Project No. 9
Coordinated VMS/HAR Strategies
Task 2

VMS/HAR OPERATIONS GUIDELINES AND RECOMMENDED PRACTICES

QUICK REFERENCE GUIDE

Prepared by

I-95 Northeast Consultants
The Scientex Corporation

I-95 Corridor Coalition

JUNE 1995

NOTICE

This document is disseminated under the sponsorship of the I-95 Corridor Coalition in the interest of Information exchange. The Coalition assumes no responsibility for its contents or use thereof. The contents of this report reflect the views of the contractor, who is responsible for the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policy of the Coalition. This report does not constitute a standard, specification. or regulation.

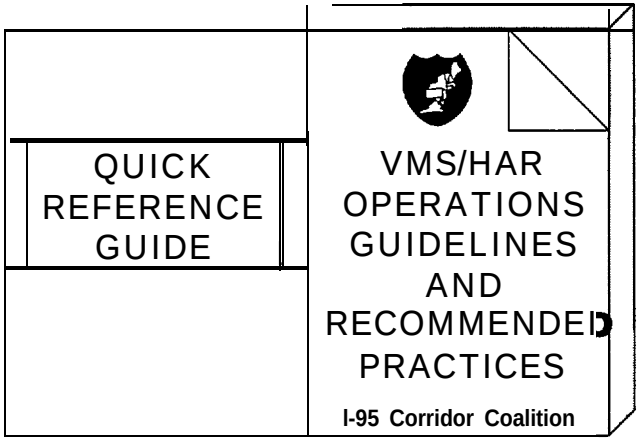
The I-95 Corridor Coalition does not endorse products or manufacturers. Trade or manufacturers' names appear herein only because they are considered essential to the object of this document.

Table of Contents

QUICK REFERENCE GUIDE

INTRODUCTION

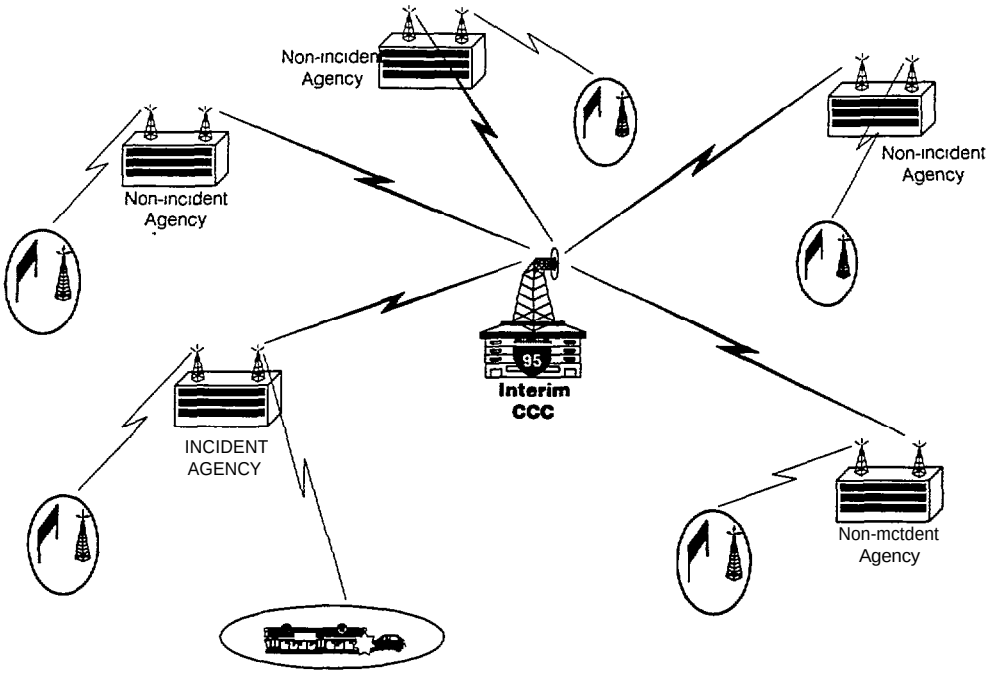
This "Quick Reference Guide" is intended to accompany the VMS/HAR Operations Guidelines and Recommended Practices[1] prepared under Project *9. Coordinated VMS/HAR* Strategies. It is anticipated that this guide will be invaluable to TOC operators in locating salient features of the parent document quickly. However, the guide is not intended to be a stand-alone document and only provides the information needed for quick reference, as the name suggests. For complete information on VMS/HAR guidelines and practices, the reader is referred to the parent manual.



1 I-95 Northeast Consultants. VMSHAR Operations Guidelines and Recommended Practices. June 1995. Report No. I-95 CC 9-95-09.

WHEN TO PLACE MESSAGES

Centralized Assistance through an Interim Corridor Communications Center (Interim CCC) is assumed. The Interim CCC will undertake the responsibility for coordinating Corridor activities and disseminating information during regional/corridor incidents This activity will relieve the agency with the incident of this task allowing it to focus on the incident itself.



DESIGNATION OF RESPONSIBILITIES

The responsibilities of each agency are summarized as follows:

1. ROLE OF INCIDENT AGENCY

ROLE	REQUIREMENTS
1. OBTAIN INFORMATION	- nature, location and time . estimated duration and affected roadways . number and configuration of open lanes . special driving instructions . confirmed local alternate route
2. INFORMING INTERIM CCC	. contact Interim CCC . provide periodic updates . monitor Interim CCC

II. ROLE OF NON-INCIDENT AGENCY

ROLE	REQUIREMENTS
1. EXPECTED RESPONSE	. verify receipt of message . verify availability of Corridor alternate route . verify placement of advisory messages on VMS/HAR
2. RESPONSIBILITIES	. selecting alternate route . placing advisory message on VMS/HAR . provide updates on Corridor alternate route status . monitor status of incident

III. ROLE OF INTERIM CCC

ROLE	REQUIREMENTS	
1. DISSEMINATE INFORMATION	To Incident agency • proposed corridor alternate route . non-incident agencies response	To Non-incident agency • nature, location and time • estimated duration/affected roadways . number/configuration of open lanes . special driving instructions . confirmed local alternate route
2. RESPONSIBILITIES	24 h-p-d operation . coordinate activities. disseminate information . coordinate/relay corridor alternate route selection . advise on the need to post messages . provide regular updates . request action from non-incident agencies	Non-24 h-p-d operation • contact designated personnel or agency, and – disseminate incident information – request VMS/HAR messages – provide regular updates • follow procedures established by local agency for corridor alternate route selection

