

# ***National Certification Program Study Guide***

October 2009



## **Driver/Operator – Aerial**



**NFPA 1002,  
Standard for Fire Apparatus Driver/Operator Professional  
Qualifications,  
2009 Edition**

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## Introduction to Driver/Operator - Aerial Certification

Each individual seeking certification within the Kansas Fire & Rescue Training Institute, the University of Kansas, Certification System must submit an application and the appropriate fee to secure entrance into the system. **Candidates are given one year in which to complete the certification process.** Application forms may be downloaded at: <http://www.continuinged.ku.edu/fire/certification.php>.

A list of current fees may be obtained by calling 785-864-4790 or toll free 1-866-804-8841 or may be downloaded from <http://www.continuinged.ku.edu/fire/certification.php>. Purchase orders from cities or organizations will be accepted. Kansas Fire & Rescue Training Institute will not "bill" individuals for the certification fee. Checks or credit cards are accepted from individuals. Upon receipt of the application and fee, the candidate will be scheduled into a specific exam site as requested or the candidate may select an exam site from the schedule on the KUCE website.

Applicants may register for an exam site at the time of application by completing the appropriate block on the application form. Candidates requesting a specific test site should contact the Kansas Fire & Rescue Training Institute at 785-864-4790 or toll free 1-866-804-8841 to confirm that they have a reserved place at the exam.

Certification candidates are given two (2) attempts at each component, written and practical, **within the twelve month certification period.** If the candidate takes either component of the exam twice without passing, the candidate is required to resubmit a certification application form as well as an additional certification fee before being scheduled to retest a third time.

Candidates failing the written exam are responsible for notifying Kansas Fire & Rescue Training Institute of their desire to retest and enroll at the next scheduled exam that has available space or they may come to the Kansas Fire & Rescue Training Institute in Lawrence, Kansas to take a retest. Written exams will **not** be graded at the test site. Candidates may not take the written exam more than once per day.

Candidates are responsible for **all of the skills** required by the NFPA 1002, **Standard for Fire Apparatus Driver/Operator Professional Qualifications**, 2009 edition, during the practical exam. An exact list of specific skills is included in the study guide. **Candidates should be prepared to test on any skill listed in the standard.** The intent of this process is to insure that candidates are prepared to test on skills required by the NFPA 1002 – 2009 standard.

### **Candidates will test one maintenance skill set, one driving skill set, and two aerial skill sets.**

Practical skill exams are graded on a pass/fail basis. Candidates must successfully complete all skill stations at an exam site to receive a passing grade for the practical exam. Each candidate is allowed two (2) attempts at each station.

Candidates failing the practical exam are responsible for notifying Kansas Fire & Rescue Training Institute of their desire to retest by preregistering for another regularly scheduled exam. Candidates may not take the practical exam more than once per exam day.

**An official picture ID (e.g., driver's license, military ID, etc.) must be shown for admittance to written and practical exams.**

## Certification Examination Instructions Driver/Operator - Aerial NFPA 1002 – 2009

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### Prerequisites:

Candidates seeking certification for Driver/Operator - Aerial within the Kansas Fire & Rescue Training Institute (KFRTI), the University of Kansas, must meet the following:

1. Residency and membership requirements as stated in Section 12, "Certification Policies" of the KFRTI National Certification Program Criteria and Procedures document published by Kansas Fire & Rescue Training Institute (available for download at <http://www.continuinged.ku.edu/fire/certification.php>.)
  2. Verification of the following requirements by the Fire Chief (or designated representative) or employer. Verification of these requirements will be executed with the completion of the **Driver/Operator – Aerial Local Verification Form** found at the end of this Study Guide (page 21).
    - a. Valid state driver's license.
    - b. Approval by Chief of Department to drive all vehicles the candidate is expected to drive.
    - c. Demonstrated ability to document routine tests, inspections, and servicing functions per department protocols and procedures.
    - d. Demonstrated ability to operate a fire department pumper under adverse environmental conditions.
    - e. Demonstrated ability to operate a department pumper using defensive driving techniques under emergency conditions (i.e., "lights and sirens").
  2. Candidate must be competent in all objectives listed in NFPA 1002, **Standard for Fire Apparatus Driver/Operator - Professional Qualifications**, 2009 edition, Chapters 4 and 6.
  3. Candidate must be previously nationally certified NFPA 1001 Fire Fighter I.
  4. Successful completion of all parts of the Driver/Operator - Aerial certification exam will result in national certification in Driver/Operator - Aerial.
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### Part I - Written Examination:

The Driver/Operator - Pumper written certification exam is based on **Requisite Knowledge** objectives listed in the NFPA 1002, **Standard for Fire Apparatus Driver/Operator Professional Qualifications**, 2009 edition.

1. Candidates are required to score a minimum of 70%.
  2. The certification exam contains one hundred (100) true/false and multiple choice questions covering Driver/Operator - Aerial level knowledge requirements as stated in NFPA 1002-2009. The candidate will be allowed two (2) hours to complete this portion of the exam.
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**Part II - Practical Skills Examination:**

The Driver/Operator - Aerial practical skills portion of the certification exam is based on **Requisite Knowledge** and **Requisite Skills** objectives listed in NFPA 1002, **Standard for Fire Apparatus Driver/Operator Professional Qualifications**, 2009 edition.

1. Candidates will be required to score 100% on all evaluated skills, which are graded on a Pass/Fail basis.
2. The skills evaluation forms are available as part of this study guide.

