



Highway Enforcement Command

Understanding APD's Strategy Regarding Austin's Traffic Issues

Commander David Carter



Special Command Created

- **Highway Enforcement Command reorganized and expanded by Cmdr. David Carter**
 - Highway Patrol & Response Section
 - DWI Enforcement Section
 - Vehicular Homicide & Traffic Incident Section (wrecker/Vehic Abatement)
 - Air Enforcement



HEC Mission Objectives

- Traffic safety via: enforcement & investigation
- Emergency traffic management “CDR”
- Homeland security issues on major thoroughfares (under development)
 - Interdiction of dangerous persons and/or cargo coming into or thru Austin
 - Mass emergency evacuation

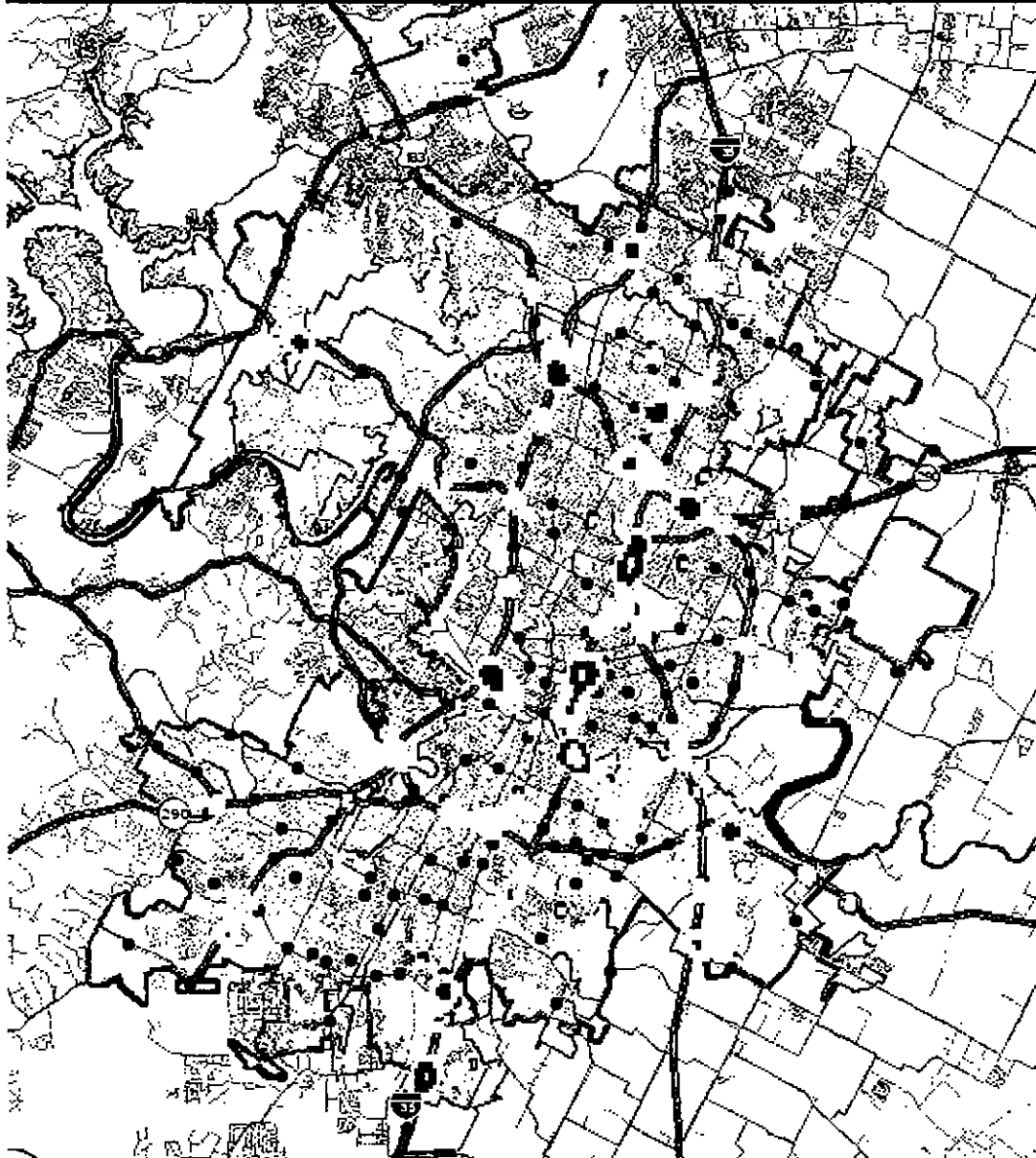


HEC Area of Responsibility

- Assume responsibility for serious injury and fatal collision reduction strategies - freeing up Area Commanders to attack other crime/quality of life problems
- Analysis of data (geographic, temporal and demographic)
- Deploy assets based on data analysis
- Focus toward major crash repetitive locations - tending to be high capacity roads & Freeways