INCIDENT SPECIFIC ACTIONS

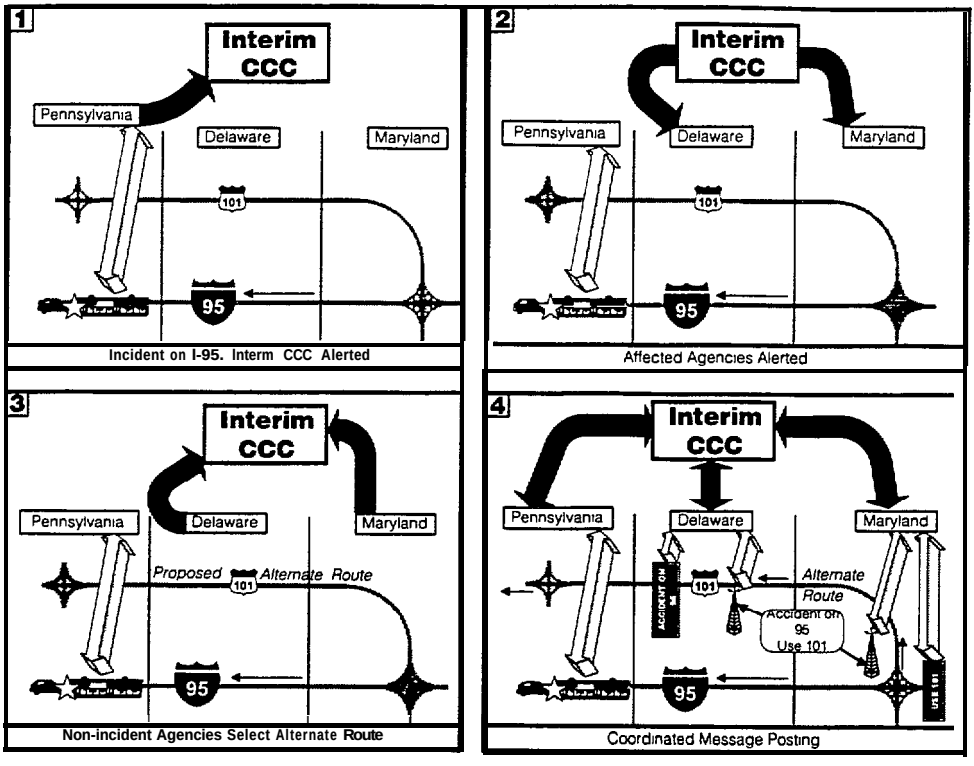
CONDITION	TYPE	ACTION
		INCIDENT AGENCY
WEATHER	Severe	• see Table 1, and · contacting Interim CCC within 12 hours of the expected weather condition · reporting on the operating status of the TOC and VMS/HAR devices
	Major	• see Table 1, and · contacting Interim CCC within 6 hours of the expected weather condition
SPECIAL EVENT	NIA	· see Table 1, and · contacting Interim CCC 48 hours prior to event
BOUNDARY EVENT	Severe	· see Table 1
	Major	• see Table 1
CONSTRUCTION	Major	• see Table 1 and · contacting Interim CCC 48 hours prior to start of construction
	Minor	• notifying Interim CCC of construction
TRAFFIC ACCIDENT	**N/A**	. see Table 1
HAZARDOUS SPILL	**Severe**	· see Table 1, and · relay extent of area to be vacated to Interim CCC (if required)
	Major	• see Table 1
MULTIPLE EVENTS	N/A	· see Table 1

INCIDENT SPECIFIC ACTIONS (CONTINUED)

CONDITION	TYPE	ACTION	
		NON-INCIDENT AGENCY	INTERIM CCC
WEATHER	Severe	• See Table II	• See Table III
	Major	• See Table II	• See Table III
SPECIAL EVENT	N/A	• See Table II	• See Table III, and • send reminder 24 hours prior to event
BOUNDARY EVENT	Severe	• See Table II	• See Table III
	Major	• See Table II	• See Table III
CONSTRUCTION	Major	• See Table II, and • continuing messages during construction	• See Table III • send reminder 24 hours prior to start of construction
	Minor	• placing messages on HAR	• notifying non-incident agencies of construction
TRAFFIC ACCIDENT	N/A	• See Table II	• See Table III
HAZARDOUS SPILL	Severe	• See Table II	• See Table III
	Major	• See Table II	• See Table III
MULTIPLE EVENTS	N/A	• See Table II	• See Table III

INTERIM CCC

The role of the Interim CCC in alternate route selection is illustrated below.



WHERE TO PLACE MESSAGES

Regional and Corridor Response Levels

Response levels have been developed to simpify the process of determining what actions should be taken by the Interim CCC and/or local agency corresponding to the different message ranges.

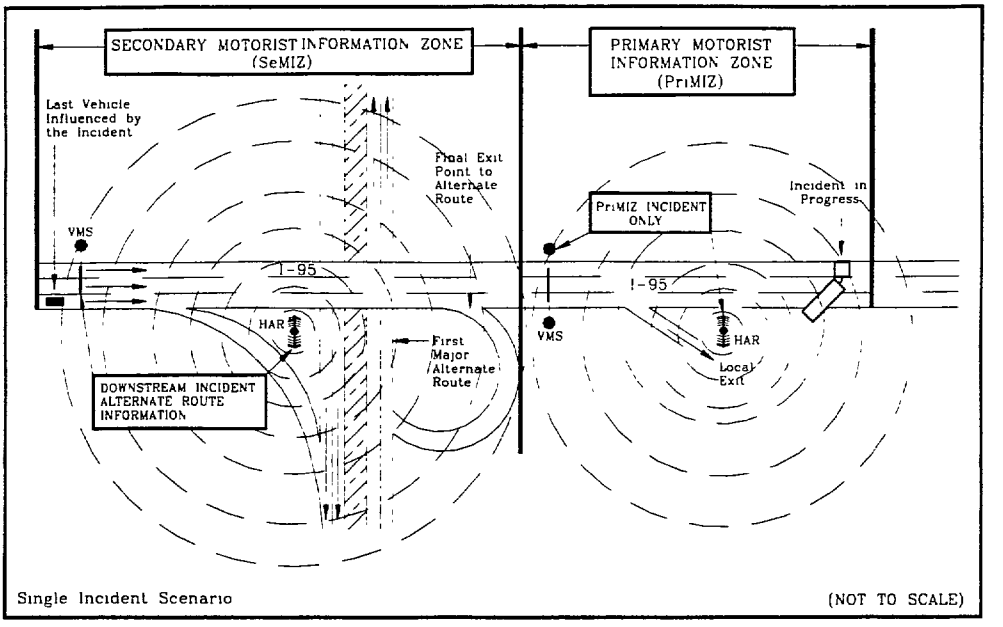
RESPONSE LEVEL	DESCRIPTION
R-1	Information to supporting Coalition agencies only - No response initiated.
R.2	Limited Response - Information to supporting Coalition agencies and request for activation of VMS/HAR in the SeMIZ and SuMIA.
R-3	Moderate Response - Information to supporting Coalition agencies, request for activation of VMS/HAR in the SeMIZ and SuMIA, and Initiation of "soft" trip diversion needs, both geographical and time
R-4	Moderate Response - information to supporting Coalition agencies, request for activation of VMS/HAR in the SeMIZ and SuMIA, and initiation of "hard" trip diversion needs, both geographical and time.
C-1	Information Only to all Coalition agencies (may include R-2 to R-4 regional levels on a location basis).
G-2	Moderate Response - Information to all Coalition agencies, request for activation of VMS/HAR in the SeMIZ and SuMIA, and Initiation of "soft" trip diversion needs, both geographical and time.
G 3	Moderate Response - Information to all Coalition agencies, request for activation of VMS/HAR in the SeMIZ and SuMIA. and initiation of "hard" trip diversion needs, both geographical and time.