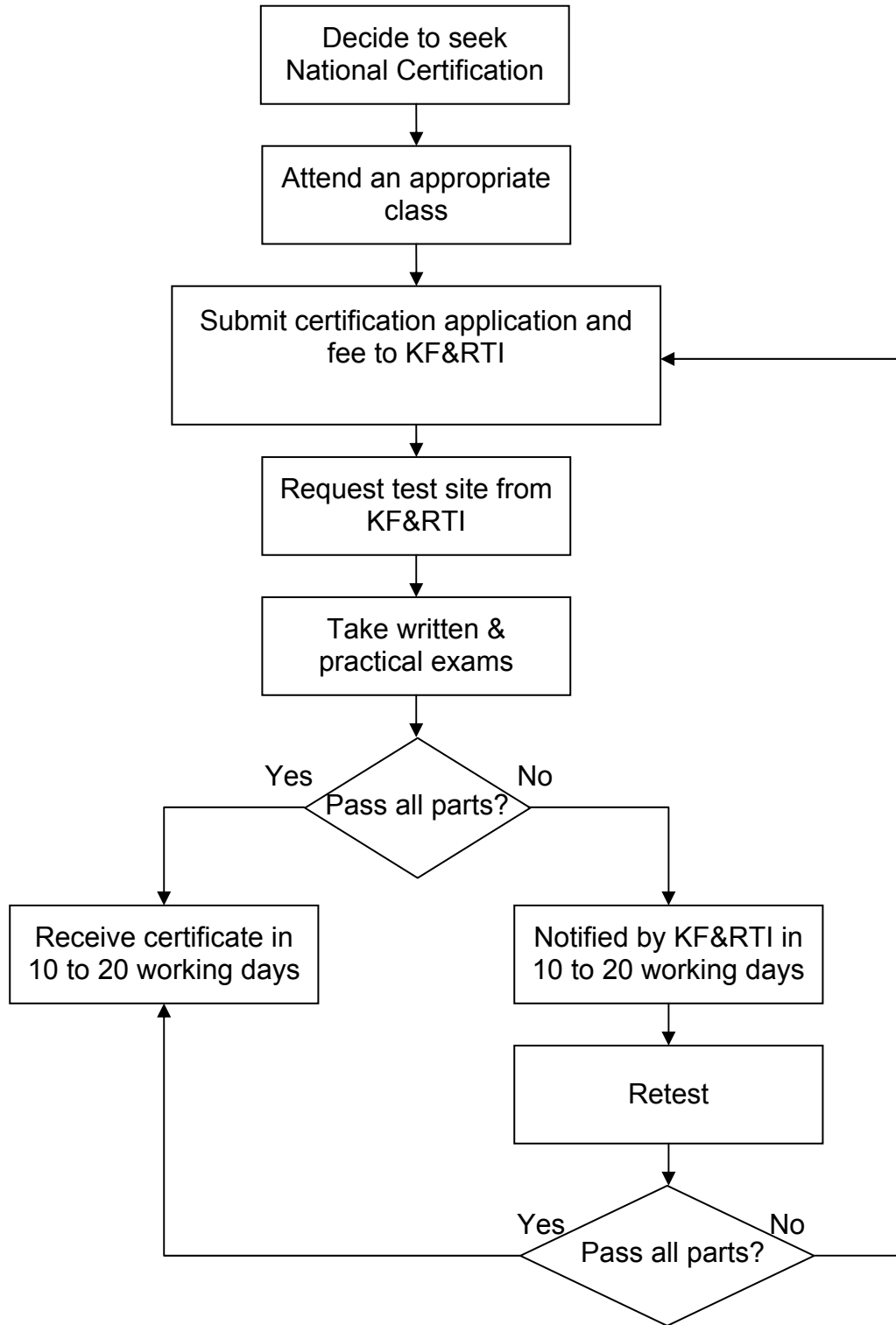
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**References & Textbooks:**

IFSTA, **Aerial Apparatus Driver/Operator Handbook**, 2d edition, © 2009.  
NFPA 1002, **Standard for Fire Apparatus Driver/Operator Professional Qualifications**, 2009 edition.  
NFPA 1500, **Standard on Fire Department Occupational Safety and Health Program**, 2007 edition.

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### Certification Flow Chart for Driver/Operator - Aerial



## Driver/Operator - Aerial Written Exam Study Guidesheet

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**Standard:** NFPA 1002, **Standard for Fire Apparatus Driver/Operator Professional Qualifications**, 2009 edition.

**Reference:** IFSTA, **Aerial Apparatus Driver/Operator Handbook**, 2d edition, © 2009.

The reading and study references listed below represent published references from which certification exam questions are taken.

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<b>Section Subject &amp; NFPA Objective Number</b>	<b>Reading/Study Reference</b>
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**Perform Routine Tests, Inspections, and Servicing Functions.**

4.2.1 pp. 94 – 131

**Document Routine Tests, Inspections, and Servicing Functions.**

4.2.2 pp. 90 – 91, 131

**Operate a Fire Department Vehicle.**

4.3.1 pp. 30 – 33, 144 – 145, 149 – 171, 176 – 182

**Back a Fire Department Vehicle Into a Restricted Area.**

4.3.2 pp. 25, 34 – 39, 177 – 178

**Maneuver a Fire Department Vehicle Around Obstructions.**

4.3.3 pp. 25, 36 – 39, 178

**Turn a Fire Department Vehicle 180 Degrees Within a Confined Space.**

4.3.4 pp. 36 – 39, 179

**Maneuver a Fire Department Vehicle in Areas with Restricted Horizontal and Vertical Clearances.**

4.3.5 pp. 179 - 180

**Operate a Fire Department Vehicle Using Defensive Driving Techniques Under Emergency Conditions.**

4.3.6 pp. 154 – 171

**Operate All Fixed Systems and Equipment on the Fire Department Vehicle.**

4.3.7 pp. 46 – 84

**Perform Routine Tests, Inspections, and Servicing Functions Particular to an Aerial Apparatus**

6.1.1 pp. 73 – 74, 125 – 131

**Maneuver and Position an Aerial Apparatus**

6.2.1 pp. 187 – 219

**Stabilize an Aerial Apparatus**

6.2.2 pp. 226 – 247

**Maneuver and Position the Aerial Device from Each Control Station**

6.2.3 pp. 60 – 68, 73 – 74, 233 – 242, 255 – 271, 280 – 293, 302 – 316, 321 – 322

**Lower an Aerial Device Using the Emergency Operating System**

6.2.4 pp. 63, 269 – 270, 292

**Deploy and Operate an Elevated Master Stream**

6.2.5 pp. 69 – 72, 194 – 195, 316 – 321, 323 – 335



## Driver/Operator - Aerial Practical Skills Exam Study Guidesheet

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**Standard:** NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications*, 2009 edition.

