



**Practical Skill Sheets**  
**Fire Apparatus Driver/Operator – Aerial**

**January 2019**

**Table of Contents**

Acknowledgements..... 3

Driver/Operator Aerial Practical Skill Guide ..... 4

Grading Schedule ..... 5

Aerial Practical Skills Test Station Summary ..... 6

    TEST 1 – Positioning Aerial Apparatus & Device ..... 7

    TEST 2 – Stabilizing Aerial Apparatus & Device ..... 8

    TEST 3 – Operating Aerial Apparatus & Device..... 9

    TEST 4 – Pre-Trip Inspection ..... 11

    TEST 5 – Serpentine or Diminishing Clearance ..... 12

    TEST 6 – Alley Dock or Confined Space Turnaround..... 13

    TEST 7 – Over the Road Driving & Positioning ..... 14

APPENDIX A..... 16

## **Acknowledgements**

The Wisconsin Technical College System (WTCS) gratefully acknowledges the assistance of many dedicated fire service personnel during both the development and the administration of the WTCS Fire Service Education office (FSEO) Certification Program. It would be impossible to individually recognize each and every person who has helped to make the program the resounding success that it is.

Morna K. Foy – President

Chrystal Seeley-Schreck – Associate Vice-President

Angela White – Fire Service Education Director

***Special recognition for their technical expertise, time and effort is extended to the Driver/Operator-Aerial Curriculum Committee.***

Blake Deiber

Gary Gillitzer

Daniel Machotka

Douglas Pietz

Shannon Young

As a member of the Training Resources and Data Exchange (TRADE) of the National Fire Academy, WTCS FSEO is committed to fostering the ongoing exchange of ideas, programs, and curricula among and between Federal, State and local fire training organizations. Many of the publications and training materials of the WTCS FSEO may be freely used to aid emergency responders in any way possible. This manual is one of the aforementioned publications. We would appreciate the accompaniment of a credit line with any portion of this guide that is used indicating WTCS FSEO as the origin of the material. We also ask that such materials borrowed from us not be sold for profit.

## **Driver/Operator Aerial Practical Skill Guide**

This document is provided to assist candidates as they ready themselves to enter the WTCS FSEO Driver/Operator-Aerial Certification Process. The primary reference materials for meeting the certification requirements is the Jones and Bartlett *Fire Apparatus Driver/Operator*, Third Edition and the requirements of NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications*, 2017 Edition, Driver/Operator Job Performance Requirements (JPRs).

### **Requirements of the Candidate:**

- Candidates must register and pay for their practical exam.
- The candidate must have a valid driver's license and show the license to the evaluator before participating in the driving portion of the practical examination.
- The candidate must have a CDL learner's permit if he/she is not an active member of a Wisconsin fire department at the time of the practical examination.
- Candidates are responsible for providing the proper PPE to be worn by driver/operators.
- If the candidate is a member of a fire department, the candidate's fire department must provide an operational aerial for the candidate to use during the driving and pumping portions of the practical examination.
- The Driver/Operator-Aerial Practical Skills Examination is physically demanding, and the candidate is responsible for his/her own physical fitness and ability to perform the skills required.

## Grading Schedule

The following criteria will be used to evaluate and determine the pass/fail status of a candidate. **All skill stations are pass/fail. Failure to meet the criteria will result in a failure.** Each item in the performance test checklist is given a rating. **Passing Criteria (Failures): 1 Critical, 2 Major, 3 General or combination of 3 Major/General.**

**Critical (C)** - This rating has been assigned to items, which, if omitted or performed incorrectly, would result in severe injury to, or death of, an individual. Should a candidate fail to perform any **ONE** item rated as critical **(C)**, the candidate would be unsuccessful in demonstrating the required proficiency level for that standard.

**Major (M)** - This rating refers to any item that is very important to the general safety of personnel and the successful completion of the evolution. Should a candidate fail to perform any **TWO** items rated as major **(M)**, the candidate would be unsuccessful in demonstrating the required proficiency level for that standard.

**General**—This rating, although there is no symbol, has been given to all remaining items that in combination are relevant to the successful completion of the evolution. Should a candidate fail to perform any **THREE** items rated as *general*, the candidate would be unsuccessful in demonstrating the required proficiency level for that standard.