Distance from Incident to Alert Motorists

TIME OF DAY	INCIDENT DURATION	CAPACITY LOSS					
		0-33% (MI)		34-66% (MI)		67-100% (MI)	
PEAK PERIOD	0-20 min.	15	R-1	15	R-1	30	R-2
	20 min.-2 hrs.	15	R-1	30	R-2	60	R-3
	2-4 hrs.	60	R-3	120	R-4	150	C-1
	>4 hrs.	120	R-4	300	C-2	450	C-3
DAYTIME OFF-PEAK	0-20 min.	15	R-1	15	R-1	30	R-2
	20 min.-2 hrs.	15	R-1	15	R-1	30	R-2
	2-4 hrs.	60	R-3	120	R-4	150	C-1
	>4 hrs.	60	R-3	150	C-I	300	c-2
NIGHTTIME OFF-PEAK	O-20 min.	15	R-I	15	R-I	30	R-2
	20 min.-2 hrs.	15	R-I	15	R-I	30	R-2
	2-4 hrs.	15	R-I	15	R-I	30	R-2
	>4 hrs.	60	R-3	120	R-4	150	C-I

Legend: **R 1= Regional Level One Incident** **C 1= Corridor Level One Incident**
R 2= Regional Level Two Incident **C 2= Corridor Level Two Incident**
R 3= Regional Level Three Incident **C 3= Corridor Level Three Incident**
R 4= Regional Level Four Incident

Defining Motorist Information Zones



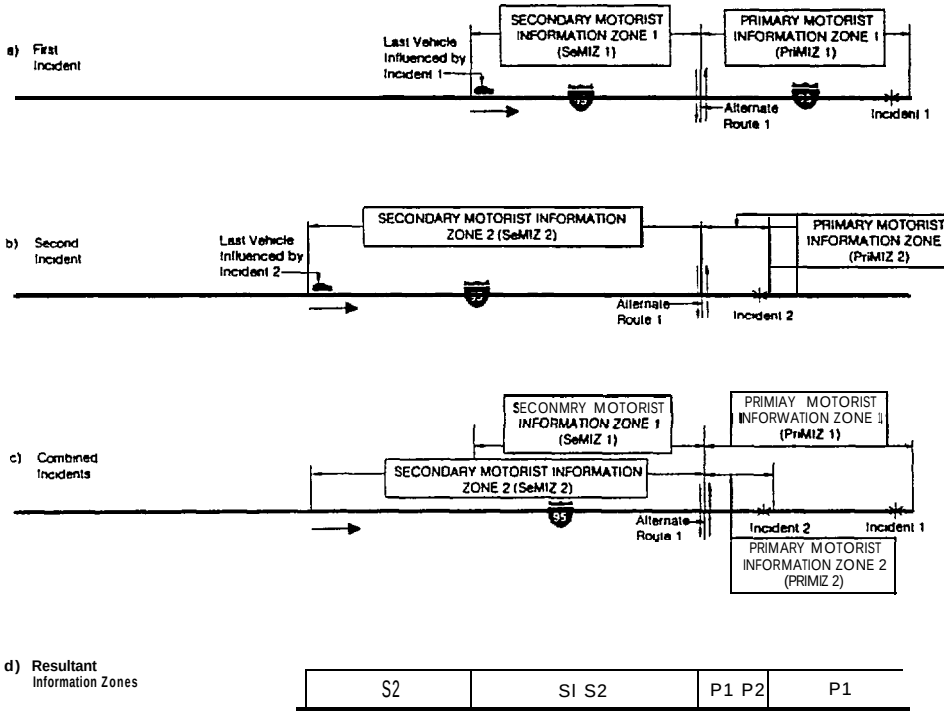
Motorist Options In Incident Area

The table below describes motorists options in the information zones.

LOCATION	MOTORISTS OPTIONS
PRIMARY MOTORIST INFORMATION ZONE (PRIMIZ)	- No major alternate routes available, wait for conditions to return to normal.
SECONDARY MOTORIST INFORMATION ZONE (SEMIZ)	- Continue through the primary motonst information zone and wait. . Use a major alternate route. . Adjust travel schedule.
SURROUNDING MOTORIST INFORMATION AREA (SuMIA)	. Continue towards the primary/secondary motorist Information zones. . Use a diversion route. . Use alternate means of transportation (e.g., train). . Adjust travel schedule.

ADDING MOTORIST INFORMATION ZONES

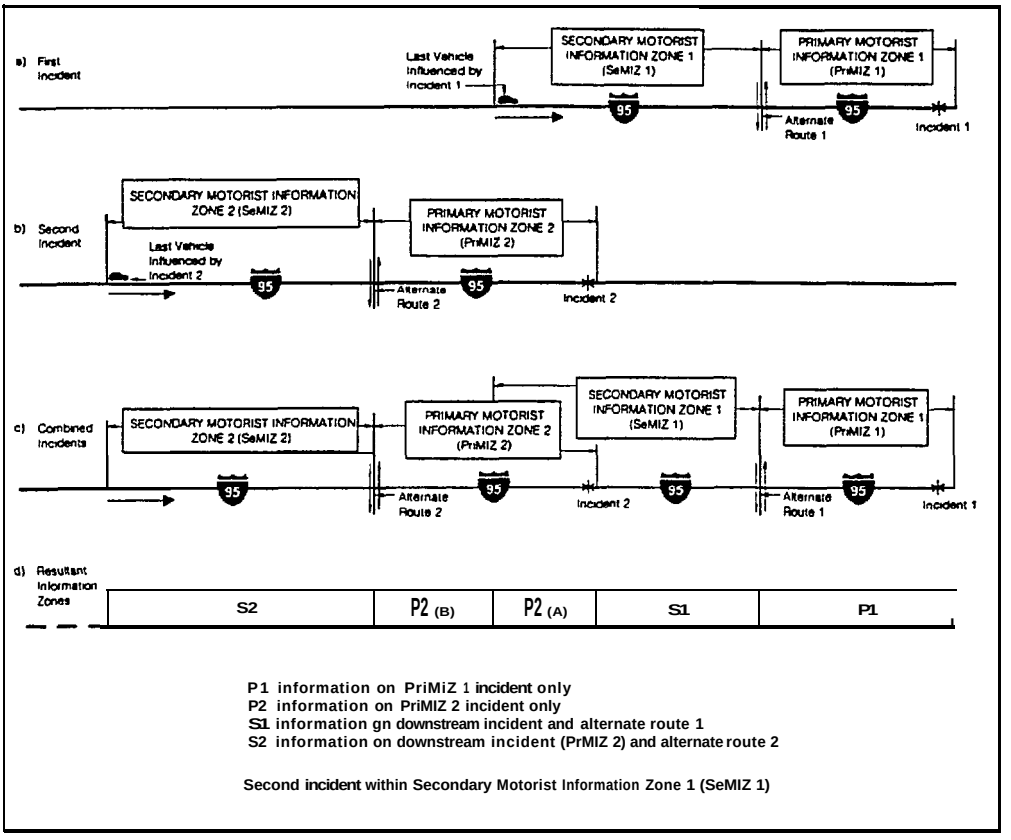
Second Incident in Primary Motorist Information Zone