Fatal Traffic Crash Hot Spot- 2000-Dec 2005



"Hot Spot"-approximate definition

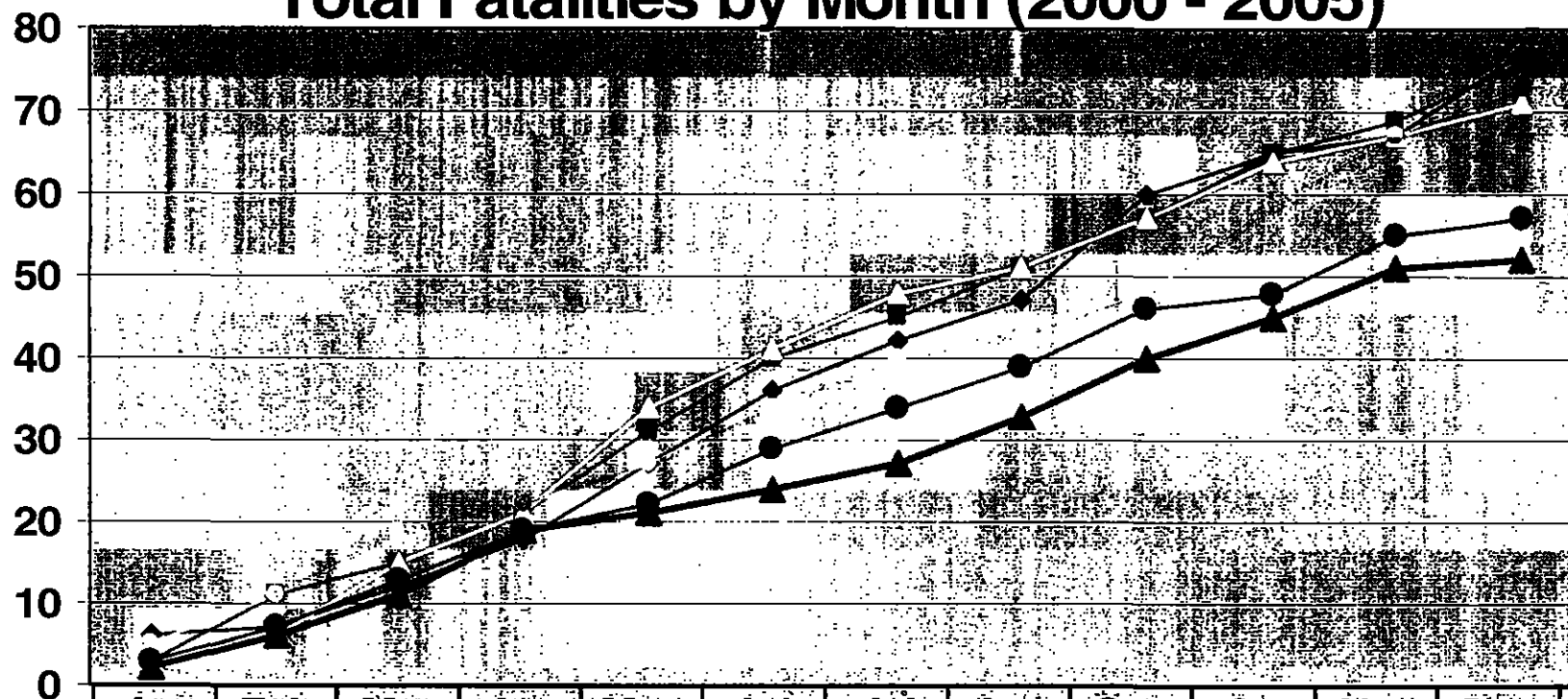
Low 3-4 fatal wrecks w/in approx .5 mi radius

Med 5-6 fatal wrecks w/in approx .5 mi radius

High 7-9 fatal wrecks w/in approx .5 mi radius



Total Fatalities by Month (2000 - 2005)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
—◆— 00	6	1	5	6	9	9	6	5	13	5	2	10	77
—■— 01	3	8	4	6	10	9	5	6	6	8	4	7	76
—●— 02	3	3	9	6	13	7	7	3	6	7	3	4	71
—▲— 03	2	4	5	8	2	3	3	6	7	5	6	1	52
—●— 04	5	6	8	3	5	7	6	3	5	11	8	6	73
—●— 05	3	4	6	6	3	7	5	5	7	2	7	(2)	(57)

As of 12/12/05 there have been 57 fatalities. As of 12/12/04 there had been 70 fatalities.



Annual economic cost of roadway crashes:

- fatal crash: \$977,000
- critically injured crash survivor: \$1.1 million
- \$230.6 billion per year in the U.S.
 - lost workplace/household productivity
 - property damage
 - medical costs
 - travel delay costs
- \$19.8 billion for Texas
- 75% of the costs are borne by uninvolved taxpayers thru insurance premiums, taxes, and travel delay

•\$163.7 million for Austin in 2004 (estimate)

(source: NHTSA "The Economic Impact of Motor Vehicle Crashes" & Drivers.com article)



HEC strives to be Data driven

Time of Day-Day of Week Fatal & Serious

COMBINED FATAL & SERIOUS INJURY

January 1-Dec 7, 2005 for Fatality CRASHES (not people)

January 1-Nov 18, 2005 for Serious Injury

TimePeriod	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total	% of fatal & serious-time	% alc-by time	% spd-by time
midnight-3:59am	5	3	2	3	2	7	6	28	18%	61%	39%
4-7:59am	3	0	1	3	1	1	4	13	8%	23%	38%
8-11:59am	1	4	3	0	3	5	2	18	12%	11%	17%
noon-3:59pm	7	2	6	3	7	1	2	28	18%	7%	32%
4-7:59pm	5	5	2	5	7	6	7	37	24%	27%	27%
8-11:59pm	4	1	5	6	5	5	3	29	19%	34%	14%
Total	25	15	19	20	25	25	24	153	100%	29%	27%
% of fatal & serious-day	16%	10%	12%	13%	16%	16%	16%	100%	1%		
% alc- by day	16%	33%	11%	35%	24%	32%	50%	29%			

	100% alcohol involved
	>50% alcohol involved
	>25% speed



Data indicating *injury Crash locations* ST3 injury reports January 1, 2004 thru Nov 15.

ST3 Reports since January 1, 2004 (as of Nov 15, 2005)

Alias	Total Injury St3	Fatality	Serious	Minor	TOTAL-all
I 35 N	1540	14	21	1505	2252
US Hwy 183 N/	879	7	11	861	1272
I 35 S	727	10	4	713	1167
US Hwy 290 W/ Ben White/State	627	5	16	606	953
LAMAR N	584	7	8	569	820
MO-PAC N	408	1	3	404	588
Wm Cannon (E&W)	350	0	4	346	520
Riverside (E&W)	307	3	5	299	498
CONGRESS S	305	6	3	296	422
Parmer (E&W)	301	6	5	290	377
AIRPORT	299	7	3	289	413
FM 2222	268	4	7	257	395
US HWY 290 E	253	3	5	245	371
BURNET	252	0	2	250	351
MO-PAC S	248	5	4	239	398
MLK / FM 969	230	3	2	225	338
Oltorf(E&W)	208	0	0	208	328
1ST S	203	2	4	197	294
Slaughter (E&W)	183	5	2	176	268
CAMERON	173	1	3	169	258
F M 620 N	169	2	2	165	239
GUADALUPE	165	0	2	163	254
CAPITAL OF TEXAS N	164	1	4	159	220
Braker (E&W)	161	2	1	158	219
LAMAR S	161	0	1	160	247
MANCHACA	156	0	5	151	214
PLEASANT VALLEY S	145	1	1	143	224
Stassney (E&W)	141	0	0	141	197
Rundberg (E&W)	135	1	2	132	194
7th (E&W)	134	0	1	133	211
US Hwy 183 S / Bastrop	130	3	5	122	192
Cesar Chavez (E&W)	114	3	1	110	188
6th (E&W)	113	1	2	110	203

Roads highlighted in yellow have had 5 or more fatalities since 2004

"Road" may be an alias for logical primary street designation.

