Auxiliary Communications (AUXCOMM)

Training Course

Unit 5: Incident Radio Communications Plan

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Terminal Learning Objective
Enabling Learning Objectives

TLO: At the conclusion of the unit, the student will be able complete Form 217A, Communications Resource Availability Worksheet, and ICS Form 205, the Incident Radio Communications Plan

ELO A: Complete Form 217A

ELO B: Complete ICS Form 205

ELO C: Identify security requirements for ICS Form 205 and Form 217A

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Form 217A: Communications Resource Availability Worksheet

- Purpose
- Preparation
- Distribution

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Exercise 5-1: Form 217A Communications Resource Availability Worksheet

Purpose/Objective

- Complete Form 217A
- Identify security requirements for Form 217A

Exercise Instructions

- All AUXCOMM organizations should have the Form 217A(s) that include all auxiliary communications resources available to that specific group
- Identify available channels at the state, region, or local level

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Exercise 5-1: Form 217A Communications Resource Availability Worksheet (Cont'd)

Exercise Instructions (Cont'd)

- List other available AUXCOMM-related resources that provide coverage in the AUXCOMM organization's area of operation (repeaters, designated channels, etc.)
- Provide and review samples of Form 217A

Exercise 5-1: Form 217A Communications Resource Availability Worksheet (Cont'd)

Outputs

- Participants will work in small groups to produce a hard and/or soft copy of the 217A
- Present and discuss results per group
- Present and discuss security requirements

Duration

- 1 hour

Form 217A for Group Exercises

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET							Frequency Band				Description
Form 217-A			Page 1 of 3				3 - 30 MHz				Nationwide

Ch #	Channel Config	Channel Name	Eligible Users	Rx Frequency	Wide/ Narrow	RX Tone / NAC	Tx Frequency	Wide/ Narrow	Tx Tone / Nac	Mode (A/D)	Remarks
1	80/75 Meters	RTTY/ DATA					3.5700-3.6000				
2	80/75 Meters	SSB-DX					3.7900-3.8000				
3	80/75 Meters	SSTV					3.8450				
4	80/75 Meters	AM-Calling					3.8850				
5	60 Meters	1					5.3305				Shared with primary user
6	60 Meters	2					5.3465				Shared with primary user
7	60 Meters	3					5.3585				Shared with primary user
8	60 Meters	4					5.3715				Shared with primary user
9	60 Meters	5					5.4035				Shared with primary user

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Form 217A for Group Exercises (Cont'd)

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET							Frequency Band				Description
Form 217-A			Page 2 of 3				3 - 30 MHz				Nationwide

Ch #	Channel Config	Channel Name	Eligible Users	Rx Frequency	Wide/ Narrow	RX Tone / NAC	Tx Frequency	Wide/ Narrow	Tx Tone / Nac	Mode (A/D)	Remarks
10	40 Meters	RTTY-DX					7.0400				
11	40 Meters	PSK31 DX					7.03515				
12	40 Meters	SSTV					7.1710				
13	40 Meters	AM-Calling					7.2900				
14	20 Meters	PSK31					14.07015				
15	20 Meters	RTTY					14.0700-14.0950				
16	20 Meters	NCDXF Beacons					14.1000				Do Not Transmit On This Frequency!
17	20 Meters	SSTV					14.2300				
18	20 Meters	AM-Calling					14.2860				

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Form 217A for Group Exercises (Cont'd)

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET							Frequency Band				Description
Form 217-A			Page 3 of 3				3 - 30 MHz				Nationwide

