

FIRE APPARATUS AERIAL OPERATOR

PRACTICAL SKILLS CERTIFICATION EVALUATION PACKET

(NFPA Standard 1002, 2017 Edition)

Department of Public Safety Alaska Fire Standards Council 5700 E. Tudor Road Anchorage, Alaska 99507 (907) 269-5052

www.firestandards.alaska.gov

March 2022

A	AERIAL OPERATOR PRACTICAL SKILLS CORRELATION MAP						
	CORE JOB PERFORMANCE REQUIREMENTS						
(NFPA 1	002, 2017 E	Edition)					
Skill Sheet #	1 Department verme						
Practical Sk	ills Completed a	at Department Level for Application Packet Review					
<u>AO 1</u>	6.1.1	Perform Visual and Operational Checks Document Routine Maintenance Operate All Fixed Systems	Department Verification				
40.2	6.2.1	Maneuver and Position Aerial Apparatus	Mandatann				
<u>AO 2</u>	6.2.2	Stabilize an Aerial Apparatus	Mandatory				
<u>AO 3</u>	6.2.3	Maneuver and Position an Aerial Device from each Control Station	Mandatory				
<u>AO 4</u>	6.2.4	Lower Aerial Device Using Emergency Operating System	Mandatory				
<u>AO 5</u>	6.2.5	Deploy and Operate Elevated Master Stream	Mandatory				

Skill Sheet Packet Instruction

Purpose of the Skill Sheets

All skills listed in this packet are consistent with the 2017 edition of the NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications. The Alaska Fire Standards Council (AFSC) provides these skill sheets as the basis for Aerial Operator testing and certification. For certification purposes, the final skill examination will consist of a series of mandatory skill stations listed on page 2.

Description & Use

- 1. These skills sheets are designed for use by the Training Officer and Aerial Operator candidate. Use of this packet throughout a training program will assist in verifying candidate competency and completion of the Aerial Operator Training Record.
- 2. For eligibility to complete the final certification examination, a candidate must demonstrate competency in all skills during training and satisfactorily compete all items on the Aerial Operator training record document.
- 3. This packet is designed to encompass the requisite skills for Aerial Operator. These skill sheets are used for final testing and certification. Accreditation Managers/Training Officers and Aerial Operator course instructors should utilize this evaluation packet during a course to prepare candidates for the certification exam.
- 4. The final skills examination will consist of skills selected from this packet. Skills are selected from the mandatory skills categories. This packet contains a list of all mandatory skills that are used for the final examination.
- 5. The Certifying Officer will notify candidates which skills they will be required to complete at the start of the practical skills portion on the date of the examination.
- 6. The completion of the Aerial Operator Training Record establishes a candidate's eligibility to test. The Training Record document must be fully completed and signed by the Accreditation Manager/Training Officer or designee for each candidate before a candidate can begin the final skills examination. The Aerial Operator Training Record and the practical skills evaluation sheets shall become a permanent part of the candidate's local training record, and this information shall be kept on file in accordance with local fire department accreditation procedures.

Grading Criteria

- 1. It is expected that all of the listed skill sheet elements will be taught and evaluated by the Aerial Operator instructor throughout a course. During the final skills exam, the candidate must be prepared to perform all the skills listed in this packet. There are no specific critical points designated within the practical skill sheets, and the Certifying Officer (CO) will require the candidate to repeat an individual practical skill station if *all* of the listed skill items on a selected sheet are not completed by the candidate.
- 2. This packet contains skill requirements that involve the demonstration of driver skills within simulated vehicle operation scenarios related to emergency response activities. When applicable, skill sheets specifically describe when simulated conditions are permitted for certification testing.
- 3. Regardless of final examination skills, there are critical performance items that must be followed for satisfactory performance. Examples of unsatisfactory performance can include:
 - a. Exceeding limitations: time, safety, and equipment limitations
 - b. Inadequate/insufficient personal protective equipment (lack of seatbelt[s], etc.)
 - c. Lack of skill accuracy and task completion as defined on the skill evaluation sheet
 - d. Poor judgment in skill performance (i.e.- improper vehicle operation or equipment/safety violation)
 - e. Failure to appropriately apply basic driver knowledge (speeding or violation of traffic laws)
 - f. Not competent in the specified task or skill steps