**Reference:** IFSTA, *Aerial Apparatus Driver/Operator Handbook*, 2d edition, © 2009.

The reading and study references listed below represent published references from which certification exam skill sheets are derived.

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<b>Section Subject &amp; NFPA Objective Number</b>	<b>Referenced Skill Sheets</b>
<b>Perform Routine Tests, Inspections, and Servicing Functions.</b>	
4.2.1 Use hand tools.	KFRTI 1
Recognize system problems.	KFRTI 1
Correct deficiencies noted.	KFRTI 1
<b>Document Routine Tests, Inspections, and Servicing Functions.</b>	
4.2.2 Use tools and equipment.	KFRTI 1
Complete all related departmental forms.	Local Verification
<b>Operate a Fire Department Vehicle.</b>	
4.3.1 Operate passenger restraint devices.	KFRTI 2
Maintain safe following distances.	KFRTI 2
Maintain control of vehicle while accelerating, decelerating, and turning.	KFRTI 2
Operate under adverse environmental or driving surface conditions.	Local Verification
Use automotive gauges and controls.	KFRTI 2
<b>Back a Fire Department Vehicle Into a Restricted Area.</b>	
4.3.2 Use mirrors and judge vehicle clearance.	KFRTI 3
<b>Maneuver a Fire Department Vehicle Around Obstructions.</b>	
4.3.3 Use mirrors and judge vehicle clearance.	KFRTI 3
<b>Turn a Fire Department Vehicle 180 Degrees Within a Confined Space.</b>	
4.3.4 Use mirrors and judge vehicle clearance.	KFRTI 3
<b>Maneuver a Fire Department Vehicle in Areas with Restricted Horizontal and Vertical Clearances.</b>	
4.3.5 Use mirrors and judge vehicle clearance.	KFRTI 3
<b>Operate a Fire Department Vehicle Using Defensive Driving Techniques Under Emergency Conditions.</b>	
4.3.6 Operate passenger restraint devices.	Local Verification
Maintain safe following distances.	Local Verification
Maintain control of vehicle while accelerating, decelerating, and turning.	Local Verification
Operate under adverse environmental or surface conditions.	Local Verification
Use automotive gauges and controls.	Local Verification
<b>Operate All Fixed Systems and Equipment on the Fire Department Vehicle.</b>	
4.3.7 Deploy, energize, & monitor system or equipment.	KFRTI 2
Recognize & correct system problems.	KFRTI 2
<b>Perform Routine Tests, Inspections, and Servicing Functions on Aerial-Specific Equipment.</b>	
6.1.1 Cable systems (if applicable).	KFRTI 1

Aerial device hydraulic systems.	KFRTI 1
Slides and rollers.	KFRTI 1
Stabilizing systems.	KFRTI 1
Aerial device safety systems.	KFRTI 1
Breathing air systems.	KFRTI 1
Communication systems.	KFRTI 1
Ability to use tools.	KFRTI 1
Recognize system problems.	KFRTI 1
Correct any deficiencies noted according to policies & procedures.	KFRTI 1
<b>Maneuver and Position an Aerial Apparatus</b>	
6.2.1 Ability to determine a correct position for the apparatus.	KFRTI 4
Maneuver the apparatus into that position.	KFRTI 4
Avoid obstacles to operations.	KFRTI 4
<b>Stabilize an Aerial Apparatus</b>	
6.2.2 Transfer power from the vehicle's engine to the hydraulic system.	KFRTI 4
Operate vehicle stabilization devices.	KFRTI 4
<b>Maneuver and Position the Aerial Device from Each Control Station</b>	
6.2.3 Raise the aerial device.	KFRTI 5
Rotate the aerial device.	KFRTI 5
Extend the aerial device.	KFRTI 5
Position to a specified location.	KFRTI 5
Lock the aerial device.	KFRTI 5
Unlock the aerial device.	KFRTI 5
Retract the aerial device.	KFRTI 5
Lower the aerial device.	KFRTI 5
Bed the aerial device.	KFRTI 5
<b>Lower an Aerial Device Using the Emergency Operating System</b>	
6.2.4 Rotate and position to center.	KFRTI 7
Unlock the aerial device.	KFRTI 7
Retract the aerial device.	KFRTI 7
Lower the aerial device.	KFRTI 7
Bed the aerial device using the emergency operating system.	KFRTI 7
<b>Deploy and Operate an Elevated Master Stream</b>	
6.2.5 Connect a water supply to a master stream device.	KFRTI 6
Control an elevated nozzle manually or remotely.	KFRTI 6

## Skill Set: Maintenance

**OBJECTIVE:** NFPA 1002-2009, Chapter 4, Sections 4.2.1 and 4.2.2 and Chapter 6, Section 6.1.1.

**REFERENCE:** IFSTA, Aerial Apparatus Driver/Operator Handbook, 2d edition, © 2009.  
KNOWLEDGE: pp. 73 – 74, 90 – 91, and 94 – 131,

**Candidate Equipment Required:** Station uniform, fire department aerial, inspection checklist, hand tools.

**Evaluator Equipment Required:** Inspection checklist, departmental maintenance SOPs.

### Read To Candidate

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At this station, you will be required to inspect a fire department aerial and all its on-board, integral sub-systems. You will use the provided checklist and whatever hand tools which may be required to perform those checks. You should correct any deficiencies noted that are allowed by your departmental maintenance SOPs. You must appropriately annotate the inspection checklist. This is **not** a timed event, but you should complete the assignment as expeditiously as possible.

