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# Complete Streets Considerations for Freight and Emergency Vehicle Operations

## Module 2: Introduction to Emergency Services

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# Guidebook



Complete Streets Considerations for  
Freight and Emergency Vehicle Operations



NYSDA Project 83178

The City College  
of New York



Topics discussed in this  
module are detailed in  
**Chapter 2** of:  
  
*Complete Streets  
Considerations for Freight  
and Emergency Vehicle  
Operations*



# Module 2 Outline

- Demand for Emergency Services
- Emergency Service Providers
- Emergency Service Vehicles
- Emergency Response Infrastructure
- Emergency Service Regulations
- Common Emergency Operator Challenges

# Demand for Emergency Services

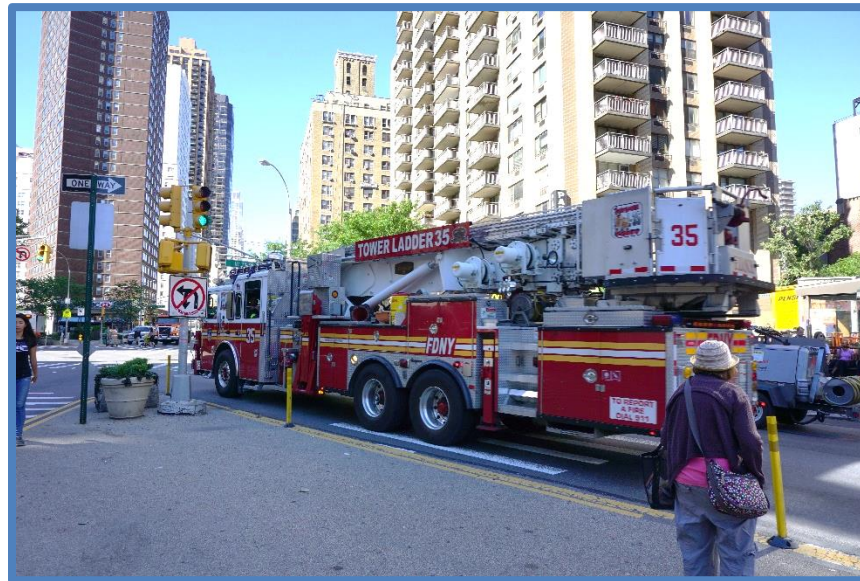
# Medical Emergencies

- Life threatening
- Non-life threatening



# Fires

- Structural fires
- Non-structural fires



# Crimes

- Critical
- Serious
- Non-critical





# Emergency Service Providers

# Emergency Medical Services

- Basic life support (BLS)
- Advanced life support (ALS)
- Government
- Private
- Volunteer