- g. Outcome of the specified task is in doubt (i.e.- incorrectly performed or did not accomplish skill evaluation criteria)
- h. Need for evaluator intervention (i.e.- imminent health or safety risk to candidate or others)
- i. Failure to adhere to basic safety principles or guidelines

Artificialities of Training and Testing

Training and testing for at this level can only approximate the on-the-job activities of an Aerial Operator. There are certain artificialities to training and testing that the candidate must be able to adapt to. Simulations during the final examination are often necessary to complete the required practical skill scenarios. For the best possible outcome during final skills examination, the Aerial Operator course instructor must prepare the candidates to competently perform these skills under a variety of conditions.

Final Skills Evaluation

The AFSC designated Certifying Officer (CO) shall conduct the final evaluation and will utilize the practical skills evaluation sheets during the examination process. The CO has the overall test site authority and is required to perform his or her duties as outlined in the <u>Certifying Officer Manual</u>.

For preparation of the final examination, the designated CO must coordinate with the Accreditation Manager/Training Officer, or designee, to ensure an adequate test site location is available. The Accreditation Manager/Training Officer is responsible for preparation of all test site equipment/materials and arranging designated evaluators for the date of the practical examination. The CO must verify that all required elements are adequate for testing and will approve all designated Evaluators. Designated Evaluators shall receive training appropriate for the test site and are required to complete an Evaluator Code of Ethics Compliance agreement before testing begins.

The CO shall verify completion of the final skills examination packet, and the packet will be attached to the Aerial Operator Training Record as part of the candidate's permanent local training record.

Prerequisite Certification Requirements

For eligibility to certify at the Aerial Operator level, candidates must:

- Be 18 years of age
- Meet the requirements for Firefighter I or equivalents listed above
- *Meet all criteria for Driver Operator and Pumper Operator
- *Provide evidence of completion of Driver Operator skills while operating a fire department Aerial apparatus
- **Provide evidence of completion of Pump Operator skills while operating a fire department Aerial apparatus
- Meet the medical requirement as specified in NFPA 1500 (10.1.1, 10.1.2, 10.1.3, 10.1.5)
 - *Conduct Driver Operator skills while operating an Aerial apparatus and attach completed Driver Operator Training Record
 - **Conduct Pumper Operator skills while operating an Aerial apparatus and attach completed Pumper Operator Training Record

Additional Notes:

- 1. During the final practical examination, it is expected that appropriate personal protective equipment (PPE) shall be worn for all skill stations, unless otherwise indicated within the skill evaluation sheet. When appropriate, candidates shall don *all* PPE appropriate for the scenario to maintain on-the-job conditions.
- During some scenarios, a candidate may be instructed to perform other Aerial Operator tasks not directly related to the specific skill sheet evaluation being tested. It is expected that the candidate shall perform all related skills correctly.
- 3. Skills should be accomplished in a safe and efficient manner. An evaluator may use a digital or analog watch/stopwatch for final skills evaluation. Prior to the start of the practical examination, the CO must inspect and approve all timing devices used during final skills evaluations.
- 4. Some skills require that equipment be prepared or assembled within the final skills examination. Unless otherwise indicated, it is permissible for the candidate to prepare or assemble the required equipment or devices at any time, provided that this does not interfere with the core skill, task, or evolution.
- 5. Candidates must be prepared to complete skills under a variety of conditions. Training and skills practice is often done during optimum conditions, but candidates must be prepared to adapt to changing conditions that can occur in on-the-job situations.
- 6. Candidates must identify and respond quickly and appropriately to equipment malfunctions, improper application of tool usage, or other changes within a given scenario. The Certifying Officer ultimately determines if the candidate has met the criteria specified on the skill(s) being evaluated.
- 7. For final examination, the performance of a skill, task, or evolution is not required to be done in the exact order of the steps (as outlined on the skill sheet), unless it is critical to a particular task. For example, a person must secure a safety restraint device before driving an apparatus.
- 8. Some skills may require that a candidate verbalizes information about a particular task or procedure. In such cases, any question(s) from the evaluator to the candidate must be limited to those that satisfy the criteria listed on the skill sheet, and a question cannot exceed the scope the Aerial Operator requirements.