Most E/W roads have been combined, but most N/S roads have been kept separate (eg Mopac, I 35, Lamar).

Reports where road was listed as primary or intersecting street are counted.

All directions, eg proper and frontage roads are included.



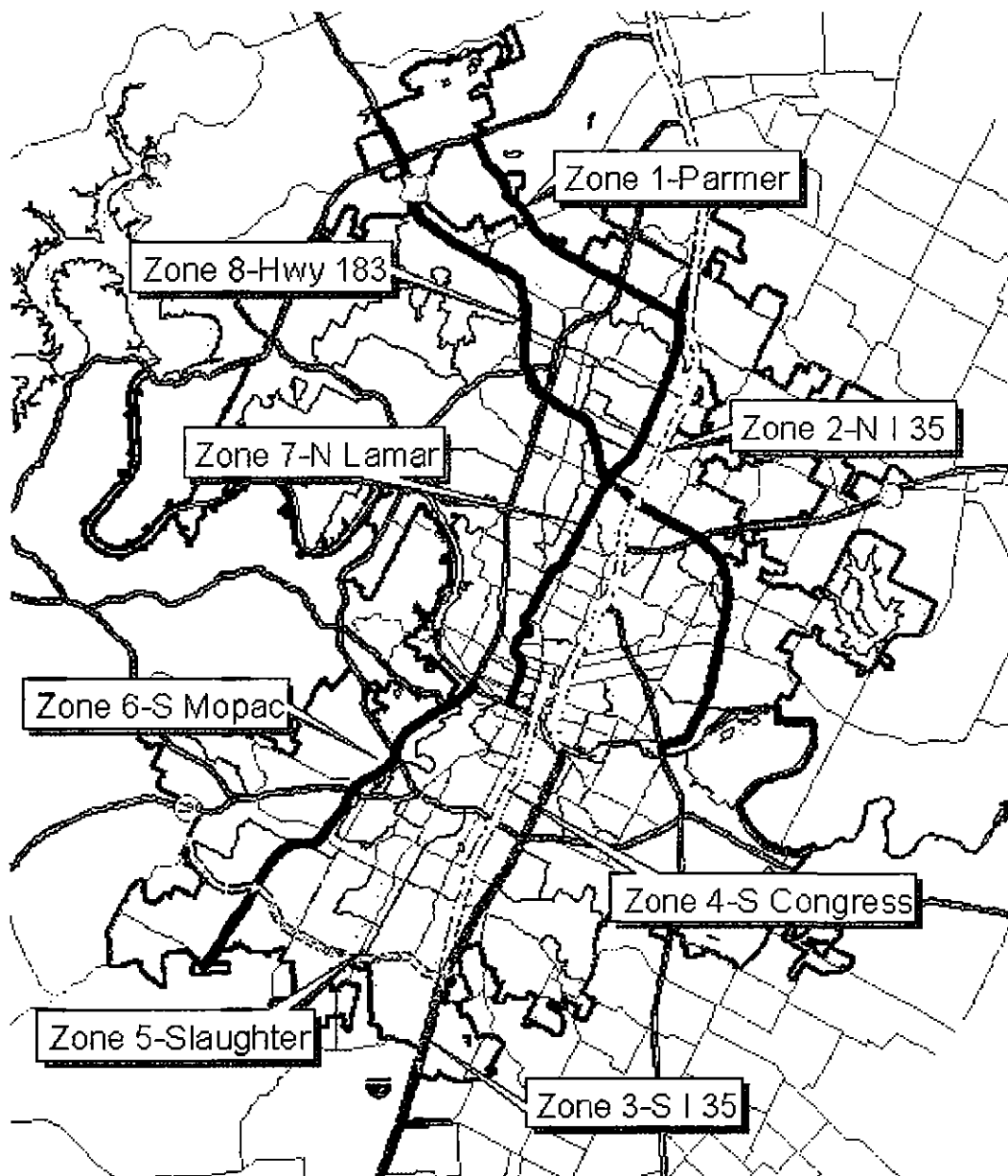
2005 YTD Fatal Crash Data

- 43% of fatal crashes involved alcohol or drugs (47% in 04)
- 34% of fatal crashes involved speeding (39% in 04)
- 36% of the mtr-vehic occupant fatalities not using a seatbelt or child safety seat (33% in 04)
- 40% of motorcycle fatalities (2) were not wearing a helmet (69% in 04)
- 11% (6) were FTSRA (driver left the scene)
- 28% (16) involved pedestrians (approx 70% of pedestrians at fault-FTROW, approx 30% impaired alcohol or drugs)



HEC Daylight Deployment Strategy

- 45 % ser injury & fatals occur btwn 8a-8p
- Primary traffic management problem occurs between 8a-8p
 - Two Highway Patrol Teams & Highway Response Team deployed at peak periods targeting prioritized hotspots and rush hour periods
 - Focus on all moving violations and keeping roadway open during morning and evening “rush-hour” periods (6a-9a, 4p-7p)
 - Helicopter and fixed wing deployments



“Crash Reduction Enforcement Zones”