To pass this station, you must **successfully complete 100% of the steps.**

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1<sup>st</sup> Attempt 2<sup>nd</sup> Attempt  
P F P F

### Skill Steps

**Section 4.2.1 – Perform Routine Tests, Inspections, and Servicing Functions.**

**Section 4.2.2 – Document Routine Tests, Inspections, and Servicing Functions.**

**Section 5.1.1 – Perform Routine Tests, Inspections, and Servicing Functions on Aerial-Specific Equipment.**

- |     |     |     |     |                                     |
|-----|-----|-----|-----|-------------------------------------|
| ___ | ___ | ___ | ___ | 1. Use hand tools and equipment.    |
| ___ | ___ | ___ | ___ | 2. Recognize system problems.       |
| ___ | ___ | ___ | ___ | 3. Correct deficiencies noted.      |
| ___ | ___ | ___ | ___ | 4. Cable systems (if applicable).   |
| ___ | ___ | ___ | ___ | 5. Aerial device hydraulic systems. |
| ___ | ___ | ___ | ___ | 6. Slides and rollers.              |
| ___ | ___ | ___ | ___ | 7. Stabilizing systems.             |
| ___ | ___ | ___ | ___ | 8. Aerial device safety systems.    |
| ___ | ___ | ___ | ___ | 9. Breathing air systems.           |
| ___ | ___ | ___ | ___ | 10. Communication systems.          |

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**Candidate's Name:** \_\_\_\_\_ **Station:** P \_\_\_ F \_\_\_

**Evaluator's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

If the candidate FAILS this station after both attempts, provide comments on the back of this sheet and turn it in to the Exam Site Coordinator.

**Fire Department Aerial Maintenance Checklist**

OK	Needs Service	Item or System	Comments
<b><i>Automotive Systems</i></b>			
___	___	Battery or batteries	
___	___	Braking system	
___	___	Coolant system	
___	___	Electrical system	
___	___	Fuel	
___	___	Hydraulic fluids (cab raising pump, etc.)	
___	___	Transmission fluid	
___	___	Lubrication	
___	___	Oil	
___	___	Tires	
___	___	Steering system	
___	___	Belts	
___	___	Lights (headlights, parking lights, brake lights, back-up lights, turn signals)	
___	___	Emergency lights & siren	
<b><i>Aerial-Specific Systems</i></b>			
___	___	Exercised all valves	
___	___	Pump primer oil (if equipped with a pump)	
___	___	Hydraulic fluids (aerial device, ladder rack, etc.)	
___	___	Generator fluids	
___	___	Extrication power unit fluids	
___	___	Gas-powered saws fluids	
___	___	Gas-powered ventilation fan fluids	
___	___	All on-board equipment properly secured	
___	___	Aerial device	
___	___	Vehicle stabilization system	
Truck Number _____ Verified By _____ Date _____ Time _____			

## Skill Set: Driving – Road Course

**OBJECTIVE:** NFPA 1002-2009, Chapter 4, Section 4.3.1 & 4.3.7.

**REFERENCE:** IFSTA, *Aerial Apparatus Driver/Operator Handbook*, 2d edition, © 2009.  
KNOWLEDGE: pp. 30 – 33, 46 – 84, 144 – 145, 149 – 171, 176 - 182.

**Candidate Equipment Required:** Station uniform, valid driver's license, fire department aerial.

**Evaluator Equipment Required:** Specified road course.

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### Read To Candidate

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At this station, you will be required to safely operate a fire department aerial over a predetermined route on public roads. I will ride with you and give you verbal directions. Be sure to observe and obey all applicable traffic laws and department regulations while operating the vehicle. There will **NOT** be any emergency driving during the course of this skill station.

Upon completion of the road driving portion of this skill set, you will operate all fixed systems on this apparatus. This is **not** a timed event, but you should complete the assignment as expeditiously as possible, **without** breaking any speed limits.

To pass this station, you must **successfully complete 100% of the steps.**

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1<sup>st</sup> Attempt 2<sup>nd</sup> Attempt  
P F P F

### Skill Steps

#### Section 4.3.1 – Operate a Fire Department Vehicle

- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 1. Possessed valid driver's license in accordance with department SOP.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 2. Operated passenger restraint devices.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 3. Ensured all occupants were seated and restrained.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 4. Maintained safe following distances.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 5. Maintained control of vehicle while accelerating, decelerating, and turning.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 6. Used automotive gauges and controls.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 7. Used turn signals.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 8. Operated within all traffic laws and department SOPs.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 9. Performed all required maneuvers on predetermined route.
  - a. Four left turns.
  - b. Four right turns.
  - c. Straight section of business street or two-lane rural road at least 1 mile long.
  - d. One through intersection.
  - e. Two intersections where a stop has to be made.
  - f. One railroad crossing (*may be simulated/designated if no track in district*)
  - g. One curve, either left or right.

**(Continued)**

- h. Section of limited-access highway with conventional entrance/exit ramps.
- i. Two lane changes on highway.
- j. Downgrade steep enough to require down-shifting and braking.
- k. Upgrade steep enough and long enough to require gear changing.
- l. Underpass or a low clearance or bridge.

**Section 4.3.7 – Operate All Fixed Systems & Equipment on a Fire Department Vehicle**

10. Deployed, energized, & monitored system or equipment. **(Test all that apply.)**

- \_\_\_ \_\_\_ \_\_\_ \_\_\_ a. Generator and/or inverter.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ b. Scene lighting equipment (fixed and portable).
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ c. Air compressor.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ d. Breathing air system.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ e. Hydraulic rescue tools & power unit.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ f. Power reels for air, hydraulic, or electrical lines.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ g. Ground ladders.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ h. Powered ventilation equipment.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 11. Recognize & correct system problems.