P1 Information on PriMiz 1 Incident only
P1 P2: Information on PnMIZ 1 & 2 incidents
S1S2: Information on downstream incidents and alternate route1
S2: Informaoon on PnMIZ 2 incident and alternate route 1

Second incident within Pnmary Motorist Information Zone 1(PriMiz 1)

Second Incident in Secondary Motorist Information Zone



P1 information on PriMiZ 1 incident only
P2 information on PriMIZ 2 incident only
S1 information gn downstream incident and alternate route 1
S2 information on downstream incident (PrMIZ 2) and alternate route 2

Second incident within Secondary Motorist Information Zone 1 (SeMIZ 1)

Important: The SeMIZ is a collapsing zone and as the incident progresses, the overlap between SeMIZ 1 and PriMIZ 2 will diminish.

Information Given in Information Zones

INCIDENT CONFIGURATION	PRIMARY MOTORIST INFORMATION ZONE			SECONDARY MOTORIST INFORMATION ZONE		
	P1	**P2**	**PIP2**	**S1**	**S2**	**S1S2**
SINGLE INCIDENT	primary incident only	N / A	N / A	Primary incident and alternate route	N/A	N/A
TWO INCIDENTS 2ND INCIDENT INSIDE THE PRMARY MIZ	Primary Incident 1 only	N/A (Combined with P1)	Both incidents In order they will be encountered	N/A (Comined) with S2)	Secondary incident and alternate route	Both incidents In the order In which they will be encountered and alternate route
TWO INCIDENTS: 2ND INCIDENT INSIDE THE SECONDARY MIZ	Primary incident 1 only	Secondary Incident (incident 1 on HAR only)	Incident 1 N/A	Incident 2 and alternate route	and alternate route	N/A

GUIDELINES FOR MESSAGE DEVELOPMENT

It may never be possible to tell motorists everything they might want to know, but motorists must be told what they need to know to respond in the appropriate manner for existing traffic conditions, according to a commonly-accepted list of priorities which in turn guide the specification of standard message elements.

TELLING MOTORIST WHAT THEY NEED TO KNOW

- A problem statement
- A location statement
- An effect statement (lane closure, delay, chains required, etc.)
- An attention statement (addressing a certain group of motorists or destination)
- An action statement

PRIORITIES FOR COMMUNICATIONS TO MOTORISTS

Nondiversion Situation.

- Reason for the problem
- Location of the problem
- Desired action by the motorists
- The traffic condition
- The benefits of message compliance

Diversion Situation:

- The nature of the problem
- Which motorists are affected
- Desired action by the motorists
- Location of diversion point
- Location for return to the primary route
- The benefits of message compliance
- Supplemental information (to facilitate navigation of the alternate route)

VMS MESSAGE CONSTRUCTION

Recommended Permanent VMS Problem Statements

ACCIDENT
DELAYS
MAJOR DELAYS
DISABLED VEHICLE
TRAFFIC BACKUP
ROADWORK
ROADWAY \ MAY BE ICY
CAUTION \ RAMPS MAY BE \ ICY
CAUTION \ BRIDGES MAY BE\ ICY
CAUTION \ ICY ROAD
CAUTION \ SLIPPERY ROAD
CAUTION \ SNOW DRIFTING
CAUTION \ POOR VISIBILITY
CAUTION \ ROAD FLOODING
CAUTION \ HIGH WINDS
CAUTION \ FOG
CAUTION \ UNMARKED LANES
SLOW TRAFFIC
ROAD CLOSED AHEAD
_____CLOSED BRIDGE
_____CLOSED RAMP
2-WAY TRAFFIC
LANES SHIFT
LANES DIVIDE
ROADWORK \ TONIGHT \ NEAR __
SOFT SHOULDER
LOOSE GRAVEL
FRESH OIL
HOV LANE
TRAFFIC SIGNAL \ NOT WORKING
WORKERS IN ROAD
MOVING WORK CREW
UNEVEN PAVEMENT
FLAGGER
LANES NARROW
SINGLE LANE
NO SHOULDER
POLICE CHECK POINT
– BRIDGE RAISED
– BRIDGE \ SCHEDULED TO \ RAISE AT –
LEFT LANE \ HOV ONLY
LEFT LANE \ HOV AND MOTORCYCLES
NO HOV \ RESTRICTIONS
TUNNEL CLOSED
HAZARDOUS \CHEMICAL SPILL
TRAFFIC EMERGENCY (USE WITH MESSAGE TO TUNE RADIO)

NOTE: \" indicates phases requiring two or more lines

Recommended Portable VMS Problem Statements

ACCIDENT	ROADWORK \ TONIGHT \—
DELAYS	SOFT \ SHOULDER
MAJOR \ DELAYS	LOOSE \ GRAVEL
DISABLED \VEHICLE	FRESH \OIL
TRAFFIC \ BACKUP	HOV LANE
ROADWORK	SIGNAL \ NOT\WORKING
ROADWAY \MAY BE \ ICY	WORKERS \ IN ROAD
RAMPS \MAY BE \ ICY	MOVING \ WORK \CREW
BRIDGES \MAY BE\ ICY	UNEVEN \ PAVEMENT
CAUTION \ ICY \ROAD	FLAGGER
CAUTION \ SLIPPERY \ROAD	LANES \ NARROW
CAUTION \ SNOW \DRIFTING	SINGLE \ LANE
CAUTION \ DENSE \ FOG	NO \ SHOULDER
CAUTION \ ROAD \FLOODING	NO SHLDR
CAUTION \ HIGH \ WINDS	POLICE \ CHECK \POINT
CAUTION \ FOG	—\ BRIDGE \RAISED
CAUTION \ UNMARKED \ LANES	LEFT \ LANE \ HOV ONLY
SLOW \TRAFFIC	LEFT\LANE \ HOV AND \ MTRCYCLE
ROAD \CLOSED \ AHEAD	NO \ HOV \LIMITS
_____\ BRIDGE \ CLOSED	NO HOV \ LIMITS
_____\ CLOSED\ RAMP	TUNNEL \ CLOSED
2-WAY \ TRAFFIC	HAZ\CHEMICAL \SPILL
LANES \SHIFT	TRAFFIC \ ALERT (USE WITH MESSAGE TO TUNE RADIO)
LANES \ DIVIDE	