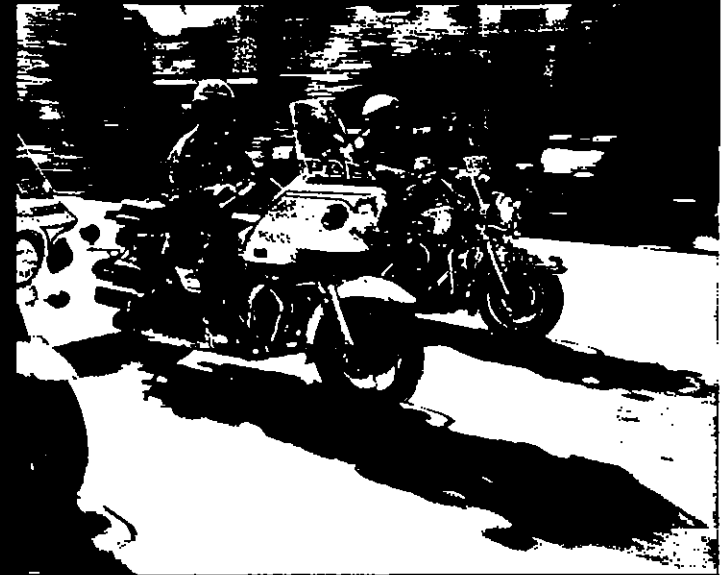
Police units are
strategically
deployed based
upon crash
analysis



Crash Reduction Enforcement Zones

Wolf-packs

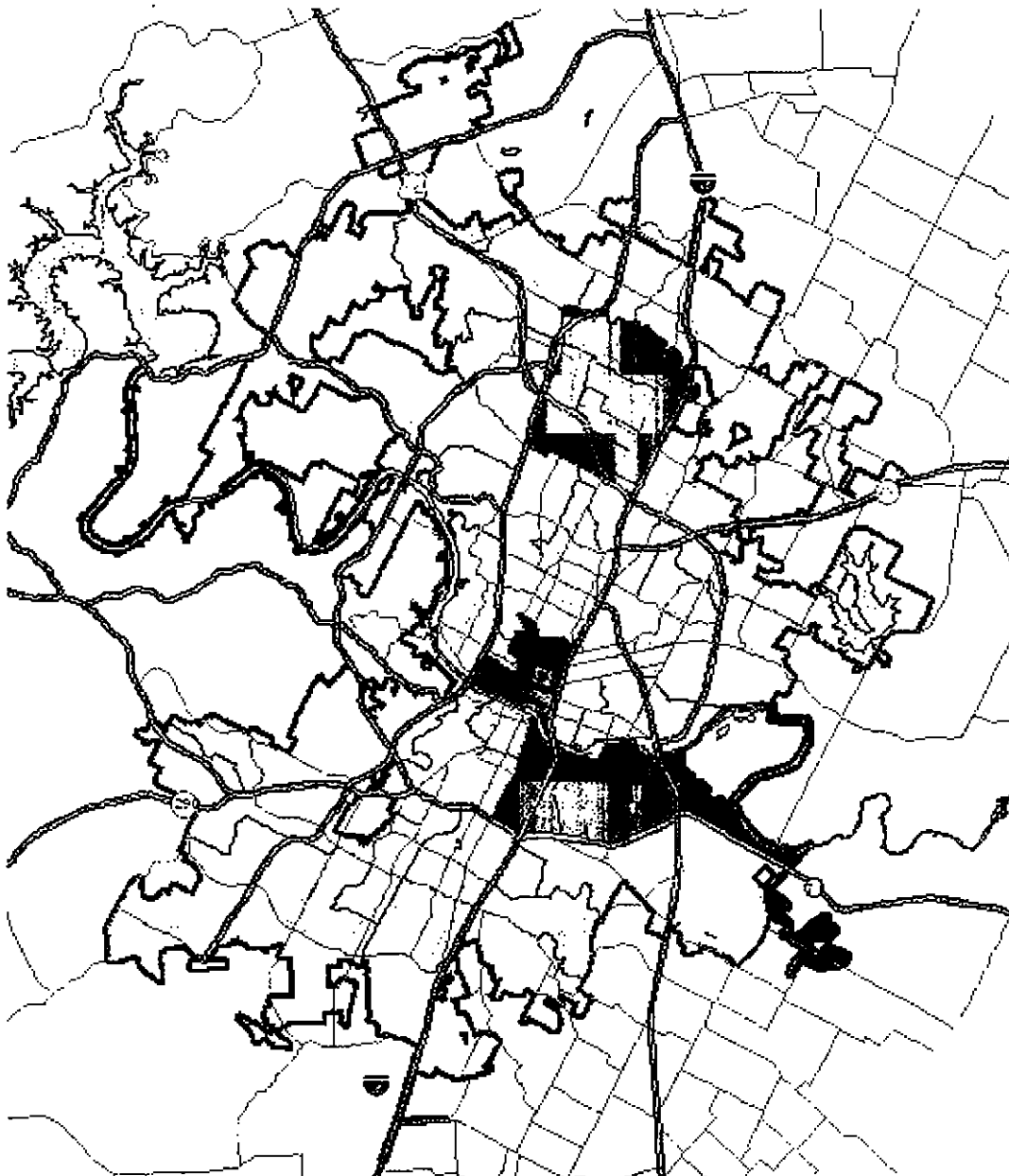
- Area Command Motor Units will work in conjunction with the Highway Response Team Stealth cars.
- Motor teams are formed up in to three distinct “wolf pack” teams. The joint HEC/AC motor operations are conducted one day per week
- 3 motor divisions-bureau level: North, Central and South





HEC Night-time Deployment Strategy

- **55%** serious injury & fatalities occur between 8p-8a
alcohol as contributing factor prevalent
 - Two DWI Enforcement Teams & Highway Response Team deployed at peak periods in focus areas
 - Focus to be on DWI- emphasis toward weekends and holidays
 - BAT Unit initiatives
 - Air 1 initiatives (e.g. monitoring major roads leading out of Downtown Entertainment District)



**BATU and DWI
Enforcement focus
adjusted on a monthly
to quarterly basis**

Example (summer 05):