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**Candidate's Name:** \_\_\_\_\_ **Station: P** \_\_\_ **F** \_\_\_

**Evaluator's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

If the candidate FAILS this station after both attempts, provide comments on the back of this sheet and turn it in to the Exam Site Coordinator.

## Sample of Predetermined Route for the Driver/Operator – Aerial Road Course

(Used with permission from Ottawa Fire Department)

### Instructions to Driver/Operator:

When determining the route for the Driver/Operator Road Course, it is advisable that you indicate the **task** from the skill sheet provided by KFRTI with the directions in the course. Keying the task with directions will give you the opportunity to cross check the directions with the skill sheet, thereby ensuring each task has been covered. It will also assist the evaluator as he checks off the items on the skill sheet during the exam. Candidates should practice driving the exact route prior to the exam date. Allow approximately 30 minutes per candidate for the street course.

### Sample predetermined route for the driver/operator road course:

Off the bay floor across the street to 68 Hwy.

Turn right on 68 Hwy **(9.b)** go over bridge. On the down-hill side of the bridge, down shift and brake. **(9.j)**

Take off ramp to Tecumseh. **(9.b)**

Turn right on Tecumseh, **(9.b)** go under the bridge and north on locust. **(9.g & 9.l)**

Take Locust north to Wilson. Turn right on Wilson. **(9.b)**

Proceed to railroad crossing, stop at crossing per department protocol. **(9.f)**

Continue on to Main Street, cross Main on Wilson to Hickory. Turn right on Hickory. **(9.b & 9.e)** South to Blackhawk, **(9.d)** turn right from Blackhawk onto Main Street. **(9.b)**

Turn left on Main Street going south. **(9.a)**

South on Main to 68 Hwy. **(9.c)** Once on 68 Hwy, execute two lane changes. **(9.i)**

Turn left on Fifth, **(9.a)** turn left on Hickory, **(9.a & 9.e)** turn left on Fourth **(9.a & 9.e)** turn left on Main **(9.a)** and proceed south.

Take Princeton Circle Drive to I-35.

Go south on I-35. **(9.h)** Exit I-35 at Old Fifty Hwy **(9.h)** and turn right. **(9.b)**

Take Old Fifty Hwy back into town on Main. On incline to Old Fifty Hwy overpass, shift gears to maintain speed. **(9.k)**

Return to station.

## Skill Set: Driving – Cone Course

**OBJECTIVE:** NFPA 1002-2009, Chapter 4, Sections 4.3.2, 4.3.3, 4.3.4, and 4.3.5.

**REFERENCE:** IFSTA, *Aerial Apparatus Driver/Operator Handbook*, 2d edition, © 2009.  
KNOWLEDGE: pp. 25, 34 – 39, 177 – 180

**Candidate Equipment Required:** Station uniform, valid driver's license, fire department aerial.

**Evaluator Equipment Required:** Cones, spotter, event specifications, closed-course driving area.

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### Read To Candidate

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At this station, you will be required to operate a fire department aerial through various situations that simulate actual driving situations. I will give you specific instructions at the beginning of each event. You will have a spotter available to you. No one else will be in the truck cab with you during this station. If you strike any of the cones, that constitutes a failure at that event. This is **not** a timed event, but you should complete the assignment as expeditiously as possible.

To pass this station, you must **successfully complete 100% of the steps.**

---

1<sup>st</sup> Attempt 2<sup>nd</sup> Attempt  
P F P F

### Skill Steps

- |     |     |     |     |  |
|-----|-----|-----|-----|--|
| ___ | ___ | ___ | ___ | 1. Possessed valid driver's license in accordance with department SOP.   |
| ___ | ___ | ___ | ___ | 2. Operated passenger restraint devices.                                 |
|     |     |     |     | 3. Used mirrors & judged vehicle clearance:                              |
| ___ | ___ | ___ | ___ | a. Backed into a restricted area.  |
| ___ | ___ | ___ | ___ | b. Maneuvered around obstructions.                                       |
| ___ | ___ | ___ | ___ | c. Turned 180 degrees within a confined space.                           |
| ___ | ___ | ___ | ___ | d. Maneuvered in areas with restricted horizontal & vertical conditions. |

**(NOTE: See following pages for individual event requirements.)**

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**Candidate's Name:** \_\_\_\_\_ **Station:** P \_\_\_ F \_\_\_

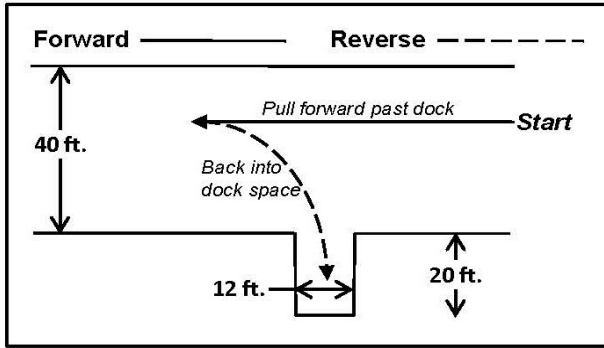
**Evaluator's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

If the candidate FAILS this station after both attempts, provide comments on the back of this sheet and turn it in to the Exam Site Coordinator.