Recommended VMS Location Statements

PERMANENT VMS

___ MILES AHEAD	NEAR _____ (LANDMARK)
AT___STREET	EXITS ___TO ___
AT EXIT _____	_____ ST \ TO -ST
AT___ STREET \ EXIT ___	NEAR_____STREET
AT _____ (LANDMARK)	AFTER _ _ _ _ STREET

PORTABLE VMS

___ MI AHD	NEAR \ (LANDMARK)
___ MILES \ AHEAD	EXIT___ \ TO___
___ ST	_____ ST \TO ___ST
EXIT ___	NEAR \ ____ ST
___ST \ EXIT___	AFTER \ ___ ST
(LANDMARK)	

Recommended VMS Effect Statements

PERMANENT VMS

LEFT LANE CLOSED	RIGHT SHOULDER \ CLOSED
RIGHT LANE CLOSED	OFF RAMP CLOSED
CENTERLANECLOSED	___ MINUTE DELAY
CENTERLANESCLOSED	SLOW TRAFFIC
RIGHT LANES CLOSED	EXPECTDELAYS
2 RIGHT LANES CLOSED	SPEED LIMIT\ REDUCED __ MPH
LEFT LANES CLOSED	15 MINUTE CLOSURES \MIDNIGHT TO 5 AM \EXPECT
2 LEFT LANES CLOSED	DELAYS
ROAD CLOSED	— MILE BACKUP
LEFT SHOULDER \ CLOSED	CHAINS REQUIRED

PORTABLE VMS

LEFT \ LANE \CLOSED	2 LEFT \IANES \CLOSED
LFT LANE \ CLOSED	2 LFT LN \ CLOSED
RIGHT \LANE \CLOSED	ROAD \ CLOSED
RT LANE\ CLOSED	LEFT\SHOULDER \ CLOSED
CENTER \ LANE \CLOSED	RIGHT \ SHOULDER \ CLOSED
CNTR LN \CLOSED	RT SHLDR \ CLOSED
CENTER \ LANES \CLOSED	OFF RAMP\ CLOSED
CNTR LNS \ CLOSED	___ MIN\ DELAY
RIGHT \LANES \CLOSED	SLOW \TRAFFIC
RT LANES \ CLOSED	EXPECT DELAYS
2 RIGHT \ LANES \ CLOSED	REDUCED \SPEED \ __ MPH
2 RT LNS \ CLOSED	15 MIN\ CLOSURES \ — _____AM
LEFT \LANES \CLOSED	— MILE \ BACKUP
LFT LNS \ CLOSED	CHAINS \ REQUIRED

Recommended VMS Attention Statements

PERMANENT VMS

ALL TRAFFIC	THRU TRAFFIC
CARS	BUSES
TRUCKS	CARPOOLS
(ROUTE NO) NORTH	WIDE LOADS
(ROUTE NO) SOUTH	EMERGENCY VEHICLES \ ONLY
(ROUTE NO) EAST	VEHICLES WITH \TRAILERS
(ROUTE NOI WEST	SINGLE AXLE TRUCKS
LOCAL TRAFFIC	

PORTABLE VMS

ALL TRAF	THRU \TRAFFIC
ALL\TRAFFIC	BUSES
CARS	CARPOOLS
TRUCKS	WIDE \ LOADS
(ROUTE NO) N	EMERGENCY \VEHICLES \ ONLY
(ROUTE NO) S	EMER VEH \ ONLY
(ROUTE NO) E	VEH WITH \TRAILERS
(ROUTE NO) W	VEHICLES \ WITH \ TRAILERS
LOCAL \ TRAFFIC	SINGLE \AXLE \TRUCKS

Recommended Permanent VMS Action Statements For Non-Diversion Situations

MERGE RIGHT	PREPARE TO MERGE
MERGE LEFT	SLOW TO -MPH
KEEP LEFT	REDUCE SPEED
KEEP RIGHT	(ATT'N STMT) \ KEEP LEFT
STAY ON —	(ATT' N STMT) \ KEEP RIGHT
(ATT'N STMT) \ MERGE TO\ RIGHT LANE	DO NOT PASS
(ATT'N STMT) \ MERGE TO\ LEFT LANE	STAY IN LANE
(ATT'N STMT)\MERGE TO\RIGHT OR LEFT LANE	PROCEED WITH CAUTION
ATT'N STMT) \ MERGE TO \2 RIGHT LANES	USE CAUTION
(ATT' N STMT) \ MERGE TO \ 2 LEFT LANES	WATCH FOR FLAGGER
DO NOT LEAVE \ YOUR VEHICLE	USE RIGHT LANE
PREPARE TO STOP	USE LEFT LANE

Recommended Portable VMS Action Statements For Non-Diversion Situations

MERGE \ RIGHT	PREPARE \TO \ MERGE
MRGE RT	PREPARE \TO MERGE
MERGE\ LEFT	SLOW TO\ --- MPH
KEEP \ LEFT	REDUCE \ SPEED
KEEP LFT	(ATT'N STMT) \ KEEP\ LEFT
KEEP \ RIGHT	(ATT'N STMT) \ KEEP LFT
KEEP RT	(ATT' N STMT) \ KEEP\ RIGHT
STAY ON\ ——	(ATT'N STMT) \ KEEP RT
MERGE TO \ RIGHT\ LANE	DO \ NOT \ PASS
MERGE TO \ RT LANE	DO NOT \ PASS
MERGE TO\LEFT\LANE	STAY\IN\LANE
MERGE TO \ LFT LANE	STAY IN \ LANE
KEEP OUT \ OF CNTR \ LANE	PROCEED\ WITH \ CAUTION
MERGE TO \2 RIGHT \ LANES	USE\ CAUTION
MERGE TO \2 LEFT \ LANES	WATCH \ FOR \ FLAGGER
STAY \ WITH \ VEHICLE	USE \RIGHT \LANE
PREPARE \ TO STOP	USE \ RT LANE
PREPARE \TO \ STOP	USE \ LEFT\ LANE
	USE \ LFT LANE