Ch #	Channel Config	Channel Name	Eligible Users	Rx Frequency	Wide/ Narrow	RX Tone / NAC	Tx Frequency	Wide/ Narrow	Tx Tone/ Nac	Mode (A/D)	Remarks
19	15 Meters	RTTY/DATA					21.0700 - 21.1100				
20	15 Meters	PSK31					21.07015				
21	15 Meters	NCDXF Beacons					21.1500				Do Not Transmit On This Frequency!
22	15 Meters	SSTV					21.3400				
23	10 Meters	RTTY/DATA					28.0700 - 28.1500				
24	10 Meters	PSK31					28.12015				
25	10 Meters	NCDXF Beacons					28.2000-28.3000				Do Not Transmit On This Frequency!
26	10 Meters	AM					29.0000 - 29.2000				
27	10 Meters	FM Repeaters		29.6100 - 29.7000	W		29.5200 - 29.5900	W		A	
28	10 Meters	FM Calling		29.6000	CSQ	W	29.6000	CSQ	W	A	Simplex Calling

AUXCOMM UNIT 5 – INCIDENT RADIO COMMUNICATIONS PLAN

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ICS Form 205: Incident Radio Communications Plan

- Purpose

- Preparation

- Distribution

ICS Form 205: Incident Radio Communications Plan (Cont'd)

- Determine needs:
  - <u>What</u> is their assignment?
  - <u>Who</u> is here?
  - <u>When</u> are they doing it?
  - <u>Where</u> are they doing it?
  - <u>Why</u> are they doing it; what are roles of resources?
  - <u>How</u> is the incident organized?
  - <u>How much?</u> What bandwidth/capacity is needed and over what coverage area?

ICS Form 205: Incident Radio Communications Plan (Cont'd)

- Assess available resources
- Determine most appropriate and available application of resources
  - Shared channels/systems?
  - Interconnects (gateways)?
  - Radio cache equipment?
- Assign nets
  - Create the ICS Form 205

ICS Form 205: Incident Radio Communications Plan (Cont'd)

- Message Coordination
- Incident support (Operational and Technical)

Networks for large incidents may be organized as follows:

- Command Net
- Tactical Net
- Support Net
- Air Nets (air-to-ground, air-to-air, etc.)
- Staging Area Nets

Incident Radio Communications Plan Sensitive Information

- Generally, IAPs become public information and radio programming information may become compromised through general distribution of the IAP beyond incident personnel

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Incident Radio Communications Plan Sensitive Information (Cont'd)

- The Department of Homeland Security (DHS) restricts the publication of detailed frequency and programming information regarding Urban Search & Rescue (USAR) and Disaster Medical Assistance Team (DMAT) channels to DHS-authorized personnel who have obtained the necessary clearances

Incident Radio Communications Plan Sensitive Information (Cont'd)

- USAR and DMAT frequencies will not be published on an ICS Form 205, even if known to the COML

- This same philosophy may apply to the Bomb Squad, SWAT team, military teams, intelligence gathering, or other sensitive channels being used

- Media access to ICS Form 205

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Incident Radio Communications Plan Sensitive Information (Cont'd)

- Encryption
  - Not allowed on amateur radio frequency per FCC rules
- Project 25 Digital Standards

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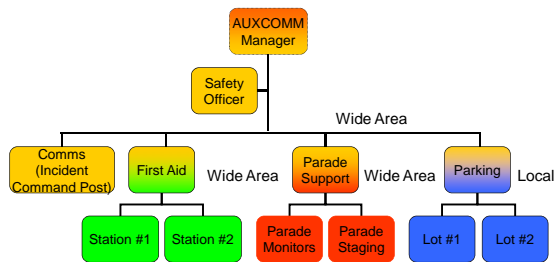AUXCOMM UNIT 5 – INCIDENT RADIO COMMUNICATIONS PLAN

Functional Assignments

```
                    AUXCOMM
                    Manager
                       |
                    Safety
                    Officer
                       |            Wide Area
        ┌──────────┬───────┬────────────┬──────────┐
      Comms      First Aid  Wide Area  Parade    Wide Area  Parking   Local
   (Incident                           Support
  Command Post)
                  ┌────┬────┐        ┌──────┬──────┐      ┌─────┬─────┐
              Station Station      Parade  Parade    Lot #1  Lot #2
                #1     #2         Monitors Staging
```

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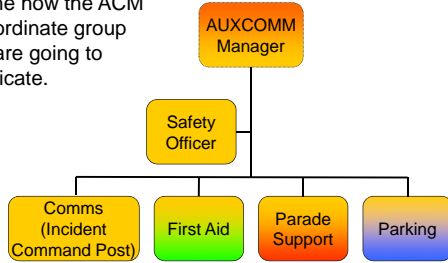
AUXCOMM UNIT 5 – INCIDENT RADIO COMMUNICATIONS PLAN

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Functional Assignments (Cont'd)

Determine how the ACM and subordinate group leaders are going to communicate.