Should a candidate fail to perform any combination of Major or General rated items resulting in a sum total of **THREE**, the candidate would be unsuccessful in demonstrating the required proficiency level for that standard. Candidates who fail the practical skills exam should reference Policy 31 in the WTCS FSEO Policy and Procedure Manual for retest information.

Each candidate will perform a total of 8 of the 15 possible evolutions. The evolutions will be selected randomly either by the FSEO or by the station examiner. Candidates should be prepared to perform any of the tests listed. The assignment of each candidate during the evolution is randomly selected at the time of the test and cannot be changed. Non-compliance can be grounds for the candidate's failure of the entire examination.

Total station time includes properly breaking down equipment and replacing to the starting point.

**\*Candidates will not be penalized for equipment failures or cancellations/delays due to inclement weather or other circumstances.**

## Aerial Practical Skills Test Station Summary

1. **Positioning Aerial Apparatus & Device** – Individual Test  
The individual will position the apparatus in accordance with the scenario/evolution provided.
2. **Stabilizing Aerial Apparatus & Device** – Individual Test  
The individual will stabilize the aerial device on given terrain.
3. **Operating Aerial Apparatus & Device**  
The individual will correctly operate the apparatus for one of the following:
  - 3A Roof Operations
  - 3B Window Operations
  - 3C Elevated Fire Stream Operations
  - 3D Emergency Operating System
4. **Pre-trip Inspection** – In Class Individual Test\*  
Individual will conduct a pre-trip inspection for A, B, C, D or E as randomly selected by the station examiner.
  - 4A Cable System
  - 4B Aerial Device Hydraulic Systems
  - 4C Stabilizing Systems
  - 4D Breathing Air Systems (if applicable)
  - 4E Communication System (if applicable)
5. **Serpentine or Diminishing Clearance** – In Class Individual Test\*  
Individual will drive the apparatus both forward and in reverse for one of the following:
  - 5A Serpentine
  - 5B Diminishing Clearance
6. **Alley Dock or Confined Space Turnaround** – In Class Individual Test\*  
Individual will drive the apparatus for one of the following:
  - 6A Alley Dock or Station Apparatus Backing Maneuver
  - 6B Confined Space Turnaround
7. **Over-the-Road Driving & Positioning** – In Class Individual Test\*  
Individual will drive the apparatus over-the-road on a predetermined route selected by the station examiner.

\* Due to the limited availability of Aerial apparatus for testing purposes, Stations 4, 5, 6 and 7 will be evaluated and signed off by an instructor during the class sessions.

TEST 1 – Positioning Aerial Apparatus & Device		Individual Test	
Candidate must participate in this evolution.			
Target Time	Student Name:		
15 minutes	Examiner Name:		
Position Apparatus		YES	NO
1.	(M) Properly placed apparatus according to given scenario (Offensive/Defensive)		
2.	(C) Ground and overhead obstructions identified		
3.	(M) Positioned upwind (can be verbalized if conditions don't allow)		
4.	(M) Ground conditions considered		
<b>(C) Completed task within time limit with no safety violations</b>			

TEST 2 – Stabilizing Aerial Apparatus & Device		Individual Test	
Candidate must participate in this evolution.			
Target Time	Student Name:		
10 minutes	Examiner Name:		
<b>Stabilize Apparatus</b>		<b>YES</b>	<b>NO</b>
1. (C) Transfer of power for operation of aerial			
2. (C) Position of the pads or plates			
3. (C) Proper deployment of stabilizer			
4. (C) Check for proper level, according to manufacturer specifications			
5. (M) Pins placed into stabilizers (if applicable, manufacturer specific)			
<b>(C) Completed task within time limit with no safety violations</b>			