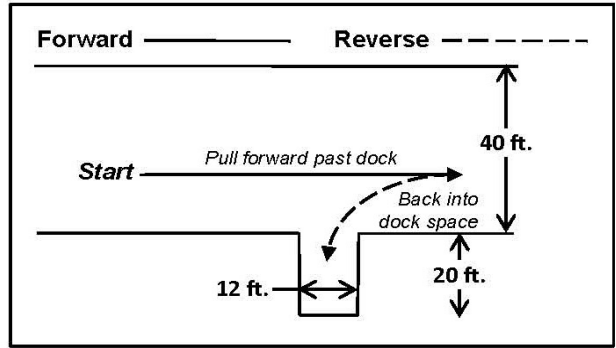


**Skill Item 3, Event 3a – Back into a restricted space:**

This exercise measures a driver's ability to drive past a simulated dock or stall, back the apparatus into the space provided, and stop smoothly. A dock or stall can be simulated by arranging barricades 40 ft. from a boundary line. These barricades should be 12 ft. apart, and the length should be approximately 20 ft. The driver should pass the barricades with the dock on the left and then back the apparatus, using a left turn, into the stall. The exercise should then be **repeated** with the dock on the right side, using a right turn.



Step 1



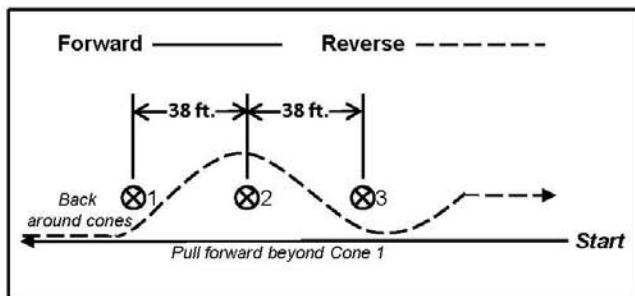
Step 2

**Skill Item 3, Event 3b – Maneuver around obstacles:**

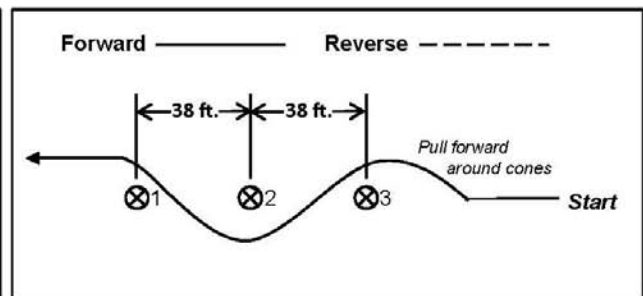
This exercise measures a driver's ability to steer the apparatus in close limits without stopping. The exercise should be conducted with the apparatus moving **first** backward, **then** forward. The course or path of travel for this exercise can be established by placing a minimum of three markers, each spaced 38 ft. apart, in a line. Adequate space must be provided on each side of the markers for the apparatus to move freely.

The driver should drive the apparatus along the left side of the markers in a straight line and stop just beyond the last marker. The driver then should begin the exercise by backing the apparatus between the markers by passing to the left of marker No. 1, to the right of marker No. 2, and to the left of marker No. 3.

At this point, the driver should stop the vehicle and then drive it forward between the markers by passing to the right of marker No. 3, to the left of marker No. 2, and to the right of marker No. 1.



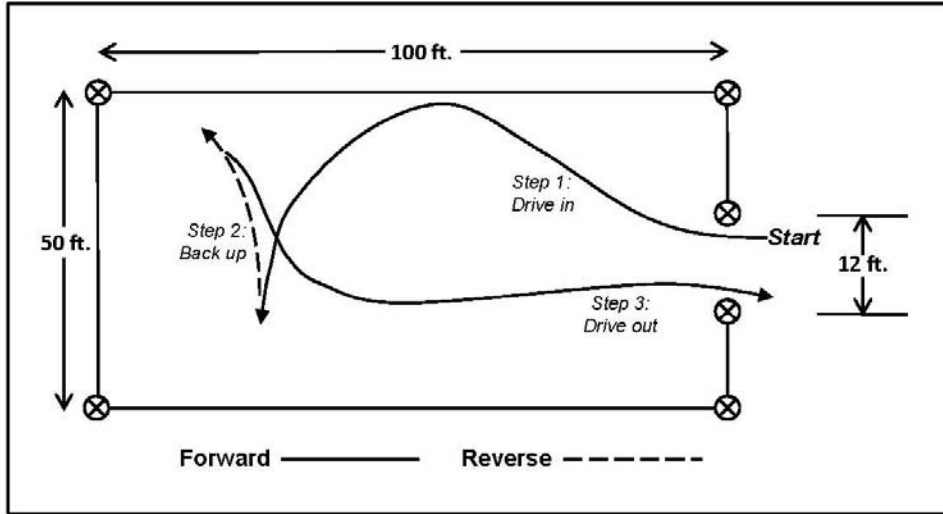
Step 1



Step 2

**Skill Item 3, Event 3c – Turned 180 degrees within a confined space:**

This exercise measures the driver's ability to turn the vehicle around in a confined space without striking obstacles. The turn is accomplished within an area 50 ft. x 100 ft. The driver moves into the area from a 12 ft. opening in the center of one of the 50 ft. legs, turns the vehicle 180 degrees, and returns through the opening. There is **no limitation** on the number of times the driver has to maneuver the vehicle to accomplish this exercise, but **no portion** of the vehicle should extend over the boundary lines of the space.