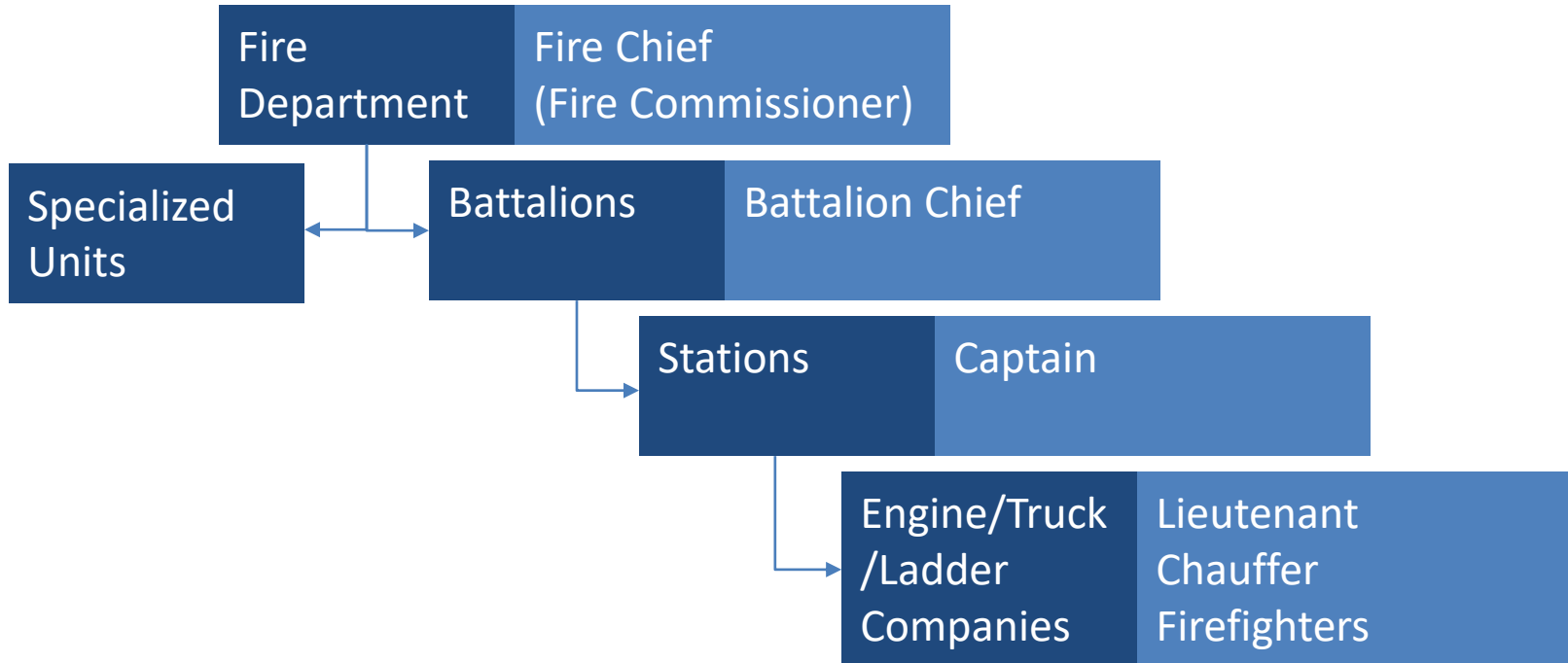


# Fire Protection

- Fire Department
- Fire District
- Professional
- Volunteer



# Typical Fire Department Structure



# Police

- Public safety
- Traffic control & parking enforcement
- Municipal Police
- County Sheriff
- State Police



# Other Emergency Service Providers

- Corrections officers
- Military and civil defense authorities
- Blood transporters
- Environmental/Hazmat response
- Sanitation patrols

# Stakeholder Engagement

- Fire chief – fire lane regulation
- Chauffer – vehicle/apparatus operations

## Methods of Outreach

Targeted invitations to public meetings

Regular inter-departmental meetings

Technical advisory committee

# Emergency Service Vehicles



# Ambulances

- Chassis w/ integrated cab
- Cab-chassis w/ modular body
- Cutaway van w/ modular body



# Fire Apparatus

- Engine
- Foam pumper
- Tanker
- Aerial ladder
- Aerial platform
- Tiller



# Police Vehicles

- Sedans
- SUVs
- Passenger vans
- Pedestrian-friendly vehicles
- Specialized vehicles



# Emergency Response Infrastructure

# Buildings

- Hospitals
- Fire stations
- Police stations





# Roads

- Fire lane
- Fire access road



# Fire Hydrants



# Frontage Space

- Parking
- Staging and operations
  - Opening doors
  - Accessing equipment and ladders
  - Connecting hoses
  - Deploying ladders and stabilizers



# Emergency Service Regulations

# Local Fire Code

- Access roads design
- Frontage space
- Authorities granted to fire commissioner/chief
  - Turning radius requirements
  - Parking restrictions



# Traffic Regulations

- Operating exceptions for vehicles responding to an emergency
  - Stopping location
  - Turning movements
  - Directionality
  - Speed Limit
- Operator must still maintain public safety

# Performance Standards

- National Fire Protection Association (NFPA) Standards
  - 1710: Professional
  - 1720: Volunteer
- Establish minimum response times
  - Emergency medical services – cardiac arrest
  - Fire response – flashover

# Adherence to Performance Standards

- Debate in medical community regarding response time as a performance measure
- May be contractually obligated
- Even if voluntary, provider may be subject to litigation for failure to meet “expected standard of care”

# Parking Regulations

- Maintain minimum travel width on fire lanes/fire access roads
- Maintain fire hydrant access



# Truck Size and Weight Regulations

- Fire apparatus frequently exempted from truck size and weight regulations
- Independent regulations may exist (e.g. wider vehicle width)



# Common Emergency Operator Challenges on Complete Streets



# Navigation Challenges

1. Navigating restricted turns.
2. Conflicts with vulnerable roadway users.
3. Navigating speed reducers.
4. Maintaining reasonable route access on everyday and alternative paths.

# Curbside Challenges

1. Finding adequate space for parking, firefighting operations, and deployment of aerial ladders and platforms.
2. Finding safe and efficient paths to access sidewalks and buildings.

# Approaches to Address Challenges

- Discussed in detail in *Module 3: Street Design and Management Considerations*