Aerial Operator Final Written and Practical Examinations

Following is a brief outline of the reference materials and documents that are used for an Aerial Operator final examination:

Aerial Operator Examination References

- a. NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications Standard, 2017 edition
- b. Text (any one of the following)
 - IFSTA, Pumping and Aerial Apparatus Driver/Operator Handbook, 3rd Edition
 - Jones and Bartlett Fire Apparatus Driver/Operator: Pump, Aerial, Tiller, and Mobile Water Supply, 3rd Edition
- c. Aerial Operator Practical Skills Evaluation Sheets (this packet)

Final Examination Steps

- a. *Driver Operator Training Record review (this must be completed while operating an Aerial Apparatus and signed off by the Accreditation Manager/Training Officer or designee prior to the date of the final examination and reviewed by the CO to ensure all elements are complete.
- b. *Pumper Operator Training Record review (this must be completed while operating an Aerial Apparatus and signed off by the Accreditation Manager/Training Officer or designee prior to the date of the final examination and reviewed by the CO to ensure all elements are complete.
- c. *Aerial Operator Training Record review (this must be completed and signed off by the Accreditation Manager/Training Officer or designee prior to the date of the final examination and reviewed by the CO to ensure all elements are complete.
- d. Certifying Officer reviews and signs candidate Application for Certification
- e. Candidate completes the written examination administered by the CO
- f. Candidate completes the practical examination administered by the CO.
- g. Certifying Officer reviews completed evaluator skill sheets and transfers information to the <u>Practical Examination Reporting Form</u> (PERF)
- h. Written exam, PERF, and signed application are forwarded to AFSC.
- i. AFSC Aerial Operator certificate is issued upon successful completion of the written and practical exam (within approximately 30 days of test date)

*Note: The candidate's completed Training Record and signed Final Examination skill sheets shall be placed in the candidate's local training file in accordance with fire department accreditation procedures

NFPA 1002- 2017 Ed.

PRACTICAL SKILL REQUIREMENTS

AO 1

Candidate:			Date:				
STANDARD: NFPA 1002: 4	4.2.1 (B) 6.1.1 (B)	SKILL AREA:	Perform Routine Tests				
	TASK: Perform the visual and operational checks on the systems and components specified in the following list, so that the operational status of the aerial is verified.						
PERFORMANCE OUTCOME: system problems; correct any defit the system or equipment and to re	iciency noted in acco	ordance with policies	and procedures; deploy, energize, a	and monitor			

EQUIPMENT: Fire aerial apparatus, department policies and procedures (SOP/SOG), forms/reports, maintenance log book/record, notepad or clipboard, and radio unit.

CONDITIONS: Given a fire department aerial, its manufacturer's specifications, and maintenance inspection forms, the candidate shall demonstrate the ability to:

Candic	candidate shan demonstrate the ability to.								
No.	TASK STEPS	TE	ST	RET	EST 1	RET	EST 2		
		P	F	P	F	P	F		
	Perform routine tests, inspections and/or service functions on the follo	wing:							
1.	Battery(ies)								
2.	Braking system								
3.	Coolant system								
4.	Electrical system								
5.	• Fuel								
6.	Hydraulic fluids								
7.	• Oil								
8.	• Tires								
9.	Steering system								
10.	• Belts								
11.	Tools, appliances, and equipment								
12.	Verify operational status of cable systems (if applicable)								
13.	Verify operational status of aerial device hydraulic systems								
14.	Verify operational status of sliders and rollers								
15.	Verify operational status of stabilizing systems								
16.	Verify operational status of aerial device safety systems								
17.	Verify operational status of breathing air systems								
18.	Verify operational status of communication systems								
19.	Appropriately recognize equipment/system problems or deficiencies								
20.	Correct any found deficiencies, or document /report them in accordance with departmental procedures								
21.	Complete inspection reports and all related vehicle maintenance forms in accordance with departmental procedures								

NFPA 1002- 2017 Ed.	PRACTI	CAL SKILL REQUIR	EMENTS	Continue AO 1
Candidate:			Date:	
Evaluator:		Retest Evalua Retest Evalua		
Comments:		Keiesi Evaiua	uor 2.	
Certifying Offi	icer Name		Overall S	kill Sheet Result:
Certifying Officer	· Signature		Pass (P)	: ☐ Fail (F): ☐

NFPA 1002-2017 Ed.

PRACTICAL SKILL REQUIREMENTS

<u>AO</u> 2

Cand	Candidate: Date:									
STAN	DARD:	NFPA 1002: 6.2.1, 6.2.2	SKILL AREA:	Maneu Appara		ositio	n and	Stabili	ize Ae	rial
		Maneuver and position an aerial appara	atus, so that the appa	aratus is	positio	ned for	correct	aerial	device	,
deploy		Stabilize an aerial apparatus, so that po	war oon ha transfar	rad to the	o oriol	dovico	hydron	lie evet	tom on	d tha
	can be de		wer can be transfer	ica to the	acman	device	nyurau	inc syst	cm an	u uic
appara	PERFORMANCE OUTCOME: The candidate shall demonstrate the ability to: determine a correct position for the apparatus, maneuver apparatus into that position, and avoid obstacles to operations; and, transfer power from the vehicle's engine to the hydraulic system and operate vehicle stabilization devices.									
EQUI radio u		Aerial ground pads/plates, department	t policies and proce	dures (So	OP/SO	G), fire	aerial a	apparat	us, and	l
		Given a fully equipped fire aerial app candidate shall demonstrate the ability		location,	a situa	tion des	scriptio	n, and	an	
No.		TASK STEPS			TE	ST	RET	EST 1	RET	EST 2
					P	F	P	F	P	F
1.	Maneuv	er and position the aerial as appropriate	e for objective							
2.		power transfer from vehicle operations turer's recommendation	s to aerial per							
3.	Engage	the PTO per manufacturer recommenda	ation							
4.	Properly	position wheel chocks per manufactur	er recommendation	Ĺ						
5.		or overhead obstructions and ensure pro								
6.	Check th limiting	ne expected travel path of the stabilizers factors	s for obstructions ar	nd/or						
7.	Check th	ne ground surface for stability and cond	lition							
8.	Deploy a	and properly place the stabilizer ground	d pads							
9.	Properly	deploy the stabilizers based on topogr	aphy and conditions	S						
10.		e apparatus to its working position and								
11.	Lock the valves, i	stabilizers per manufacturer's recomn nterlock feature, safety pins, or combin	nendations (holding nation of features)	5						
E1-	4		Retest E	valuatoi	r 1:					
Evan	uator:		Retest E	valuatoi	- 2:					
Com	ments:									
		Certifying Officer Name	 Date		Ove	erall S	Skill S	Sheet	Res	ult:
		rtifying Officer Signature			Pas	s (P): 🗆	Fa	ail (F	·): 🗆

NFPA 1002- 2017 Ed.