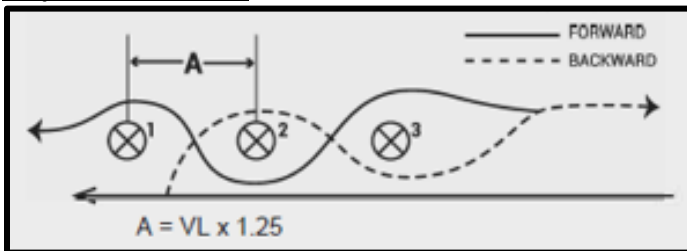
TEST 3 – Operating Aerial Apparatus & Device		Individual Test	
Candidate must participate in A, B, C or D.			
Target Time	Student Name:		
10 minutes	Examiner Name:		
<b>A. Roof Operations</b>		<b>YES</b>	<b>NO</b>
1. (C) Raised aerial device, checking for overhead obstruction			
2. Rotate aerial device			
3. Extend aerial device			
4. Position the tip/platform of aerial device (6ft. past edge of roof – straight ladder, just above roof – platform)			
5. Lock aerial device (if applicable)			
6. (C) Final position of aerial needs to be within 24" of roof			
7. Unlock aerial device (if applicable)			
8. (C) Raise, retract and lower aerial device			
9. Bed aerial device			
10. (C) All operations completed smoothly and safely			
<b>(C) Completed task within listed time limit with no safety violations</b>			
<b>B. Window Operations</b>			
1. (C) Raised aerial device, checking for overhead obstruction			
2. Rotate aerial device			
3. Extend aerial device			
4. Position the tip/platform of aerial device (top rung even with window sill – ladder, top rail or floor even with window sill – platform)			
5. Lock aerial device (if applicable)			
6. (C) Final position of aerial needs to be within 24" of window			
7. Unlock aerial device (if applicable)			
8. (C) Raise, retract and lower aerial device			
9. Bed aerial device			
10. (C) All operations completed smoothly and safely			
<b>(C) Completed task within listed time limit with no safety violations</b>			
<b>C. Elevated Master Stream</b>			
1. Install detachable ladder pipe and hose using spanner wrenches if needed (if applicable)			
2. Verify position of pinnable waterway (if applicable)			
3. Connect water supply			
4. (C) Rotate and raise the aerial device, checking for overhead obstruction			
5. Extend the aerial device			
6. Lock aerial device			
7. Proper position of master stream			
8. Verify tip load using aerial load chart			
9. Control elevated nozzle manually or remotely			
10. Bed the aerial device			
11. (C) All operations completed smoothly and safely			
<b>(C) Completed task within listed time limit with no safety violations</b>			

D. Emergency Operating System (Auxiliary Hydraulic Pump)		
1. Raise, rotate and position to center the aerial device		
2. Unlock, retract, and lower aerial device using the Emergency Operating System (Auxiliary Hydraulic Pump)		
3. Bed the aerial device		
4. (C) All operations completed smoothly and safely		
<b>(C) Completed task within listed time limit with no safety violations</b>		

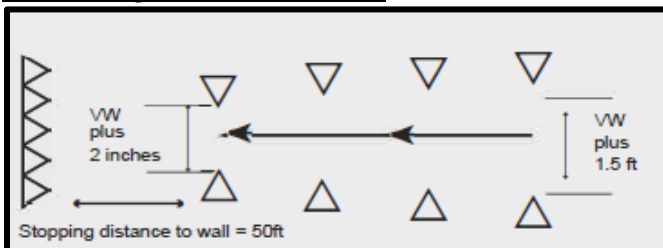
TEST 4 – Pre-Trip Inspection		Individual Test	
Candidate is assigned either A, B, C, D or E			
Total Station Time		Student Name:	
10 minutes		Examiner Name:	
<b>A. Cable system</b>		YES	NO
1. Inspected visually for free travel			
2. (M) Checked for any signs of misalignment and defects			
3. Checked for proper lubrication			
4. Checked for proper operation			
5. (C) Identified and inspected a safety system or feature			
<b>(C) Completed task within listed time limit with no safety violations</b>			
<b>B. Aerial device hydraulic systems</b>			
1. Checked visually for kinks			
2. Checked for any signs of cuts and abrasions			
3. (M) Checked lines for any signs of fluid leaking			
4. (M) Checked pump for any signs of fluid leaking			
1. (C) Checked fluid levels			
2. Checked for any signs of wear and distortion			
3. (C) Identified and inspected a safety system or feature			
<b>(C) Completed task within listed time limit with no safety violations</b>			
<b>C. Stabilizing systems</b>			
1. Inspected all stabilizer components for defects and all welds for fractures			
2. (M) Checked hydraulic system for leaks			
3. (C) Identified and inspected a safety system or feature			
<b>(C) Completed task within listed time limit with no safety violations</b>			
<b>D. Breathing air systems (if applicable)</b>			
1. Verified all components area present in serviceable condition			
2. Inspected air cylinder mounting brackets			
3. (C) Verified air cylinder level and check for leaks			
4. (C) Identified and inspected a safety system or feature			
<b>(C) Completed task within listed time limit with no safety violations</b>			
<b>E. Communication system (if applicable)</b>			
1. Inspected for proper operation			
2. (C) Identified and inspected a safety system or feature			
<b>(C) Completed task within listed time limit with no safety violations</b>			

