



# Division 03 Communication and Information Management/Technology

## Chapter 12 – Tax Grid Dispatching System

January 2009

### POLICY

This General Order shall ensure appropriate dispatch for all locations in Prince George's County and the most efficient means to resolve conflicts regarding dispatch listings.

### DEFINITIONS

**Mileage Points** - The concept used for determining dispatch sequences for incidents is based on a mileage point concept. Specific mileage points (usually at intersections) correspond with box numbers and, therefore, box areas. Measurements are made from appropriate stations to each mileage point using permissible response routes. The dispatch sequence for each box number (mileage point) is established using this mileage.

Mileage measurements are not established at each intersection but occur in most cases at:

- Major intersections.
- Entrances to subdivisions.
- Entrances to apartment complexes.
- Entrances to shopping centers.
- Entrances to miscellaneous complexes.

**Permissible Response Routes** – any streets, four traffic lanes wide or larger, for two-way traffic. This would include two-way streets that have parking on both sides with a lane open for each direction of traffic. Divided or one-way streets must be at least two lanes wide with an open lane for vehicular traffic.

Main thoroughfares through subdivisions or complexes, such as Lamont Drive through New Carrollton and Belair Drive through the Belair section of Bowie, are acceptable as a response route.

**Hazardous Response Routes** - any street that a reasonable, prudent individual would not elect to travel at a speed above the posted speed limit because of, but not limited to, the following:

- Severe or blind-vision turns in the roadway.
- An irregular surface that would cause the vehicle to be difficult to control at or above the posted speed limit.
- Blind intersections.
- Occupancies along the road that would have an adverse effect on the systematic flow of traffic, i.e., warehouse areas, complexes that normally have a large level of vehicular or pedestrian traffic.

### PROCEDURES

#### 1. Mileage Points

When determining mileage, the following routes are excluded from consideration to determine dispatch listings:

- Routes that go from a primary response route, through secondary subdivision roads, to another primary response route.
- Through parking lots.



- Through apartment, business, or industrial complexes using other than dedicated primary routes.
- Against the flow of traffic on one-way streets.
- Roads that have a gate that is capable of being closed.
- Hazardous routes.

**2. Mileage and Time Safety Studies**

When mileage information is needed by the Emergency Operations Command (EOC), PSC will provide existing information and/or new mileage information that will be developed as appropriate. New mileage studies are conducted using the shortest possible running route.

Only when companies are within .2 miles inside the beltway or .5 miles outside the beltway to the same location, will a time and safety analysis be conducted. The Career Major will determine the need for these time and safety studies.

In all cases, however, time and safety analysis will only be conducted for first and second alarm units, utilizing the time and safety worksheet. (Attachments 2, 3, and 4)

On alarms involving mutual aid responses, .5 miles will be added to the mutual aid company's mileage to determine the need for time and safety analysis.

The following steps are taken for a time and safety study:

- Total mileage is measured and the normal speed limits are noted in accordance with the distances traveled.
- The response time is computed by multiplying the distance traveled by a time factor for the posted speed limit.

Mileage for speed limit changes shall be calculated from the speed limit sign.

- For mutual aid responses, .5 miles should be added to the overall mileage total and multiplied by the average response speed.
- The response times are then adjusted to give consideration to the type of road traveled and the type of intersection passed through.
  - Five seconds per mile traveled are deducted for dual-lane highways.
  - Five seconds are added for each controlled intersection passed through. Controlled intersections are ones in which there is a traffic control device, i.e., traffic light, stop signs, yield signs, etc.
  - Ten seconds are added for each multi-controlled intersection passed through. Multi-controlled intersections are ones in which multi-control devices are used or several road intersect (i.e. turning signals, opposing signals that operate independently, intersections of five or more roads or unusual road configurations, such as a "Y" etc.).
  - Ten seconds are added for each speed barrier, i.e., speed humps, bumps, dips, traffic circles, school zones, railroad crossings, etc.

After all considerations are taken into account; the final time is used to determine the safest running route.



### 3. Challenge Procedure

The following procedure is designed to ensure a timely evaluation to a challenge, while keeping the appropriate personnel aware of and advised of the status.

A challenge is initiated by a volunteer chief or battalion chief. A memo (Attachment 1) is prepared outlining the specifics of the challenge and containing all information pertinent to the challenge including time and safety worksheets (Attachments 2 and 3), appropriate. The memo must be signed by both the Volunteer Chief and Battalion Chief.

The Volunteer Chief or Battalion Chief initiating the challenge shall give all affected volunteer chiefs or battalion chiefs a copy of the submitted challenge (Attachments 1, 2, and 3).

The challenge is forwarded to EOC, who will coordinate the following actions:

- Confirm the need for and initiate time and safety studies as appropriate.
- Advise appropriate personnel in writing of the decisions made pertaining to the protest.
- Advise Public Safety Communications (PSC) thru the EOC Office of the changes to be made.