- AUXCOMM Manager
  - Safety Officer
    - Comms (Incident Command Post)
    - First Aid
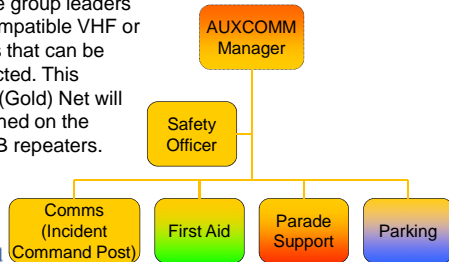   - Parade Support
    - Parking

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Functional Assignments (Cont'd)

The COML, ACM and subordinate group leaders all carry compatible VHF or UHF radios that can be interconnected. This Command (Gold) Net will be established on the linked KxAB repeaters.
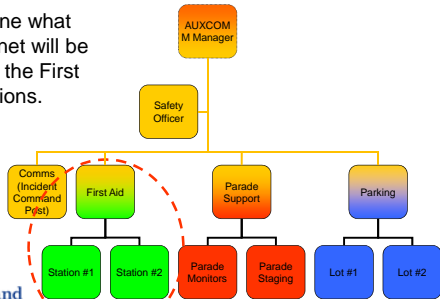
- AUXCOMM Manager
  - Safety Officer
    - Comms (Incident Command Post)
    - First Aid
    - Parade Support
    - Parking

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Functional Assignments (Cont'd)

Determine what tactical net will be used by the First Aid Stations.

- AUXCOMM Manager
  - Safety Officer
    - Comms (Incident Command Post)
    - First Aid
      - Station #1
      - Station #2
    - Parade Support
      - Parade Monitors
      - Parade Staging
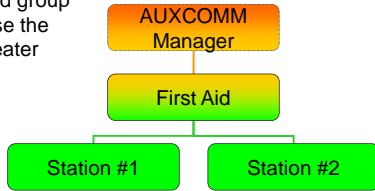   - Parking
      - Lot #1
      - Lot #2

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Functional Assignments (Cont'd)

All First Aid Station resources are local and carry VHF radios. The group leader and group members will use the KxIJK VHF repeater (Green Net).

```
AUXCOMM Manager
        |
    First Aid
    /        \
Station #1   Station #2
```

Functional Assignments (Cont'd)

Determine what tactical net will be used by Parade Support.

```
AUXCOMM Manager
        |
   Safety Officer
        |
  ------------------------------------------
  |            |         |            |
Comm        First Aid  Parade       Parking
(Incident              Support
Command
Post)
  |            |         |            |
Station #1  Station #2  Parade      Lot #1  Lot #2
                        Monitors
                        Parade
                        Staging
```

Functional Assignments (Cont'd)

All Parade Support resources carry dual band (VHF/UHF) radios. The group leader and group members will use the KxCDE UHF repeater (Red Net).
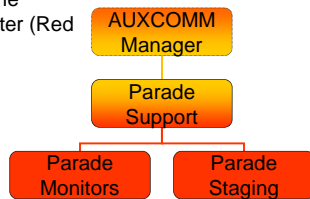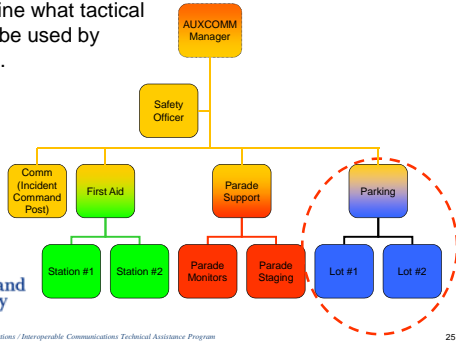
```
AUXCOMM Manager
        |
  Parade Support
    /        \
Parade       Parade
Monitors     Staging
```

Functional Assignments (Cont'd)

Determine what tactical net will be used by Parking.