TEST 5 – Serpentine or Diminishing Clearance		Individual Test	
Candidate is assigned to either A or B			
Total Station Time		Student Name:	
10 minutes		Examiner Name:	
<b>A. Serpentine</b>		YES	NO
1. (C) Fastened seat belt			
2. Drove apparatus along the left side of the markers in a straight line and stopped just beyond the last barrel/cone			
3. (C) Backed the apparatus between the markers by passing to the left of #1, to the right of #2, and to the left of #3. This maneuver must be completed without stopping.			
4. (C) Drove vehicle forward and to the right of #3, left of #2, and right of #1. This maneuver must be completed without stopping.			
5. (M) Used mirrors and all applicable warning devices. Candidate may not lean out the window.			
6. (C) Completed exercise without striking a cone			
<b>(C) Completed task within time limit with no safety violations</b>			
Total Station Time		Student Name:	
10 minutes		Examiner Name:	
<b>B. Diminishing Clearance</b>		YES	NO
1. (C) Fastened seat belt			
2. (C) Proceeded from wide to narrow end without stopping			
3. (M) Stopped within 3 feet of finish line			
4. Came to complete stop in a smooth and safe manner			
5. (C) Back vehicle through course using mirrors until clear of all cones without stopping. Candidate may not lean out the window.			
6. (M) Used all applicable warning devices (forward only).			
7. (C) Completed exercise without striking cones			
8. (C) No part of the aerial apparatus shall have crossed the vertical plane of the boundaries			
<b>(C) Completed task within time limit with no safety violations</b>			