- North Central**
- South Central**
- DTAC**

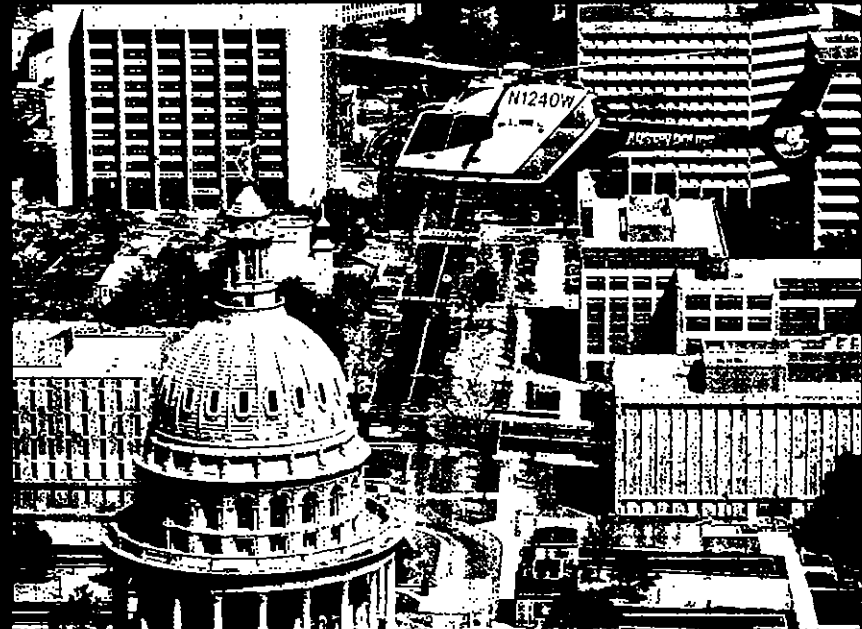




Air Enforcement

Air Enforcement assets (helicopter and fixed wing) conduct traffic enforcement missions as well as assist with emergency traffic management

The addition of the second helicopter will allow an increased ability to conduct both traffic enforcement and emergency traffic management missions





Need for Emergency Traffic Management

- CalTran study - when one lane blocked on three-lane expressway traffic flow capacity reduced by 60 percent (vehicles are forced to merge into the remaining lanes).
- Conducting a collision investigation on shoulder (no lanes blocked) reduces capacity by 30%
- The loss of two lanes creates 90 % restriction.
- A motorist changing a tire on the shoulder reduces the traffic flow by 10 to 15 percent.
- CHP advised they have found that for every minute traffic is blocked, a 4 minute traffic delay is created.



Need for Emergency Traffic Management cont.

- **Cost of roadway delays est. \$1 trillion per year (USDOT)**
- **Congestion leads to delays, decreasing flow, higher fuel consumption & has negative environmental effects**
- **Congestion exacerbated by irregular occurrences:**
 - **Traffic accidents**
 - **Vehicle disablements**
 - **Spilled loads**
 - **Hazardous materials**
- **14-18% of all crashes result from congestion incidents (USDOT)**
- **Significant relationship between fatality and accident notification time**



Texas Transportation Institute's Urban Mobility Study

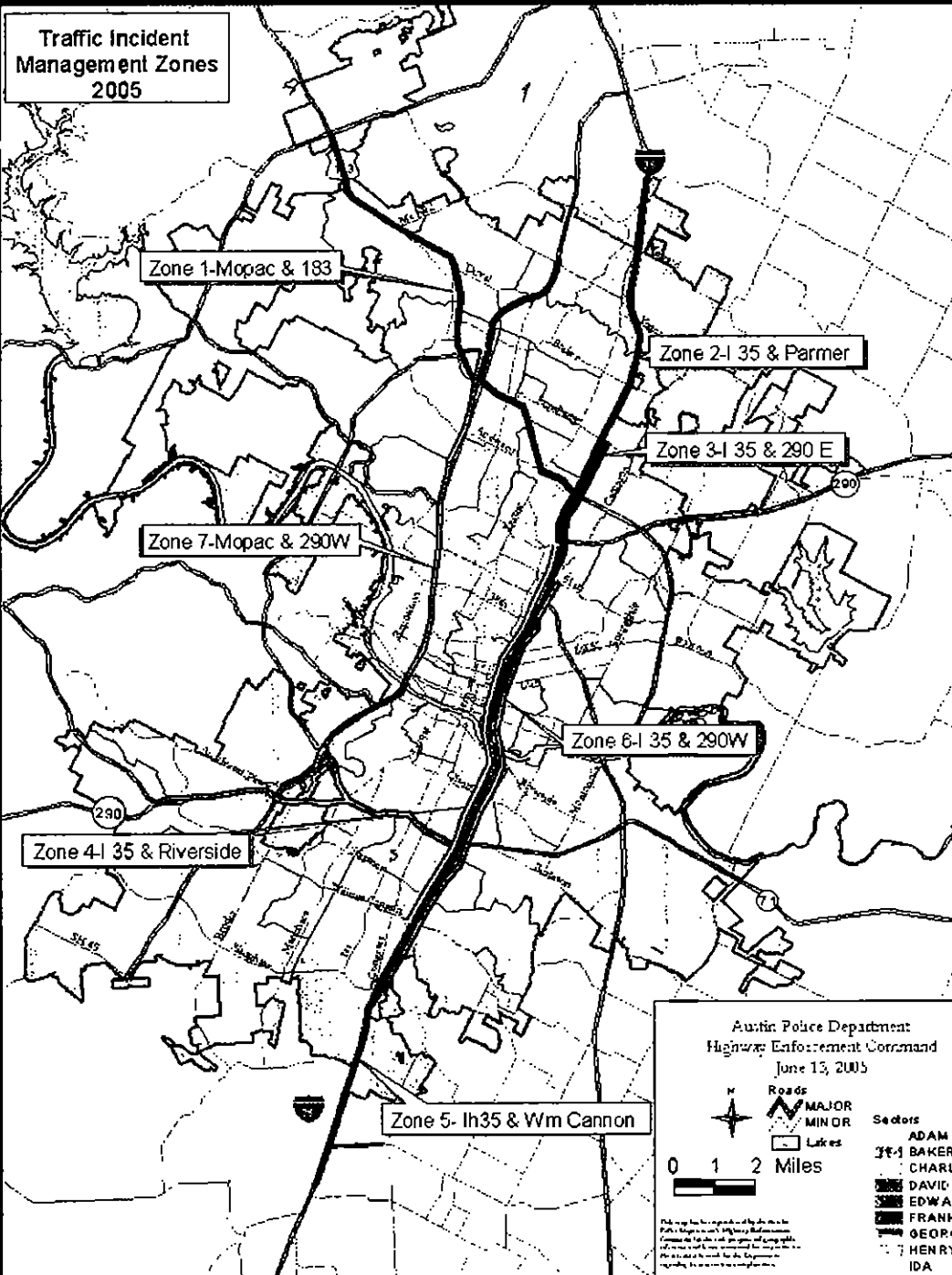
(2005)