AUXCOMM Manager
Safety Officer
Comm (Incident Command Post) — First Aid — Parade Support — Parking
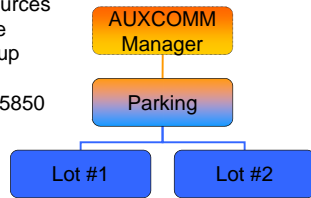Station #1 — Station #2 — Parade Monitors — Parade Staging — Lot #1 — Lot #2

Functional Assignments (Cont'd)

All parking lots are in the same area of the Central City and parking resources carry VHF radios. The group leader and group members will use the simplex channel 147.5850 MHz (Blue Net).

AUXCOMM Manager
Parking
Lot #1 — Lot #2

Functional Assignments (Cont'd)

Visually, it all can be represented like this ….

AUXCOMM Manager
Safety Officer
Gold Net
Comm (Incident Command Post) — First Aid — Parade Support — Parking
Green Net
Red Net
Blue Net
Station #1 — Station #2 — Parade Monitors — Parade Staging — Lot #1 — Lot #2
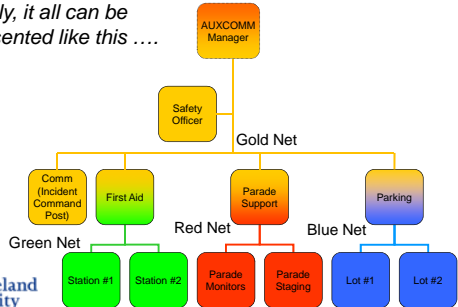
Functional Assignments (Cont'd)

- Management positions (typically) within the AUXCOMM function need to monitor and participate in radio nets both above and below them

- Two options are generally available to meet this requirement, carrying two radios or scanning

- A third option, if two bands are being used, is a dual band radio that allows simultaneous use of both bands

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ICS Form 205 (AUXCOMM Communications)

1. Incident Name: PARADE				2. Date/Time Prepared: Date: 7/1/2014 Time: 1000					3. Operational Period: Date From: 7/4/2014 Date To: 7/4/2014 Time From: 0800 Time To: 1800	
4. Basic Radio Channel Use:										
Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/ NAC	TX Freq N or W	TX Tone/ NAC	Mode (A, D, or M)	Remarks
	1	TACTICAL	KxAB	AuxComm Mgr & Supvs	146.9400 W	100.0	146.3400 W	100.0	A	Gold Net: Linked to Ch #2 at AuxComm Trailer
	2	TACTICAL	KxAB	AuxComm Mgr & Supvs	442.1000 W	141.3	447.1000 W	141.3	A	Gold Net: Linked to Ch #1 at AuxComm Trailer
	3	TACTICAL	KxIJK	First Aid	145.1450 W	CSQ	144.5450 W	123.0	A	Green Net
	4	TACTICAL	KxCDE	Parade Mgt	442.2000 W	CSQ	447.2000 W	141.3	A	Red Net
	5	TACTICAL	Simplex	Parking	147.5850 W	CSQ	147.5850 W	CSQ	A	Blue Net
	6									
	7		WxMNO	SPARE	147.1950 W	CSQ	147.7950 W	CSQ	A	Used for expansion if needed
	8		Simplex	SPARE	448.0000 W	CSQ	448.0000 W	CSQ	A	Used for expansion if needed
5. Special Instructions:										
6. Prepared by (Communications Unit Leader): Name: S. Spotter (WX4PTC)						Signature: *S. Spotter*				
ICS 205		IAP Page __4__			Date/Time: 7/1/2014 1000					

Completion of ICS Form 205

To Complete the ICS Form 205, first fill out header information:

INCIDENT RADIO COMMUNICATIONS PLAN (ICS 205)