Recommended VMS Action Statements For Required Diversions

PERMANENT VMS

TUNE RADIO 1610 AM	CARS USE —
TUNE RADIO 530 AM	TRUCKS USE-
TO AVOID DELAYS \USE-\ LEFT	USE ----ROAD \ VIA —
EXIT-1 MILE	USE ALT ROUTE
AVOID -MINUTE DELAY \ USE ___	USE. PA XX \ TO XX WEST \TO XX EAST TO 95
USE NEXT EXIT	USE I-XX SOUTH\TO ROUTE XX EAST \AVOID
USE DETOUR ROUTE	DELAYS
CONSIDER ALT ROUTE	USE I-XX NORTH \ AS ALTERNATE ROUTE
FOLLOW DETOUR	USE I-XX NORTH \ TO /LOCATION\
	FOLLOW ALT ROUTE

PORTABLE VMS

TUNE\RADIO\ 1610 AM	USE \— RD \VIA----
TUNE\RADIO\530AM	USE \ ALT \ ROUTE
AVOID\DELAYS\USE-----	USE ALT\ ROUTE
USE \ NEXT \ EXIT	PAXX \ TOXXW \TOXXE
USE \ DETOUR \ ROUTE	USE ALT\ I-XXS\ TO XXE
CONSIDER\ALT\ROUTE	USE \ I-XX N\ AS ALT
CARS USE \ —	I-XX N \TO \ (LOCATION)
TRUCKS USE \ ___	FOLLOW \ALT\ ROUTE
FOLLOW \ DETOUR	

STANDARD VMS ABBREVIATIONS AND CONTRACTIONS

Category I: Independent of Specific Content

The following is a list of acceptable abbreviations for frequently used words, which at least 85 percent of the driving public would understand if they appeared on a VMS, independent of specific content. Also Included are acceptable contractions.

WORD	ABBREVIATION
Alternate	ALT
Avenue	AVE
Boulevard	BLVD
Can Not	CAN'T
Center	CNTR
Do Not	DON'T
Emergency	EMER
Entrance, Enter	ENT
Expressway	EXPWY
Freeway	FRWY, FWY
Highway	HWY
Information	INFO
lt Is	IT'S
Junction	JCT
Left	LFT
Maintenance	MAINT
Normal	NORM
Parking	PKING

Category I (Cont'd)

WORD	ABBREVIATION
Road	RD
Service	SERV
Shoulder	SHLDR
Slippery	SLIP
Speed	SPD
Street	ST
Traffic	TRAF
Travelers	TRVLRS
Warning	WARN
Will Not	WON'T

Catagory II: Prompt Word Required

The following list of abbreviations are easily understood whenever they appear in conjunction with a particular word commonly associated with it (prompt word). The prompt word can appear either before or after the abbreviation depending on the meaning. Some abbreviations change meaning based on the prompt word. For example, "RT" is alternately recognized as either "ROUTE" or "RIGHT" based on the prompt word used. The words and abbreviations shown in normal type are understood by at least 85 percent of the driving population. Those shown in boldface type are understood by at least 75 percent of the driving population, and public education is recommended prior to their usage

WORD	ABBREVIATION	PROMPT
ACCESS	ACCS	ROAD
AHEAD	AHD	FOG*
BLOCKED	BLKD	LANE*
BRIDGE	BRDG	[NAME]*
CENTER	CNTR	LANE
CHEMICAL	CHEM	SPILL
CONDITION	COND	TRAFFIC*
CONGESTED	CONG	TRAFFIC*
CONSTRUCTION	CONST	AHEAD
DOWNTOWN	DWNTN	TRAFFIC*
EASTBOUND	E-BND	TRAFFIC
ENTRANCE	ENT	FREEWAY
EXIT	EX. EXT	NEXT
EXPRESS	EXP	LANE
FRONTAGE	FRNTG	ROAD
HAZARDOUS	HAZ	DRIVING
INTERSTATE		[NUMBER]

Category II (Cont'd)

WORD	ABBREVIATION	PROMPT
LOCAL	LOC	TRAFFIC
MAJOR	MAJ	ACCIDENT
MILE	MI	[NUMBER]=
MINOR	MNR	ACCIDENT
MINUTE(S)	MIN	[NUMBER]=
NORTHBOUND	N-BND	TRAFFIC
OVERSIZED	OVRSZ	LOAD
PREPARE	PREP	TO STOP
PAVEMENT	PVMT	WET
QUALITY	QLTY	AIR'
RIGHT	RT	KEEP=
ROADWORK	RDWK	AHEAD [DISTANCE]
ROUTE	RT	BEST*
SOUTHBOUND	S-BND	TRAFFIC
TEMPORARY	TEMP	ROUTE
TOWNSHIP	TWNSHP	LIMITS
TURNPIKE	TRNPK	[NAME]'
VEHICLE	VEH	STALLED*
UPPER, LOWER	UPR, LWR	LEVEL
WESTBOUND	W-BND	TRAFFIC
CARDINAL DIRECTIONS	N, E, S, W	[NUMBER]

. prompt word should precede abbreviation

Category III: DO NOT USE THESE

Certain abbreviations are prone to inviting confusion because another word is abbreviated or could be abbreviated in the same way. AVOID USING THESE ABBREVIATIONS:

ABBREVIATION	INTENDED WORD	COMMON MISINTERPRETATION
WRNG	WARNING	WRONG
ACC	ACCIDENT	ACCESS (ROAD)
DLY	DELAY	DAILY
LT	LIGHT (TRAFFIC)	LEFT
STAD	STADIUM	STANDARD
L	LEFT	LANE (MERGE)
PARK	PARKING	PARK
RED	REDUCE	RED
POLL	POLLUTION (INDEX)	POLL
FDR	FEEDER	FEDERAL
CLRS	CLEARS	COLORS

HAR MESSAGE CONSTRUCTION

MESSAGE ELELMENT	CONTENTS
INTRODUCTION	· Agency name · Time/Day stamp
ADDRESS	· Direction of traffic (e g. NB) · Facility name (e.g. I-95) · Destination of traffic (e.g New York)
PROBLEM	· Severity of incident
LOCATION	• Incident location · Milepost information · Exit numbers/Street names
ACTION	· Required motorist action

An HAR message should:

- Be heard in its entirety by a motorist twice within the effective transmission range (this requirement limits message duration to 60 seconds or less)
- Comply with an FCC requirement that the HAR station call sign be transmitted at the end of each complete transmission (in places where continuous, frequent, or extended broadcasts are made, the call sign may be transmitted once every 30 minutes)

HAR MESSAGE TEMPLATES FOR SELECTED APPLICATIONS

General Accident Message

A general accident message is recommended for use when a TOC operator has confirmed information about an incident location, but does not know the specific lanes closed or specific backup or delay information.