**Serpentine Exercise:**

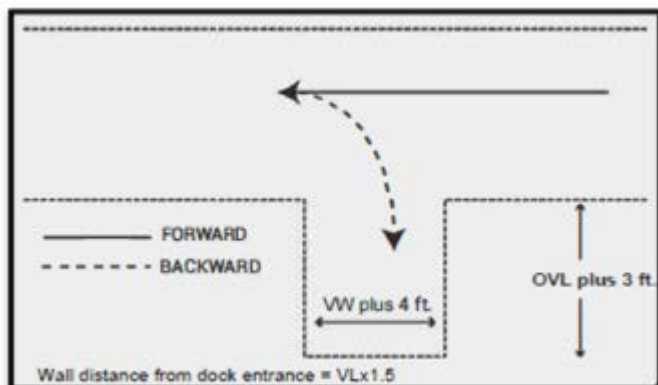


**Diminishing Clearance Exercise:**

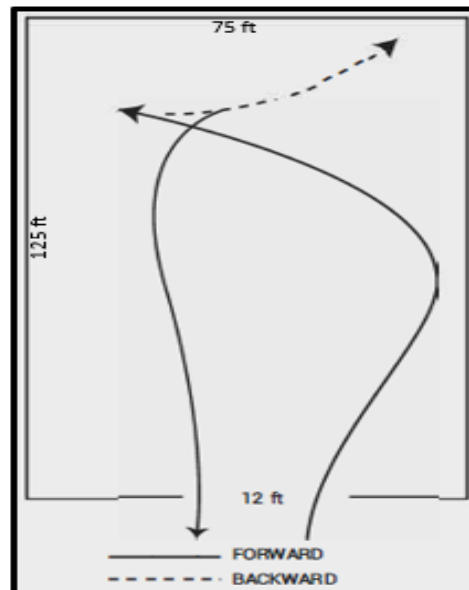


TEST 6 – Alley Dock or Confined Space Turnaround		Individual Test	
Candidate is assigned to either A or B			
<b>Total Station Time</b>	<b>Student Name:</b>		
<b>10 minutes</b>	<b>Examiner Name:</b>		
<b>A. Alley dock</b>		<b>YES</b>	<b>NO</b>
1. (C) Fastened seat belt			
2. Passed the “barricades” marking the loading dock on the left			
3. (C) Used side mirrors, backed apparatus by a left turn into the marked loading dock without stopping			
4. (C) Used side mirrors, backed apparatus by a right turn into the marked loading dock without stopping.			
5. Came to a complete stop in a smooth and safe manner			
6. (M) Used spotter when backing. (Spotter may only signal to prevent a collision.) Candidate may not lean out the window.			
7. (C) Completed exercise without pulling forward, striking cones and/or obstructions			
<b>(C) Completed task within time limit with no safety violations</b>			
<b>Total Station Time</b>			
<b>Student Name:</b>			
<b>10 minutes</b>			
<b>Examiner Name:</b>			
<b>B. Confined Space Turnaround</b>		<b>YES</b>	<b>NO</b>
1. (C) Fastened seat belt			
2. Pulled into a designated area through opening			
3. Made confined space turnaround			
4. Backed up at least once using spotters and mirrors. Candidate may not lean out the window.			
5. Exited area through same opening			
6. (C) Completed exercise without striking cones or obstructions			
7. (C) No part of the aerial apparatus shall have crossed the vertical plane of the boundaries			
<b>(C) Completed task within time limit with no safety violations</b>			

**Alley Dock Exercise**



**Confined Space Turnaround**



TEST 7 – Over the Road Driving & Positioning		Individual Test	
Candidate must participate in this evolution.			
Total Station Time		Student Name:	
20 minutes		Examiner Name:	
<b>A. Drive Predetermined Course</b>		YES	NO
1. Mounted fire apparatus using hand rail			
2. (C) Fastened seat belt			
3. Properly adjusted mirrors			
4. (M) Adjusted speed for weather			
5. (M) Adjusted stopping distances			
6. (C) Obeyed all traffic laws including speed limit			
7. (C) Demonstrated responsibility and concern for safety of apparatus and personnel while driving apparatus			
8. Used handrail(s) to lower self to ground/dismount apparatus			
9. Used all safety equipment provided as needed			
10. (C) A traffic accident results in immediate failure for the day			
<b>B. Made 4 left turns</b>			
1. (M) Activated left turn signal			
2. Checked the side view mirrors			
3. Moved vehicle to left lane if/when necessary			
4. Checked for oncoming traffic			
5. Checked to see if side street or road is clear			
6. Made safe left turns			
7. (C) Apparatus did not leave the roadway			
<b>C. Made 4 right turns</b>			
1. (M) Activated right turn signal			
2. Checked the side view mirrors			
3. Moved vehicle to right lane if/when necessary			
4. Checked for oncoming traffic			
5. Checked to see if side street or road is clear			
6. Made safe right turns			
7. (C) Apparatus did not leave the roadway			
<b>D. Drove straight section of road or highway</b>			
1. (M) Maintained vehicle speed and safe following distance			
2. Checked for oncoming traffic			
3. Checked side view mirrors			
4. Checked side streets or roads			
<b>E. Passed through one intersection (uncontrolled intersection)</b>			
1. Approached the intersection with caution			
2. Checked for traffic on the left, right, and left again			
3. Safely proceeded through the intersection			
<b>F. Passed through two intersections with stop (controlled intersection)</b>			
1. Approached intersection with caution			
2. (C) Brought the vehicle to a complete stop			
3. Checked traffic – left, right, and left again			
4. Safely proceeded through the intersection			

<b>G. Railroad crossing (if available)</b>	<b>YES</b>	<b>NO</b>
1. Approached crossing with caution		
2. Checked tracks – left and right		
3. Stopped if necessary		
4. Proceeded across tracks when safe to do so		
<b>H. Curve in roadway – right or left</b>		
1. Slowed vehicle before entering curve		
2. Adjusted speed as required		
3. (M) Maintained safe control of vehicle		
<b>I. Entered limited access highway (if available)</b>		
1. Checked traffic while on entrance ramp		
2. Adjusted speed of vehicle to match flow of traffic		
3. (M) Activated turn signal		
4. Checked side view mirrors		
5. Moved vehicle from acceleration lane to highway safely		
<b>J. Changed lanes on limited access highway (if available)</b>		
1. (M) Activated turn signal		
2. Checked side and rear-view mirrors		
3. Safely completed lane change		
<b>K. Exited limited access highway (if available)</b>		
1. (M) Activated turn signal		
2. Checked side and rear-view mirrors		
3. Safely moved vehicle into deceleration lane		
4. Slowed vehicle and exited safely		
<b>L. Downgrade</b>		
1. Used brakes and/or lowered gear		
2. Used auxiliary braking systems appropriately		
<b>M. Upgrade</b>		
1. Downshifted standard transmission to maintain engine rpm and speed (if applicable)		
<b>N. Underpass or low clearance</b>		
1. Approached with caution		
2. Checked to see if underpass height is marked		
3. (M) Stopped to check for proper clearance if it's not apparent		
4. Proceeded only when sure it was safe to do so		
<b>(C) Completed task within time limit with no safety violations</b>		