1. Incident Name: PARADE				2. Date/Time Prepared: Date: 7/1/2014 Time: 1000					3. Operational Period: Date From: 7/4/2014 Date To: 7/4/2014 Time From: 0800 Time To: 1800	
4. Basic Radio Channel Use:										
Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/ NAC	TX Freq N or W	TX Tone/ NAC	Mode (A, D, or M)	Remarks

Completion of ICS Form 205 (Cont'd)

Then complete each line, preferably by "copy/paste" from an already completed Form 217A:

1. Incident Name: PARADE			2. Date/Time Prepared: Date: 7/1/2014 Time: 1000				3. Operational Period: Date From: 7/4/2014 Time From: 0800		Date To: 7/4/2014 Time To: 1800	
4. Basic Radio Channel Use:										
Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/ NAC	TX Freq N or W	TX Tone/ NAC	Mode (A, D, or M)	Remarks
	1	TACTICAL	KxAB	AuxComm Mgr & Supvs	146.9400 W	100.0	146.3400 W	100.0	A	Gold Net: Linked to Ch #2 at AuxComm Trailer

Updating the Function, Assignment and Remarks columns as required for each line on the ICS Form 205 as it is added.

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Completion of ICS Form 205 (Cont'd)

Until all nets are properly documented.

1. Incident Name: PARADE			2. Date/Time Prepared: Date: 7/1/2014 Time: 1000				3. Operational Period: Date From: 7/4/2014 Time From: 0800		Date To: 7/4/2014 Time To: 1800	
4. Basic Radio Channel Use:										
Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/ NAC	TX Freq N or W	TX Tone/ NAC	Mode (A, D, or M)	Remarks
	1	TACTICAL	KxAB	AuxComm Mgr & Supvs	146.9400 W	100.0	146.3400 W	100.0	A	Gold Net: Linked to Ch #2 at AuxComm Trailer
	2	TACTICAL	KxAB	AuxComm Mgr & Supvs	442.1000 W	141.3	447.1000 W	141.3	A	Gold Net: Linked to Ch #1 at AuxComm Trailer
	3	TACTICAL	KxIJK	First Aid	145.1450 W	CSQ	144.5450 W	123.0	A	Green Net
	4	TACTICAL	KxCDE	Parade Mgt	442.2000 W	CSQ	447.2000 W	141.3	A	Red Net
	5	TACTICAL	Simplex	Parking	147.5850 W	CSQ	147.5850 W	CSQ	A	Blue Net

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Completion of ICS Form 205 (Cont'd)

And not forgetting to complete the footer information!

6. Prepared by (Communications Unit Leader): Name: S. Spotter (WX4PTC)		Signature: *S. Spotter*
ICS 205	IAP Page _4___	Date/Time: 7/1/2014 1000

The convention calls for frequency lists to show four digits after the decimal place, followed by either an "N" or a "W", depending on whether the frequency is narrow or wide band.   Mode refers to either "A" or "D" indicating analog or digital (Project 25).

REMEMBER – the ICS Form 205 is part of the IAP!

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Exercise 5-2: ICS Form 205 Incident Radio Communications Plan

Purpose/Objective

- Complete an ICS Form 205

- Identify security requirements for an ICS Form 205

Instructions

- Review exercise 5-2 background, scenario, tasking, resources, parade map, and organization chart

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Exercise 5-2: ICS Form 205 Incident Radio Communications Plan (Cont'd)

Outputs

- Completed ICS Form 205 including security requirements

- Present and discuss results per individual or group

Exercise Duration: 1 hour

Background

- Annually on July 4, the Central City holds the largest parade in the region drawing from 5,000 to 7,500 attendees, including entrants

- The parade typically draws from 75 to 100 entrants (bands, floats, etc.) from throughout the state

- The parade route is 1.25 miles long along the east bank of the Central River

- The parade starts at 10 am local time and is typically over by 12:30 pm

Scenario

- Because Central City is a small community, it relies heavily on volunteer support through its Community Emergency Response Team to its public safety agencies for large events such as the July 4 parade

- The July 4 parade is managed by the Fire & Police Chiefs and Emergency Manager using a unified command structure (see Organization Chart)