- Traffic incident delays comprised 54% of all delays in the urban areas studied**
- Traffic incidents caused more delays than routine heavy traffic**
- The average annual delay per person in Austin is 51 hours**
- Austin is the most congested mid sized city (500,000 – 1 million in population)**



Emergency Traffic Management Strategy

- Improve traffic incident management (“rapid roadway clearance”) *Fed highway admin states 18% fatal highway collisions are secondary collisions due to unplanned or emergency obstruction on the highway, (e.G. Major wreck)*
- In progress: developing “Traffic Incident Management” policy
 - Patrol officers to move wrecks off of major thoroughfares—not on shoulders
 - Encourage patrol supervisors to monitor officers working wrecks on major thoroughfares
- The less time we are on the freeway-the safer we all are (residents, visitors and police officers)



Highway Patrol “CDR” Zones

Morning &
Evening
“rush-hour”
(6a-9a, 4p-7p)



Proposed Emergency Traffic Incident Management Policy

- **Applies to all high speed roadways, 55mph or greater.**
 - Reduce secondary crashes
 - Restore normal traffic flow
- **Mandatory supervision of major crash scenes**
- **Coordinated interagency response**
 - APD, EMS, AFD,
 - Outside law enforcement (DPS, TCSO)
 - TXDOT, COA, CTECC & Traffic Management Center
 - Private Sector (e.g. wreckers, heavy equipment)



Proposed Emergency Traffic Incident Management

- **Officers will clear the roadway as soon as practical**
 - Using patrol car push-bars
 - HEC SUV's with tow straps and chains
- **Officers select safe traffic stop locations**
 - Safety for stopped person and officer
 - Minimize impact on traffic flow
- **Wrecker Ordinance revision (currently with legal) should be based on three premises:**
 - rapidly clearing roadway
 - consumer protection
 - fairness to wrecker industry

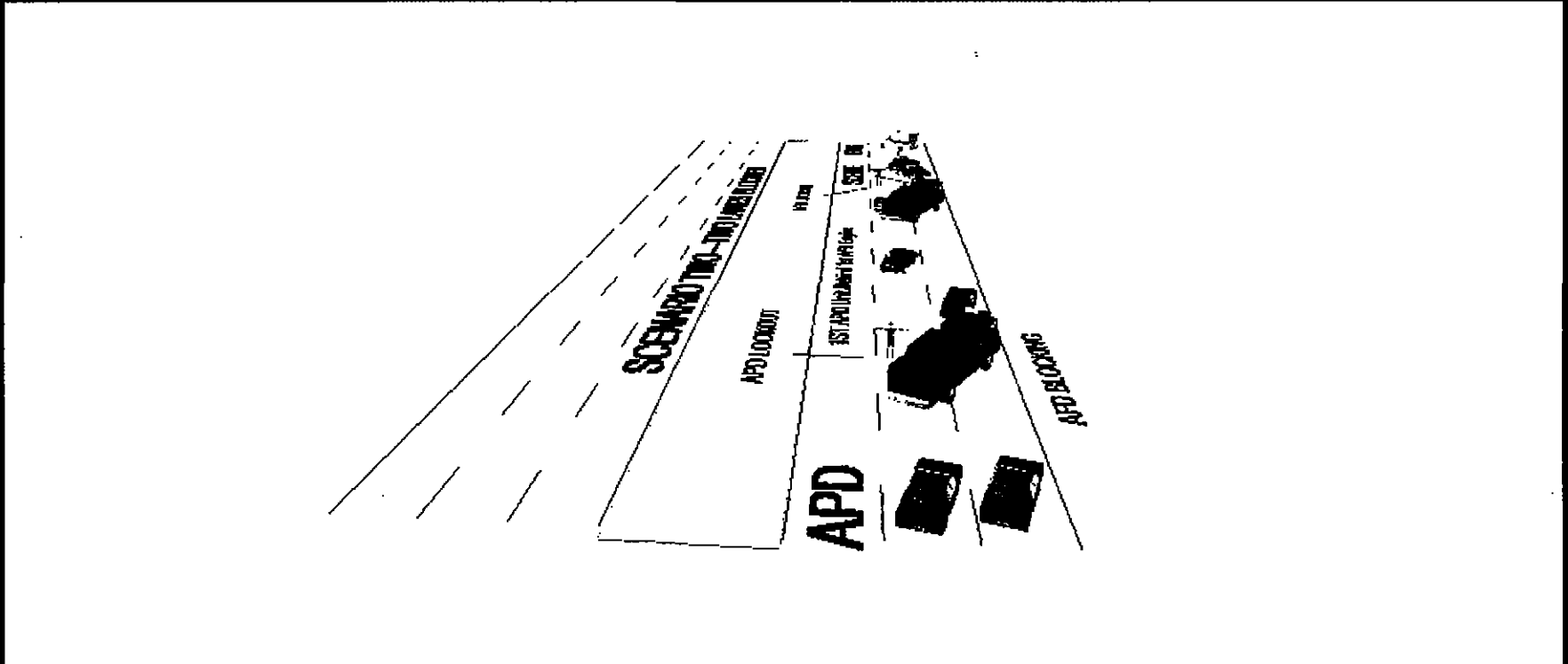
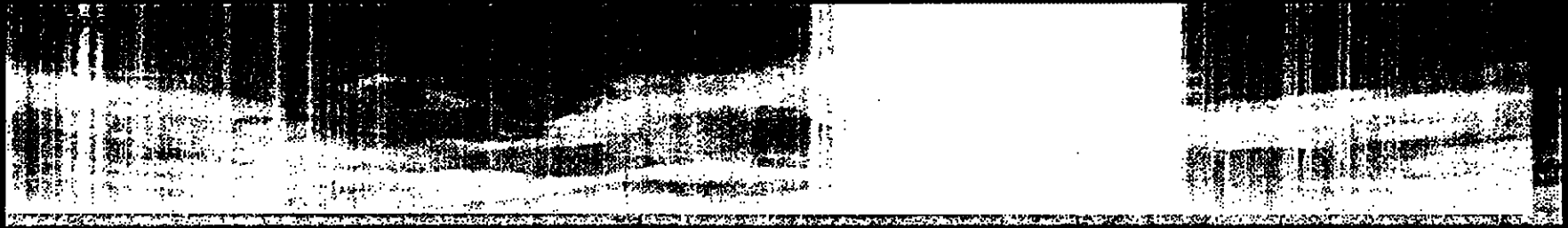