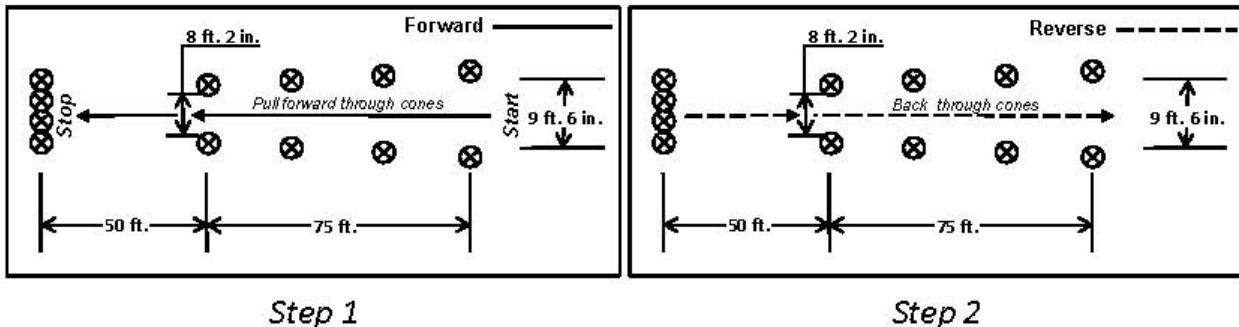


**Skill Item 3, Event 3d – Maneuvered in areas with restricted horizontal & vertical conditions:**

This exercise measures a driver's ability to steer the apparatus in a straight line, to judge distances from wheel to object, and to stop at a finish line. The speed at which a driver should operate the apparatus is optional, but it should be great enough to necessitate quick judgment. This exercise is to be performed **both** forward and in reverse with a spotter.

The course for this exercise is created by arranging two rows of markers to form a lane 22.9 m (75 ft) long. The lane varies in width from 9 ft. 6 in. to a diminishing clearance of 8 ft. 2 in. The driver should maneuver the apparatus through this lane without touching the markers. The vehicle should be stopped at a finish line 50 ft. beyond the last marker. **No portion** of the vehicle should protrude beyond this line.

Vertical clearance judgment should be evaluated using a prop with a crossbar that is adjustable, based on the vehicle height. During the evaluation, the driver should drive forward and back through the prop with the crossbar at several differing heights, including one that is lower than the top of the vehicle. The prop should not be struck.



## Skill Set: Maneuver and Position an Aerial Apparatus and Stabilize the Aerial Apparatus

**OBJECTIVE:** NFPA 1002-2009, Chapter 6, Sections 6.2.1 & 6.2.2.

**REFERENCE:** IFSTA, Aerial Apparatus Driver/Operator Handbook, 2d edition, © 2009.  
**KNOWLEDGE:** pp. 187 – 219 & 226 – 247.

**Candidate Equipment Required:** Station uniform, fire department aerial.

**Evaluator Equipment Required:** A building and a street.

### Read To Candidate

---

At this station, you will be required to maneuver and position a fire department aerial. I will give you a situation involving a building on fire at which you will eventually position the aerial device to perform (a rescue) (vertical ventilation) as directed by the Incident Commander.

You must consider any overhead obstructions such as power lines; street obstructions such as parked cars or pumpers; and the reach of your aerial device when positioning the apparatus. This portion skill station begins when you put the apparatus in drive and ends when you set the parking brake.

You will then be directed by me to stabilize and level the apparatus in preparation to raise the aerial device. The skill station is complete when you tell me that you are ready to raise the aerial device.

This is **not** a timed event, but you should complete the assignment as expeditiously as possible.

To pass this station, you must **successfully complete 100% of the steps.**

---

1<sup>st</sup> Attempt 2<sup>nd</sup> Attempt  
P F P F

### Skill Steps

#### Section 6.2.1 – Maneuver and Position an Aerial Device

- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 1. Ability to determine a correct position for the apparatus.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 2. Maneuver the apparatus into that position.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 3. Avoid obstacles to operations.

#### Section 6.2.2 – Stabilize an Aerial Apparatus

- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 4. Transfer power from the vehicle’s engine to the hydraulic system.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 5. Operate the vehicle stabilization devices.
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ 6. Level the apparatus.

---

**Candidate’s Name:** \_\_\_\_\_ **Station:** P \_\_\_ F \_\_\_

**Evaluator’s Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

If the candidate FAILS this station after both attempts, provide comments on the back of this sheet and turn it in to the Exam Site Coordinator.

## Skill Set: Maneuver and Position the Aerial Device from Each Control Station

**OBJECTIVE:** NFPA 1002-2009, Chapter 6, Sections 6.2.3.

**REFERENCE:** IFSTA, *Aerial Apparatus Driver/Operator Handbook*, 2d edition, © 2009.  
KNOWLEDGE: pp. 60 – 68, 73 – 74, 233 – 242, 255 – 271, 280 – 293, 302 – 316, & 321 – 322.

**Candidate Equipment Required:** Station uniform, fire department aerial.

**Evaluator Equipment Required:** A building and a street.

### Read To Candidate

---

At this station, you will be required to raise and position the aerial device to a location directed by me from each control station on the apparatus. The apparatus is parked and the stabilization system is set.

You will begin by raising the aerial device from its bed position and positioning it at the location I direct. Once you have it in position, lock it for further operations from that location. I will then direct you to cease operations and lower and bed the aerial device in preparation to return to station. You must retract the stabilization system and transfer power from the hydraulic system back to the engine.

The station ends when you tell me that you are ready to return to the station.

This is **not** a timed event, but you should complete the assignment as expeditiously as possible.

To pass this station, you must **successfully complete 100% of the steps**.

---

1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt		Skill Steps
P	F	P	F	
___	___	___	___	1. Raise the aerial device.
___	___	___	___	2. Rotate the aerial device.
___	___	___	___	3. Extend the aerial device.
___	___	___	___	4. Position to a specified location.
___	___	___	___	5. Lock the aerial device.
___	___	___	___	6. Unlock the aerial device.
___	___	___	___	7. Retract the aerial device.
___	___	___	___	8. Lower the aerial device.
___	___	___	___	9. Bed the aerial device.
___	___	___	___	10. Retract the vehicle stabilization system.
___	___	___	___	11. Transfer power from the hydraulic system back to the engine.

---

**Candidate's Name:** \_\_\_\_\_ **Station: P** \_\_\_ **F** \_\_\_

**Evaluator's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

If the candidate FAILS this station after both attempts, provide comments on the back of this sheet and turn it in to the Exam Site Coordinator.