PRACTICAL SKILL REQUIREMENTS

AO 3

Cand	lidate:		Date	:			
STAN	DARD: NFPA 1002: 6.2.3 SKILL AREA: Maneuv	er and	Positi	on Ae	rial D	evice	
	-: Maneuver and position the aerial device from each control station (except device is positioned to accomplish the assignment.	t from	the ba	sket or	tip), s	o that t	he
PERF	ORMANCE OUTCOME: The candidate shall demonstrate the ability to rated location, as well as lock, unlock, retract, lower, and bed the aerial device.	ise, rota	ate, ext	end, an	d posit	ion to a	ı
	PMENT: Aerial ground pads/plates, department policies and procedures (Se	OP/SO	G), fire	aerial a	apparat	us, and	[
	DITIONS: Given a fully equipped fire aerial apparatus, an incident location, ment, the candidate shall demonstrate the ability to:	a situa	tion des	scriptio	n, and	an	
No.	TASK STEPS	TE	ST	RETI	EST 1	RETI	EST 2
		P	F	P	F	P	F
1.	Identify intended target based on assignment						
2.	Release the hold down locks and ensure all safety devices are in place and properly used (slide-out platforms, safety chains, guardrails, dead- man switches, etc.)						
3.	Check the intended path of the aerial device for obstructions. (overhead, ladder cradle, cabinetry, accessories, personnel, etc.)						
	Aerial device operations must follow manufacturer and local policy at all times						
4.	Raise the aerial device from bed to desired height						
5.	Rotate he aerial device towards intended target						
6.	Extend the aerial device towards the intended target.						
7.	Lower/position the aerial device to the objective according to department SOP's and manufacturers specifications						
8.	Align aerial device ladder rungs as necessary						
9.	Clear firefighters to safely climb the aerial ladder (if applicable)						
10.	Monitor apparatus stability and aerial loads during evolution						
11.	Maintain communication with aerial personnel throughout operation						
12.	Disengages pump						
13.	Close and disconnect water supply from fire apparatus						
14.	Opens waterway drain to drain waterway pipe completely prior to repositioning the ladder						
15	Retract rotate and lower periol device						

pin to its stowed position

recommendation

16.

17.

18.

19.

Disassemble any portable ladder pipe, hose line, and/or return waterway

Return the proper nozzle (per department SOP's) onto the aerial monitor

Return aerial device to bed and properly secure as per manufacturer

and places the monitor in its correct stowed position

Maintain smooth operation of aerial device at all times

NFPA 1002- 2017 Ed.	PRACT	ICAL SKILL REQUIRE	EMENT	CS <u>C</u>	ontinue AO 3
Candidate:				Date:	
Evaluator:		Retest Evaluate	or 1:		
Evaluator.		Retest Evaluate	or 2:		
Comments:					
Certifying Of	fficer Name		Ove	erall Skill S	heet Result:
	er Signature		Pas	s (P): 🛘	Fail (F): ☐

NFPA 1002-2017 Ed.

PRACTICAL SKILL REQUIREMENTS

<u>AO 4</u>

Cand	Candidate: Date:										
STAN	DARD:	NFPA 1002: 6.2.4(B)	SKILL	AREA:	Lower A Operation			Using	Emei	gency	7
TASK position		an aerial device using the emergenc	y operati	ing system,	so that the	aerial d	levice is	s lower	ed to it	s bedd	ed
		CE OUTCOME: The candidate shad bed the aerial device using the en				otate an	d positi	on to c	enter, u	nlock,	
EQUI		Aerial ground pads/plates, departm	nent polic	cies and pro	ocedures (S	OP/SO	G), fire	aerial a	apparat	us, and	i
		Given a fully equipped fire aerial an assignment, the candidate shall d				inciden	t locatio	on, a sit	uation		
No.		TASK STEPS				TE	ST	RETI	EST 1	RET	EST 2
						P	F	P	F	P	F
1.	Clear ae	rial device of personnel and drain th	e waterv	vay (if appl	icable)						
2.		all safety devices are in place and pross, safety chains, guardrails, dead-ma			ut						
3.	Properly	active the emergency operations sy	stem								
4.	Maintair	n safety mechanisms (as necessary)									
5.	Retract t	he aerial device fully									
6.	Rotate th	ne aerial device in line with cradle/b	ed								
7.	Lower a	erial device to bedded position									
8.	Disenga	ges emergency operating system									
9.		s apparatus stability during evolution									
10.	Maintair operation	n smooth operation of aerial maneuv ns	ers throu	ughout eme	rgency						
Evol	uator:			Retest	Evaluato	r 1:					
Evan	шаюг: 			Retest	Evaluato	r 2:					
Com	ments:										
		Certifying Officer Name		Date		Ove	erall (Skill S	Sheet	: Res	ult:
	Ce	rtifying Officer Signature				Pas	ss (P): 🗆	Fa	ail (F): 🗆

NFPA 1002-2017 Ed.