Proposed Emergency Traffic Incident Management

- **Emergency vehicle positioning**
 - Protect public
 - Protect Emergency responders
 - Expedite treatment and transport of injured motorist
- **Residual Traffic Flow Management**
 - On scene traffic direction
 - Frontage road
 - Intersection clearing (TMC a.k.a. "Camera Center")

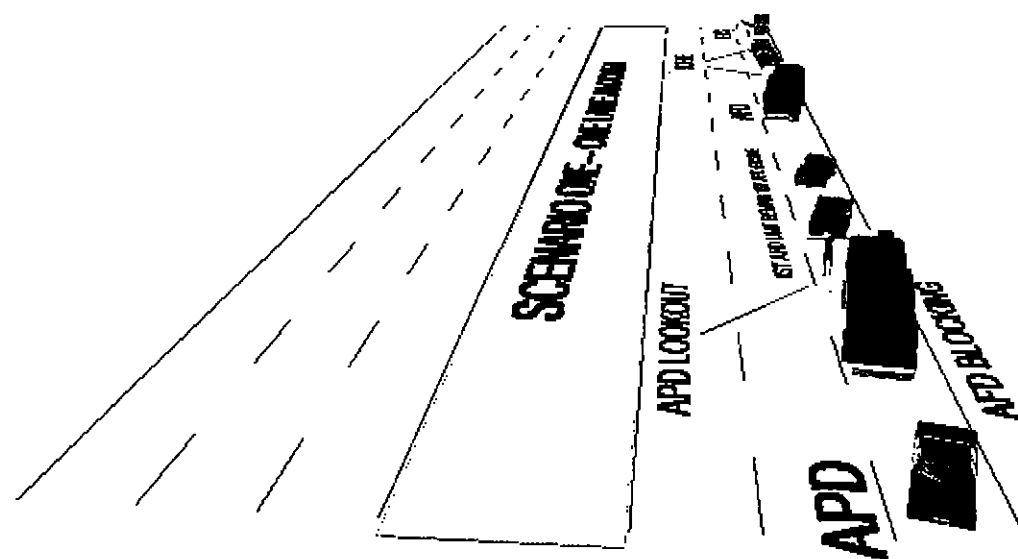
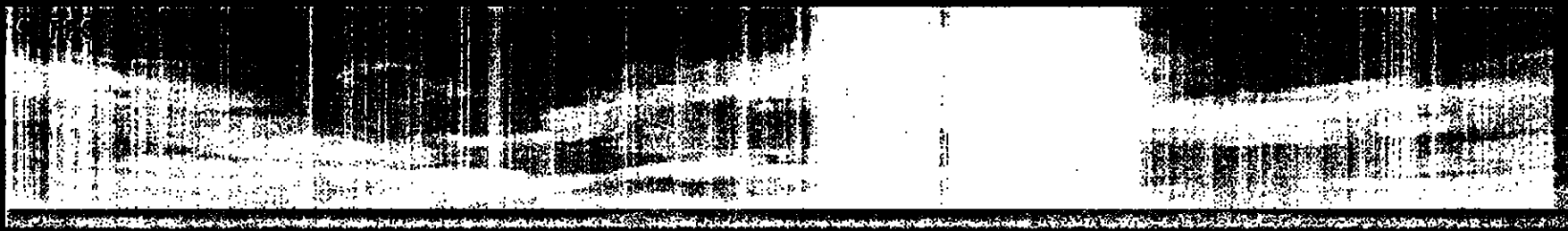