## Skill Set: Deploy and Operate an Elevated Master Stream

**OBJECTIVE:** NFPA 1002-2009, Chapter 6, Sections 6.2.5.

**REFERENCE:** IFSTA, *Aerial Apparatus Driver/Operator Handbook*, 2d edition, © 2009.  
KNOWLEDGE: pp. 69 -72, 194 – 195, 316 – 321, & 323 - 335.

**Candidate Equipment Required:** Station uniform, fire department aerial, supply pumper (if required), water source, elevated master stream device.

**Evaluator Equipment Required:** Personnel to operate hydrant or supply pumper (if required.)

### Read To Candidate

---

At this station, you will be required to deploy and operate an elevated master stream. You will be provided with assistance from personnel to operate a hydrant or a supply pumper, as required. You will be required to make any hose connections to your aerial in order to establish a water supply. You will also be required to make whatever connections necessary to the elevated master stream device and accomplish all necessary actions to put that device into service to establish an elevated master stream. You will then control the elevated nozzle either manually or remotely.

This is **not** a timed event, but you should complete the assignment as expeditiously as possible.

To pass this station, you must **successfully complete 100% of the steps.**

---

1<sup>st</sup> Attempt 2<sup>nd</sup> Attempt

### Skill Steps

P F P F

- |     |     |     |     |  |
|-----|-----|-----|-----|--|
| ___ | ___ | ___ | ___ | 1. Established a water supply to the apparatus.                  |
| ___ | ___ | ___ | ___ | 2. Connected a water supply to an elevated master stream device. |
| ___ | ___ | ___ | ___ | 3. Control an elevated nozzle manually or remotely.              |

---

**Candidate's Name:** \_\_\_\_\_ **Station:** P \_\_\_ F \_\_\_

**Evaluator's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

If the candidate FAILS this station after both attempts, provide comments on the back of this sheet and turn it in to the Exam Site Coordinator.

## Skill Set: Lower an Aerial Device Using the Emergency Operating System

**OBJECTIVE:** NFPA 1002-2009, Chapter 6, Sections 6.2.4.

**REFERENCE:** IFSTA, *Aerial Apparatus Driver/Operator Handbook*, 2d edition, © 2009.  
KNOWLEDGE: pp. 63, 269 – 270, & 292.

**Candidate Equipment Required:** Station uniform, fire department aerial.

**Evaluator Equipment Required:** A building and a street.

### Read To Candidate

---

At this station, you will begin with the aerial device in the raised position. You will then be required to lower and bed the aerial device using the emergency operating system. You must then prepare the apparatus to return to the station by retracting the stabilization system and transferring power from the hydraulic system to the vehicle's engine. This station ends when you tell me you are ready to drive away.

This is **not** a timed event, but you should complete the assignment as expeditiously as possible.

To pass this station, you must **successfully complete 100% of the steps**.

---

1<sup>st</sup> Attempt 2<sup>nd</sup> Attempt  
P F P F

### Skill Steps

- |     |     |     |     |   |
|-----|-----|-----|-----|---|
| ___ | ___ | ___ | ___ | 1. Rotate and position to center.                               |
| ___ | ___ | ___ | ___ | 2. Unlock the aerial device.                                    |
| ___ | ___ | ___ | ___ | 3. Retract the aerial device.                                   |
| ___ | ___ | ___ | ___ | 4. Lower the aerial device.                                     |
| ___ | ___ | ___ | ___ | 5. Bed the aerial device using the emergency operating system.  |
| ___ | ___ | ___ | ___ | 6. Retract the vehicle stabilization system.                    |
| ___ | ___ | ___ | ___ | 7. Transfer power from the hydraulic system back to the engine. |

---

**Candidate's Name:** \_\_\_\_\_ **Station:** P \_\_\_ F \_\_\_

**Evaluator's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

If the candidate FAILS this station after both attempts, provide comments on the back of this sheet and turn it in to the Exam Site Coordinator.



## Driver/Operator - Aerial Local Verification Form

NFPA 1002 – 2009

Candidate's Name: \_\_\_\_\_ Date of Birth: \_\_\_\_\_

### Local Verification Requirements

**1. Driver's license.**

The candidate has the appropriate class of driver's license (and appropriate endorsements, if applicable) per department requirements and is authorized by the undersigned to operate the vehicle(s) used during the test.

**2. NFPA 1002 – 2009, JPR 4.2.2, Document Routine Tests, Inspections, and Servicing Functions:**

The candidate has successfully demonstrated the ability to complete all required documentation relating to routine tests, inspections, and servicing functions of department aerials per department protocols and procedures.

**3. NFPA 1002 – 2009, JPR 4.3.1, Operate a Fire Department Vehicle Under Adverse Environmental Conditions:**

The candidate has successfully demonstrated the ability to successfully drive a department aerial under adverse environmental or driving surface conditions.

**4. NFPA 1002 – 2009, JPR 4.3.6, Operate Fire Department Vehicle Using Defensive Driving Techniques Under Emergency Conditions:**

The candidate has successfully demonstrated the ability to safely and successfully drive a department aerial including, but not limited to, the ability to operate passenger restraint devices; maintain safe following distances; maintain control of vehicle while accelerating, decelerating, and turning; operate the vehicle under adverse environmental or surface conditions; and use automotive gauges and controls, all while operating under emergency conditions (i.e., "lights and sirens").

I have reviewed the candidate's file and affirm that the candidate identified above has met the requirements listed in paragraphs 1 through 3 above. All requirements have been successfully conducted and completed per local department protocol. All information listed above can be validated by a written and/or hard copy of the documents maintained by the department.

\_\_\_\_\_  
Typed or Legibly Printed Name of Fire Chief or Designated Representative

\_\_\_\_\_  
Signature of Fire Chief or Designated Representative

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

Fire Department Phone Number: (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

Mail Completed Form To: Kansas Fire & Rescue Training Institute, KU Continuing Education, 1515 St Andrews Drive, Lawrence, KS 66047