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AUXCOMM UNIT 5 – INCIDENT RADIO COMMUNICATIONS PLAN

Scenario (Cont'd)

- Central City provides parade monitors along the entire route of the parade to keep the parade flowing and to watch for disruptions and people in need of first aid or other special attention

- Central City provides a first aid station and rest area for attendees

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AUXCOMM UNIT 5 – INCIDENT RADIO COMMUNICATIONS PLAN

Tasking

- The Emergency Manager (EM) has called the Central City's Community Emergency Response Team (CERT), asking for the following CERT support, including communications support from the AUXCOMM Manager

- Place no more than two Auxiliary Communicators at the Command Post (located in a Command Vehicle near the Reviewing Stand) to relay AUXCOMM radio traffic between Command and Auxiliary Communicators staffing field activities

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AUXCOMM UNIT 5 – INCIDENT RADIO COMMUNICATIONS PLAN

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Tasking (Cont'd)

- Emergency Manager's request (Cont'd)

  - Provide Auxiliary Communicator shadows to the 3 parade management staff handling parade staging in the assembly area near the start of the parade

  - Provide Auxiliary Communicator shadows to the 6 parade monitors spread every .25 miles along the route to monitor parade flow and report problems

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AUXCOMM UNIT 5 – INCIDENT RADIO COMMUNICATIONS PLAN

Tasking (Cont'd)

- Emergency Manager's request (Cont'd)

  - Provide Auxiliary Communicators at the First Aid Station to report urgent care requirements to the Command Post and to assist with dispatching EMS or first aid volunteers to field incidents reported by any parade personnel or CERT volunteers

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Tasking (Cont'd)

- Emergency Manager's request (Cont'd)

  - Central Fire Department dispatches EMS which is provided by a private ambulance company that has its own UHF radio system using UHF Med Channels for dispatch and hospital communications

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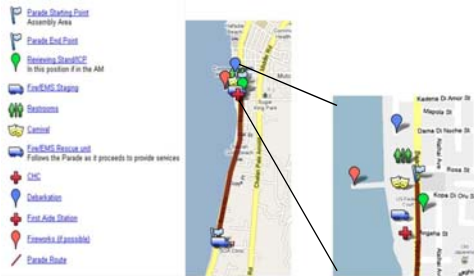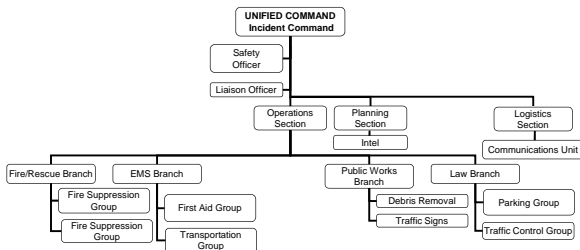AUXCOMM UNIT 5 – INCIDENT RADIO COMMUNICATIONS PLAN

Tasking (Cont'd)

- Emergency Manager's request (Cont'd)

  - Provide radio-equipped CERT members to staff entrances to two public parking lot entrances and assist motorists into lots, reporting parking lot status and any first aid/safety needs to the Command Post

Resources

- 15 CERT members serving the Central City area who are licensed Amateur Radio operators. Ten will have dual band (VHF/UHF) radios and five will have no radios

- Central City's Command Vehicle is equipped with two VHF and one UHF Amateur radio station

Resources (Cont'd)

- Central City has a cache of 5 VHF portables of the same model used by fire and police, and typically used for special events

- These radios are front-panel programmable and cover the frequency range of 138 to 174 MHz. Each has a rechargeable battery plus AA battery clamshell for backup

Exercise 5-2: Planned Event: Parade Map

Exercise 5-2: Planned Event Parade Organization Chart

Use this org chart as reference to support the incident

Unit 5: Summary

1) Completed Form 217A, the Communications Resource Availability Worksheet.

2) Completed ICS Form 205, the Incident Radio Communications Plan.

3) Identified security requirements for Form 217A and ICS Form 205.

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