- Template (general accident message)

'This is the _____ traffic *operations center (or highway authority) with* a *traffic* alert at *(time/day). Attention: Motorists traveling (direction) along (route number). is an accident along (route number/name* direction) *near milepost___, between exits___ and___. These are* the *exits for (route numbers/names). Please use caution and stay alert as you approach and* travel *through this area, as* delays *can be expected. This* message *will be updated every- minutes. You are listening to station (call number). This message will be repeated.'*

Roadwork Message

A roadwork message may include effects of roadwork such as lane closures, delays, and where appropriate, detour advisories.

- Template: (roadwork message without diversion)

  'This is the _____ traffic operations center (or highway authority) with a *traffic alert at (time/day). Attention: Motorists traveling (direction)* along *(route number). On* (route *number/name direction) near milepost __, between exits __ and __ , in (municipality), construction activity is closing (lanes closed). The work is expected to continue until (date, day, or time). Please use caution and* stay *alert as you travel through this area as* delays can *be expected. You are listening to station (call number). This message will be repeated. '*

Inclement Weather Advisory Message (1)

This type of message is recommended for use when delays are being experienced over extensive sections of highway due to the weather.

- Template 1: (to advise of weather-related delays and to increase following distance)

  'This is the _____ traffic operations center (or highway authority) with a *traffic alert at (time/day). Attention: Motorists traveling (direction) along (route number). Be advised that due to the inclement weather, traffic is* moving *at a slower than normal pace. Delays can be expected along (route number) and adjacent routes.* Please use *caution while traveling this (morning/afternoon) by reducing your speed and increasing the distance between your vehicle* and *the vehicle you are following.*

  This message will be updated periodically to keep you informed of roadway conditions as they change. Thank you for your cooperation. You are *listening to station (call number). This message will be repeated.*

Inclement Weather Advisory Message (2)

- Template 2: (snow emergency plan message)

'This is the _____ traffic operations center {or highway authority) with a traffic alert at *(time/day). Attention: Motorists traveling (direction) along* (route *number). Currently , the* snow *emergency plan is in effect for _____ county/counties. All vehicles traveling on snow emergency routes must be equipped with snow tires or chains and any vehicle left unattended on the highway will be towed.*

Please use caution while traveling by reducing your speed and increasing the distance between your vehicle and the vehicle you are following as slippery conditions require extra braking room. Also remember that ramps and bridges freeze before the roadway.

This station will broadcast additional information as road conditions change. Thank you for your cooperation. You are listening to *station (call number). This message will be repeated."*

Alternate Route Messages (1)

When a diversion is recommended (or required), an alternate route message should be inserted into an incident, roadwork, or congestion message.

- Template 1: (general delay-related diversion message for diversion to beltway. bypass, or other direct-connecting highway not requiring turns)

  'This is the _____ traffic operations center (or highway authority) with a traffic alert at (time/day) Attention: Motorists whose destinations are to _____ or points South/North, a suggested alternate route is to use (route number and direction). Use Exit to reach (route number/road name). (Repeat route number) rejoins I-95 (____miles)(north/south) of (name of city, town , etc traffic is being detoured around)'

Alternate Route Messages (2)

- Template 2: (specific alternate route instructions inserted into a roadwork message where no direct-connecting loop freeway is available)

'This is the _____ traffic operations center (or highway authority) with a traffic alert at (time/day). Attention: Motorists traveling (direction) along (route (route number). Due to lane closures at a highway work zone site on (route number name direction) near milepost___, between exits __ and __, in (municipality), motorists will encounter delays. If you switch to an alternate route, you may save ___ minutes. The alternate route is approximately miles long and total trip time to travel between exits ___ and ___ is approxrmately ____ minutes.

(Direction)-bound travelers, use exit___ and take the following route.

Turn (right/left) onto (route/street name) and follow (route/street name) for-miles
Turn (right/left onto (route/street name) and follow (route/street name) for-miles
Turn (right/left) onto (route/street name) and follow (route/street name) for-miles
And proceed back to I-95.

I repeat: Use exit —— and take the following route:

Turn left/right on _____
Turn left/right on _____
Turn left/fight on _____
And proceed back to I-95.

You are listening to station (call number). This message will be repeated.

Special Events Messages (1).

Special events messages may be used to divert traffic off of a congested route by giving instructions for a short cut to the event.

- Template 1: (short cut to parking lot)

'This is the_____ traffic operations center (or highway authority) with a traffic alert at (time/day) Attention: baseball fans headrng north/south on I-95 to_____Stadium. There are major delays in downtown (city) and on I-95 (north/south)bound to (Stadium) between exits___ and- To save ___minutestravel; time, use exit ___ and take the following route'

Turn (rIghtl/eft) onto (route/street name) and follow (route/street name) for ___miles [through — Irghts.]

Turn (right/left) onto (route/street name) [at the (landmark)] and follow (route/street name) for -miles [through ___ llghts.]

Proceed past ___Stadium on [route/street name) and turn (left/right) into the main parking lot.

I repeat: Use exit —— and take the following route to ——— Stadium to save ___ mnutes:

Turn left/right on_____
Turn left/right on _____
Turn left/right into the main parking lot.

You are listening to station (call number). This message will be repeated.'

Special Events Messages (2)

- Template 2: (shuttle bus parking)

**This is the _____ traffic operations center (or highway authority) with a traffic* alert at *(time/day). Attention' baseball fans heading north/south on I-95 to _____Stadium. Parking space at the stadium is very limited. It is much easier to park* at *the —— parking lot, where* a *shuttle bus to —— Stadium runs every 15 minutes until 15 minutes* after *the game begins. Parking at the —— parking lot is free and shuttle fare is (free/$- per person).*

To reach *the _____ parking* lot, *use exit ___ and take the following route:*

(insert directions to *parking facility)*

I repeat: to reach *the _____ parking lot and use the shuttle service to -Stadium, use exit —— and* take *the following route:*

Turn left/right on _____
Turn left/right on _____
Turn left/right into *the main parking lot,*

You are listening to station (call number). This message will be repeated. '

GENERAL VMS/HAR OPERATIONS

Messages for "No Flashing Light" Operation

- Construction Information
- special Events as they Relate to the Traffic Network
- Transportation Related Public Service Messages (20 second maximum, once per message cycle maximum)
- Station Identification
- A message cycle will be a maximum of 1.5 minutes in length.

NOTE: No advertising can be broadcast as per FCC regulations. and no recurring congestion information or non-transportation public service messages should be broadcast.

Messages for "Flashing Light" Operations

- All non-recurring congestion (accidents, breakdowns, major construction) which would substantially affect traffic in the broadcast area.
- While a flashing light message is being broadcast, all other messages should be taken off the air.
- A message cycle will be a maximum of one minute.

