Justice courts of Guadalupe County

- Justice courts of Hale County (Davis)
- Justice courts of Hamilton County
- Justice courts of Hardeman County, Pct. 4 (Quanah)
- Justice courts of Harrison County
- Justice courts of Hartley County
- Justice courts of Henderson County
- Justice courts of Hidalgo County
- Justice courts of Hill County
- Justice courts of Hockley County
- Justice courts of Hood County (Granbury)
- Justice courts of Hopkins County
- Justice courts of Hopkins County (Alley, Cooper TX)
- Justice courts of Houston County
- Justice courts of Howard County
- Justice courts of Hudspeth County, Pct. 4
- Justice courts of Hudspeth County, Pct. 1
- Justice courts of Hudspeth County, Pct. 2
- Justice courts of Hunt County
- Justice courts of Hutchinson County, Pct. 2
- Justice courts of Irion County
- Justice courts of Jackson County
- Justice courts of Jasper County
- Justice courts of Jeff Davis County, Pct. 1
- Justice courts of Jim Hogg County
- Justice courts of Jim Wells County
- Justice courts of Jones County
- Justice courts of Karnes County, Pct. 1,3,4
- Justice courts of Karnes County, Pct. 2
- Justice courts of Kaufman County

- Justice courts of Kenedy County
- Justice courts of Kimble County
- Justice courts of Kinney County
- Justice courts of Kleberg County
- Justice courts of Lee County
- Justice courts of Leon County
- Justice courts of Liberty County
- Justice courts of Limestone County
- Justice courts of Live Oak County
- Justice courts of Lynn County
- Justice courts of Marion County
- Justice courts of Martin County
- Justice courts of Mason County
- Justice courts of Matagorda County
- Justice courts of McCulloch County
- Justice courts of Menard County
- Justice courts of Midland County, Pct. 3
- Justice courts of Milam County
- Justice courts of Mills County
- Justice courts of Mitchell County
- Justice courts of Montague County (Sanders)
- Justice courts of Montgomery County
- Justice courts of Moore County (Mulanax)
- Justice courts of Nacogdoches County, Pct. 2
- Justice courts of Nacogdoches County, Pct. 4
- Justice courts of Newton County
- Justice courts of Nolan County
- Justice courts of Panola County
- Justice courts of Parker County

- Justice courts of Pecos County, Pct. 1
- Justice courts of Polk County
- Justice courts of Presidio County
- Justice courts of Rains County
- Justice courts of Randall County, Pct. 1
- Justice courts of Randall County, Pct. 4
- Justice courts of Reagan County
- Justice courts of Real County
- Justice courts of Red River County
- Justice courts of Reeves County
- Justice courts of Refugio County
- Justice courts of Robertson County
- Justice courts of Runnels County
- Justice courts of Sabine County
- Justice courts of San Augustine County
- Justice courts of San Jacinto County
- Justice courts of San Patricio County
- Justice courts of San Saba County
- Justice courts of Schlelcher County
- Justice courts of Scurry County
- Justice courts of Shackelford County
- Justice courts of Smith County
- Justice courts of Somervell County
- Justice courts of Starr County
- Justice courts of Stephens County
- Justice courts of Sterling County
- Justice courts of Sutton County
- Justice courts of Taylor County
- Justice courts of Terrell County, Pct. 2

- Justice courts of Terrell County, Pct. 2
- Justice courts of Terry County
- Justice courts of Titus County, Pct. 1
- Justice courts of Titus County, Pct. 2
- Justice courts of Tom Green County
- Justice courts of Trinity County
- Justice courts of Upshur County
- Justice courts of Uvalde
- Justice courts of Van Zandt
- Justice courts of Victoria County
- Justice courts of Walker County
- Justice courts of Ward County
- Justice courts of Washington County
- Justice courts of Wharton County
- Justice courts of Wheeler County
- Justice courts of Wichita Falls County
- Justice courts of Wilbarger (Vernon)
- Justice courts of Willacy County
- Justice courts of Wilson County
- Justice courts of Winker County
- Justice courts of Wise County
- Justice courts of Yoakum County
- Justice courts of Yoakum County, Pct. 2
- Justice courts of Zapata County
- Justice courts of Zavala County
- Maverick County Attorney (Mireles)
- Milam County Justice #4
- Pct. 2, Laredo (Benavides)
- Pct. 1, Pl 1, Brazoria County

- Pct. 2, Pl 1&2, Brazoria County
- Pct. 2, Pl 1&2, Brazoria County
- Pct. 4, Pl 1, Brazoria County (Fox)
- Pct. 4, Pl 2, Brazoria County (Snead)
- Pct. 1, Pl. 1, Harris County (Gorzynski)
- Pct. 1, Pl. 2, Harris County (Patronella)
- Pct. 3, Pl. 1, Harris County (Parrott)
- Pct. 4, Pl. 1, Harris County (McElroy)
- Pct. 4, Pl. 2, Harris County (Lawrence)
- Pct. 5, Pl. 2, Houston (Yeoman)
- Pct. 4, Laredo (Martinez)