PRACTICAL SKILL REQUIREMENTS

<u>AO 5</u>

Cand	lidate:		Date	:			
STAN	Deploy a SKILL AREA: Deploy a Stream	and Op	erate	Eleva	ted M	laster	•
	-: Deploy and operate an elevated master stream so that the stream is effest are operated correctly.	ctive and	the aer	ial and	master	strean	n
	ORMANCE OUTCOME: The candidate shall demonstrate the ability to and control an elevated nozzle manually or remotely.	connect a	a water	supply	to a ma	aster st	ream
	PMENT: Aerial ground pads/plates, department policies and procedures (re pumper apparatus, hose tools and appliances, master stream device, and			hose su	ıpply li	ne (mi	n. 2
demon firefigl	DITIONS: Given a fully equipped fire aerial apparatus, an aerial device, a astrate the proper procedures to safely raise the aerial device and position the inch smooth bore nozzle/fog nozzle, feet in elevation with the ladder thing mode. The aerial operator must calculate and flow the correct pump pate shall complete the following:	ne waterw er extende	ay to fled to	low fee	gpı et in a c	m usinį defensi	g a ve
No.	TASK STEPS	TE	ST	RETI	EST 1	RETI	EST 2
		P	F	P	F	P	F
1.	Demonstrate how to manually rotate the nozzle from side to side						
2.	Demonstrate how to manually raise and lower the nozzle						
3.	Demonstrate how to manually adjust the spray pattern of nozzle						
4.	Demonstrate how to change from a fog nozzle to a smooth bore tip with/without a stream straightener (Select the appropriate nozzle for the assigned task)						
5.	Demonstrate how to attach a portable ladder pipe/hose line, or adjust a pinable waterway in the appropriate position (if applicable)						
6.	Connect an adequate water supply to the proper water inlet (per department SOP's and manufacturers specifications)						
7.	Maneuver and position the aerial device as appropriate for objective (AFSC Skill Sheet AO3, steps 1-7)						
8.	Smoothly open waterway discharge valve with minimal stress and movement of the aerial device and waterway						
9.	Discharges the correct gpm for the assigned task at psi pump pressure						
10.	Smoothly closes waterway discharge valve with minimal stress and movement of the aerial device and waterway						
11.	Disengages pump						
12.	Close and disconnect water supply from fire apparatus						
13.	Opens waterway drain to drain waterway pipe completely prior to repositioning the ladder						
14.	Retract, rotate, and lower aerial device						
15.	Disassemble any portable ladder pipe, hoseline, and/or return waterway pin to its stowed position						
16.	Return the proper nozzle (per department SOP's) onto the aerial monitor and places the monitor in its correct stowed position						
17.	Properly bed the aerial device.						

NFPA 1002- 2	017 Ed. PR	ACTICAL SKILL REQUIRE	MENTS <u>Continue AO 5</u>
Evolvetov		Retest Evaluato	r 1:
Evaluator:		Retest Evaluato	r 2:
Comments:			
	Certifying Officer Name	Date	Overall Skill Sheet Result:
	ertifying Officer Signature		Pass (P): ☐ Fail (F): ☐

Fire Apparatus Aerial Operator Required Equipment/Material						
1	Aerial ground pads/plates	2-5				
2	Applicable agency forms/reports	All				
3	Appropriate personnel protective equipment	All				
4	Fire hose supply line (minimum 2 ½")	5				
5	Hose tools and appliances	5				
6	Maintenance log book/record	1				
7	NFPA 1002: Standard for Fire Apparatus Driver/Operator Professional Qualifications	All				
8	NFPA 1500:Standards on Occupational Safety and Health Program	All				
9	Notebook/Clipboard	1				
10	Radio unit	All				
11	Standard Operating Procedures (SOP)/Standard Operating Guidelines (SOG)	All				

Fire Apparatus Aerial Operator Required Facility/Apparatus Checklist					
1	Aerial operations area (minimum 100' X 50')	2-5			
2	Fire aerial apparatus:	All			
3	Maintenance area/fire station bay	1			
4	Pressurized water source (hydrant)	5			