Use of Distances

Decimal fractions should not be used to express distances. The following guidelines are recommended for the dissemination of distances:

- less than 1/4 mile- given in feet
- between 1/4 and 2 miles- to the nearest 1/4 mile
- between 2 and 20 miles - to the nearest mile

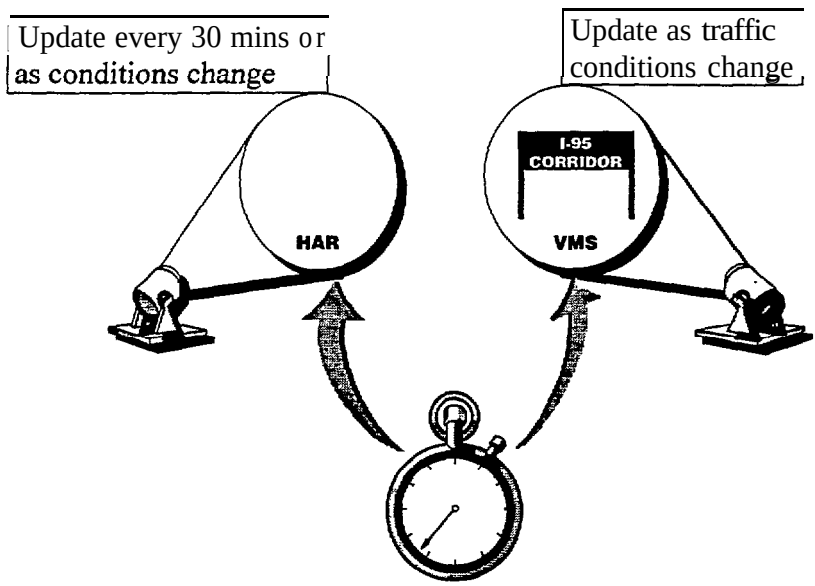
Precedence

When using VMS and HAR on a Corridor wide basis, there will be a large amount of traffic related information available to agencies. It is important that the information most vital to motorists be displayed on the VMS and HAR. The order of precedence for messages should be as follows:

1. Local Traffic Advisory Messages
2. Corridor Traffic Advisory Messages
3. Local Future Constructions and Events Messages
4. Corridor Future Construction and Events Messages (Optional)
5. Local Filler Messages (Optional)

Frequency of Updating Messages

New travel information that has been verified should be displayed as soon as possible. As a general rule, VMSs should be updated as traffic conditions change. As a minimum, HAR dated messages require an update on a daily basis, and flashing light messages, i.e., emergency traffic messages, should be updated every 30 minutes or as conditions change.



VMS PROGRAMMING AND HAR BROADCASTING GUIDELINES

General VMS/HAR Operational Issues

- Operators should know the message status of VMS and HAR at all times,
- VMS messages need to attract and maintain the attention of the motorist. Messages should be short and to the point. Each frame or page of the displayed message should display a complete phrase. For example, logical phrasing would be, “ACCIDENT AHEAD” on one page, and “AT EXIT 56” on the second page.
- Motorists must be able to recognize, read, and easily comprehend messages displayed on a VMS. In general, the fewer pages the message is displayed on, the easier it is for the motorist to comprehend the message. One page is preferred over two page messages. No three page messages are recommended. Research has concluded that motorists have difficulty or are unable to comprehend a message which has been displayed on three or more pages. If it is felt that three pages are needed, the VMS should be used in conjunction with a HAR as discussed at the beginning of this chapter.
- It is important to understand the potential audience to be reached when using either a VMS or an HAR along the I-95 Corridor. Local and commuter traffic will likely be familiar with local street names and landmarks as they frequently travel the same route on a daily basis. Corridor travelers, motorists from outside of the local area, are likely to be unfamiliar with local street names and landmarks, and more familiar with standard route markings, i.e. I-95.

- For local incidents and events, local street names and landmarks can be used to reference travel conditions. Care should be taken to ensure that destination and street names to be displayed on a VMS are consistent with those used on existing static destination signing. For corridor events, it is recommended that traditional points of reference, i.e , exit numbers, etc., be utilized as the primary reference system for disseminating travel Information along the I-95 Corridor.
- Incident related information should be disseminated beginning with the traffic control device located nearest the incident.
- Portable VMS should always display a message. When not in use, the sign should be turned away from traffic or covered so the sign is not visible to the motorist, or preferably removed from the roadway.
- Operators should avoid using a monotone voice when recording a HAR message.

HAR Operational Features[2]

- There should always be some programming on the air.
- When no current incident information is being broadcast, construction advisory Information that will affect motorists in the corridor should be broadcast.
- Unless reliable, real-time traffic condition information is available on alternate routes, specific alternates should not be suggested. If this does occur and alternates are suggested, more than one alternate route should be suggested.
- HAR operating agencies should be willing to air both major construction and Incident information for other agencies.
- When flashing lights are activated for a traffic advisory message, only information on the incident should be included in the playlist.
- No incident information should be broadcast until the information has been verified.
- No message should be broadcast stating that an incident has been cleared. Instead, the incident message should be deleted from the playlist. However, in a corridor system, an update should be provided.
- A flashing light, traffic advisory message should be updated at least once an hour.

2 *TRANSCOM Operational Guidelines for Broadcasting HAR Messages and HAR Implementation* Strategy.

DEFINITIONS

The Incident Agency is defined as the agency responsible for handling and clearing the incident. It is the agency in whose jurisdiction the incident occurred.

The Interim CCC is defined as a centralized location that will receive information from incident agencies, disseminate the information received, and coordinate the activities between the incident and non-Incident agencies throughout the duration of a regional/corridor event.

The Non-incident agency is defined as any agency which is not the incident agency but is affected by the incident

A Local Incident can be handled by the local TOC with assistance from police, fire and EMS agencies but because of time of day, anticipated duration and capacity restrictions does not warrant assistance from or significantly impact other agencies within the region.

In a Regional Incident, the combination of anticipated incident duration (greater than 2 hours), capacity restrictions and/or time of day will affect other agency jurisdictions.

The anticipated incident duration of a Corridor Incident is greater than 4 hours and a significant reduction (66% or greater) in roadway capacity exists that will potentially affect traffic conditions along the entire corridor

The Primary Motorist Information Zone (PriMIZ) is defined as that area in the immediate vicinity of an incident where there are no major alternate routes available in the direction of travel to divert traffic.

The Secondary Motorist Information Zone (SeMIZ) is defined as that area directly upstream of the primary motorist information zone within which there is one or more alternate routes available to divert traffic.

The Surrounding Motorist Information Area (SuMIA) is defined as that area outside of the primary and secondary motorist information zones whose traffic will be influenced by the incident.

I-95 Corridor Coalition

VMS/HAR Operations Guidelines and Recommended Practices Quick Reference Guide