Prince George's County Fire/EMS  
Department Time and Safety Worksheet  
(Attachment #2)

Prince George's County Fire/EMS  
Department Time and Safety Worksheet  
Response Time Summary Analysis  
(Attachment #3)

Formulas for Time and Safety Worksheet  
(Attachment #4)

#### REFERENCES

N/A

#### FORMS/ATTACHMENTS

Template for Memo Outlining Specifics of  
Challenge (Attachment #1)



# INTER-OFFICE MEMORANDUM

## PRINCE GEORGE'S COUNTY, MARYLAND

Date: \_\_\_\_\_

TO: (name), Major, Division Commander

FROM:

RE: Challenge of Dispatch Listing

Box Number: \_\_\_\_\_ Mileage Point: \_\_\_\_\_

Box Assignment Listing: \_\_\_\_\_

Specifics of Protest

Company Number: \_\_\_\_\_

Total Mileage: \_\_\_\_\_

General Information:

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\_\_\_\_\_  
Battalion Chief Signature Date

\_\_\_\_\_  
Volunteer Chief Signature Date

## Prince George's County Fire/EMS Department Time and Safety Worksheet

Station #: \_\_\_\_\_ (Protecting Company)

Requesting Person: \_\_\_\_\_

Box #: \_\_\_\_\_

Date Mileage Study Performed: \_\_\_\_\_

Box Intersection: \_\_\_\_\_

Box Assignment Listing: \_\_\_\_\_

Mutual Aid Company (Y or N)?: \_\_\_\_\_

Box Assignment Inside the Beltway (Y or N)?: \_\_\_\_\_

Street (From-To)	Dual Ln (y or n)	Distance (mi.)	Speed (mph)	Time (sec.)	Dual Lane Mi.	# Single Int.	# Multi Int.	# Spd. Barr.
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
				0.00	0.00			
<b>Sub Total:</b>		0.00		0.00	0.00	0	0	0

<b>Mutual Aid Mileage @ Average Speed(sec.):</b>	0.00	if "y", +.5 miles	#DIV/0!
<b>TOTAL MILEAGE (miles)</b>	0.00		
<b>Sum of Response Time for Mileage:</b>			#DIV/0!
<b>Total Dual lane mileage:</b>	0	-5 sec.s/mile	0.00
<b>Total # of single controlled intersections:</b>	0	+5 sec.s/int.	0.00
<b>Total # of multi-controlled intersections:</b>	0	+10 sec.s/int.	0.00
<b>Total # of speed barriers:</b>	0	+10 sec.s/barr.	0.00
<b>TOTAL RESPONSE TIME (minutes)</b>			#DIV/0!

**Complete the general information at the top of the form, in addition to the dual lane, mileage, speed limit, # of single intersections, # of multi-intersections, # of speed barriers columns.**

1. Change distance calculations for distance and speed limit when the road changes from single lane to dual lane or vise versa.
2. Change distance calculations for distance and speed limit when the speed limit changes. Mileage for speed limit changes shall be calculated from the speed limit sign.
3. Single controlled intersections are those in which there is a traffic control device, i.e., traffic light, stop sign, yield sign, etc..
4. Multi-controlled intersections are those in which multi-controlled devices are used or several roads intersect, i.e., turning signals, opposing signals that operate independently, intersections of five or more roads, or unusual road configurations such as a "y", etc..
5. Speed barriers include engineered speed bumps, speed humps, dips, traffic circles, railroad crossings, school zones, etc..

**Prince George's County Fire/EMS Department  
Time and Safety Worksheet  
Response Time Summary Analysis**

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General Information:

**Box #:** 0  
**Box Intersection:** \_\_\_\_\_ 0  
**Current Box Assignment Listing:** \_\_\_\_\_ 0

Summary Information:

<b>Station #</b>	0	0
<b>Total Mileage (miles):</b>	0.00	0.00
<b>Total Response Time (minutes):</b>	#DIV/0!	#DIV/0!

Analysis:

**Is mileage within the parameters for a time and safety study?:** Yes

**Station with the faster response time:** #DIV/0!

**Should the box listing be changed?:** #DIV/0!

**Proposed box listing (if applicable):** \_\_\_\_\_

**Formulas for Time and Safety Worksheet:**

**Time (sec.)** = distance (mi.) / speed (mph) \* 3600

**Sub-total** = Sum of columns above

**Mutual Aid Time (sec.)** = sub-total distance (mi.) / sub-total time (sec.) \* .5

**Total Mileage** = sub-total mileage + .5 (if mutual aid company)

**Sum of Response Time for Mileage** = sub-total time (sec) + mutual aid time (sec)

**Dual Lane Benefit Time** = sub-total dual lane mileage (mi.) \* -5

**Single Controlled Intersection Penalty** = sub-total # single intersections \* 5

**Multi-Controlled Intersection Penalty** = sub-total # multi intersections \* 10

**Speed Barrier Penalty** = sub-total # speed barriers \* 10

**Total Time (min.)** = Sum of: (Response Time for Mileage (sec.) +  
Dual Lane Benefit Time (sec.) (note: negative #) +  
Single Controlled Intersection Penalty (sec.) +  
Multi Controlled Intersection Penalty (sec.) +  
Speed Barrier Penalty (sec.))  
/ 60