Road Capacity 79-90% restricted





Road Capacity 50-60% restricted





Road Capacity 26-30% restricted

3 FPS

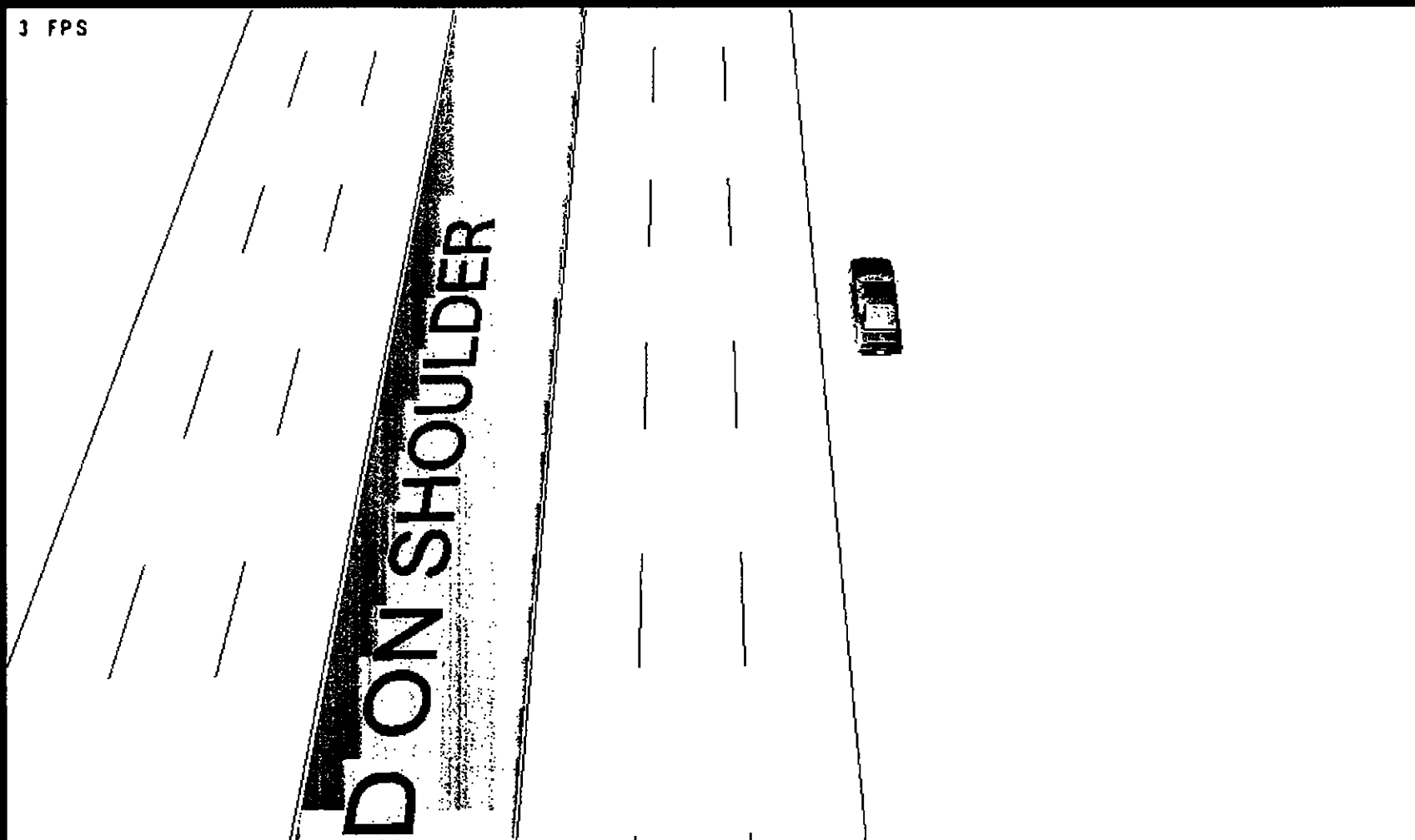
DO NOT SHOULDER



APD

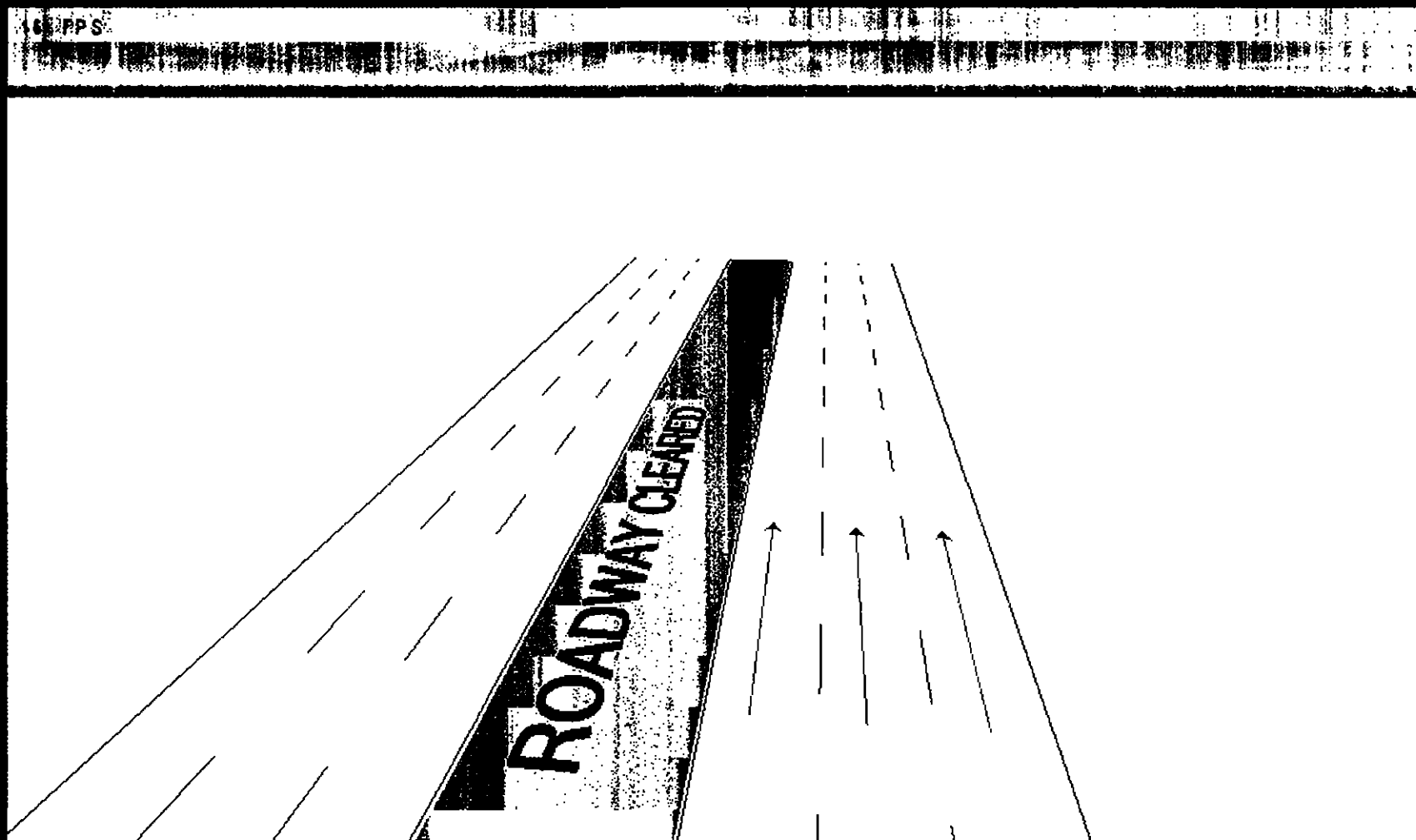


Road Capacity 10-15% restricted





Restriction based on infrastructure limitation only





Public Involvement

- **Public awareness to be increased through high profile initiatives (90 day cycles)**
 - Adjusting Austin's Driving Culture
 - Voluntary compliance indicator of adjusted culture
- **Officers and individuals can make a difference -**
 - Am I speeding?
 - Using turn signals?
 - Following too closely?
 - Driver inattention-talking on my cell phone?
 - Moving vehicles off the roadway – it's the law – but more importantly is about your safety



Conclusion

All of the following are interlinked:

- *Road Congestion*
- *Driving Culture*
- *Police Enforcement*
- *Traffic Fatalities*
- *Economy*

Therefore the Highway Enforcement Command subscribes to the belief that there is a clear nexus between safe and free moving traffic and a vibrant city.