## APPENDIX A

### Driving Course Specifications

Utilize this sheet to design your driving course in relation to the vehicles you have assigned. Please set up your course per calculations outline below.

#### Key

VW = Vehicle Width (measured as width of bumper)

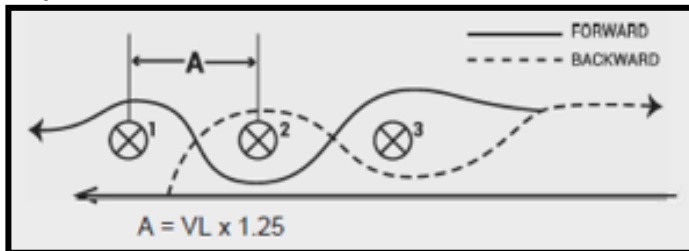
VL = Vehicle Length (measured bumper to tailboard)

OVL = Overall Vehicle Length (measured from forward-most point to rear-most point)

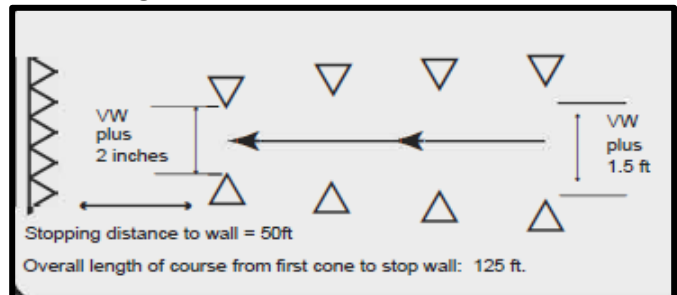
Cone distance = measured from edge of base to edge of base

Exercise	Dimensions
Alley Dock	Depth of Dock: VL plus 3 feet Width of Dock: VW plus 4 feet Wall distance from dock entrance: OVL multiplied by 1.5
Serpentine	Distance between cones: VL multiplied by 1.25
Confined Space Turnaround	Entrance Width: 12 feet Pumper: 50 feet wide x 100 feet long Aerial: 75 feet wide x 125 feet long
Diminishing Clearance	Wide Entrance: VW plus 1.5 feet Narrow Point: VW plus 2 inches Distance from end of cones to wall = 50 feet

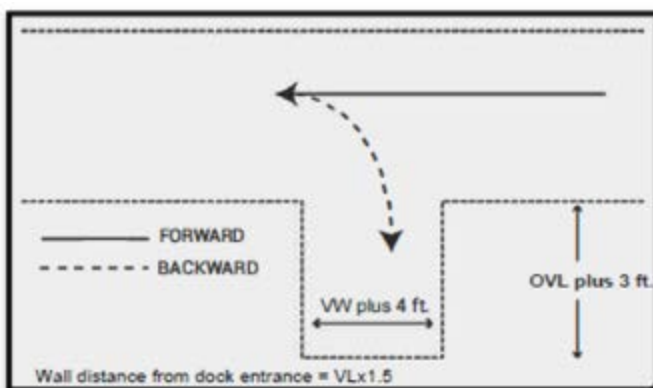
#### Serpentine Exercise:



#### Diminishing Clearance Exercise:

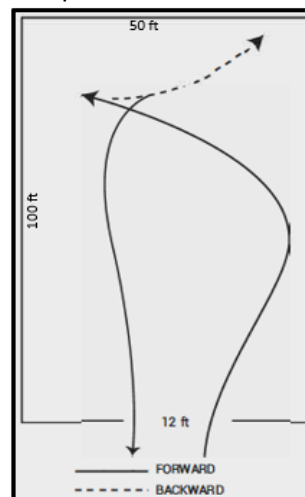


#### Alley Dock Exercise:



#### Confined Space Turnaround:

Pumper:



Aerial:

