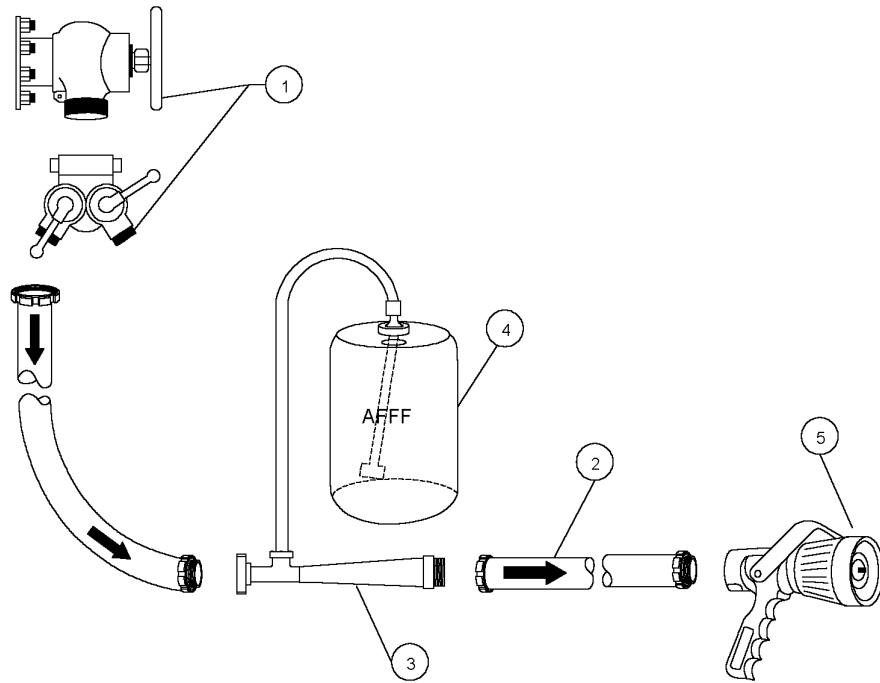


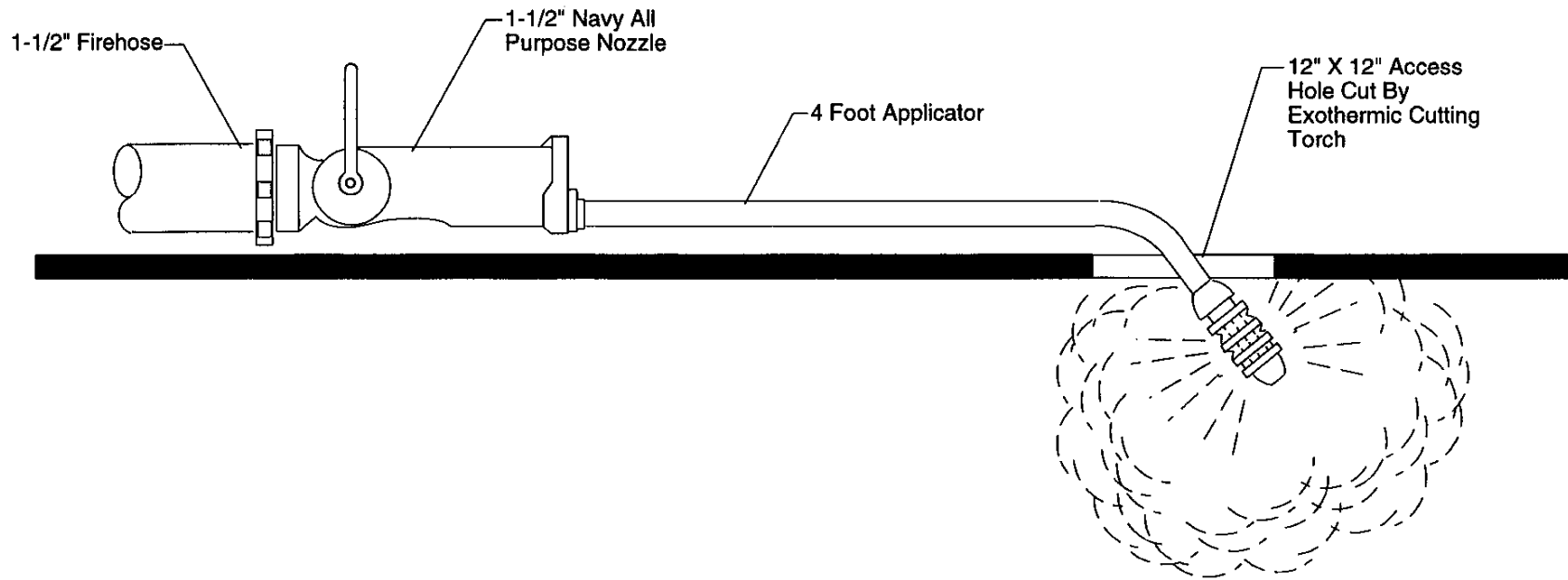
**DAMAGE CONTROL LAYOUT SKETCHES**  
**SECTION 8 - FIREFIGHTING EVOLUTION**

<b>SKETCH NO.</b>	<b>TITLE OF SKETCH</b>	<b>SHEET NO.</b>
001	Using Portable AFFF (In-Line) Eductor/Firemain	8-2
002	Using NAP Nozzle and 4 Foot Applicator	8-3
003	Using P-100 Pump and In-Line Eductor Using 1-3/4" Firehose	8-4
004	Using P-100 Pump and In-Line Eductor	8-5
005	Using P-100 Pump Using 1-3/4" Firehose	8-6
006	Using P-100 Pump and Various Applicators	8-7
007	Using P-100 Pump Taking Suction from Overboard or Flooded Compartment Using 1-3/4" Firehose	8-8
008	Using P-100 Pump Taking Suction from Overboard or Flooded Compartment	8-9
009	Replacing Ruptured Firehose Using 2-1/2" Hose Clamp to Control Wild Firehose	8-10
010	Passing Through Escape Trunk	8-11
011	Using Portable AFFF (In-Line) Eductor	8-12
012	Hose Line and Nozzle Handling Methods (Sheet 1 of 2)	8-13
	Hose Line and Nozzle Handling Methods (Sheet 2 of 2)	8-14
013	Fire Attack – Direct Attack	8-15
014	Fire Attack - Fog Attack to Control Fire	
015	Fire Attack – Attack from an Access	8-16
016	Fire Attack – Direct Attack with Vent to Weather	8-17
017	Indirect Attack	8-18
018	Indirect Attack with Venting	8-19
019	Using P-100 Pump Taking Suction from Overboard or Flooded Compartment Suction Lift Less than 20 Feet	8-20

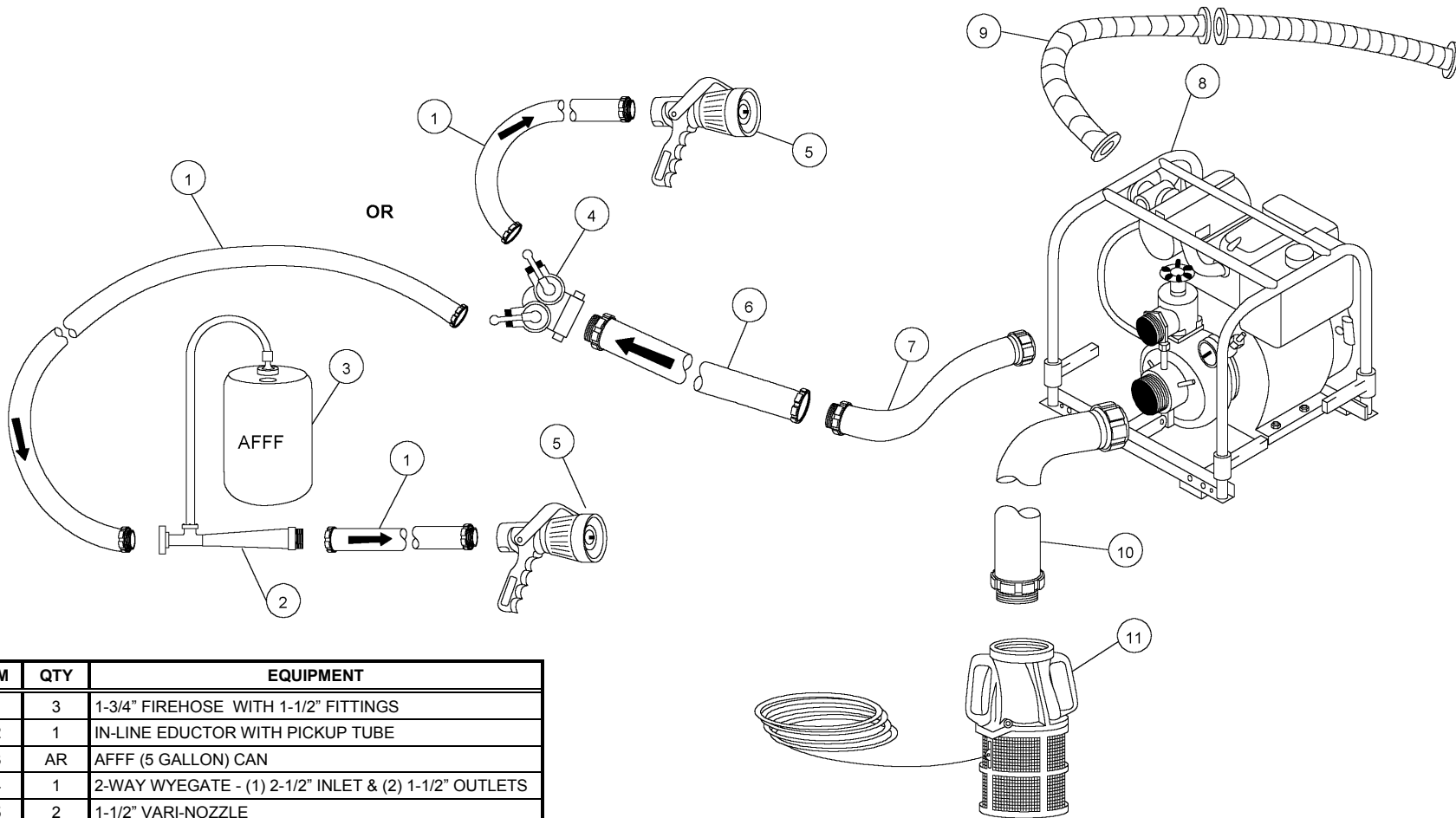


ITEM	QTY	EQUIPMENT
1	1	FIREPLUG WITH WYEGATE PROVIDING 2-1/2" OUTLET
2	2 OR 3	1-1/2" FIREHOUSE (MAXIMUM 150 FEET)
3	1	IN-LINE EDUCTOR WITH PICKUP TUBE
4	AR	AFFF (5 GAL) CAN
5	1	1-1/2" VARI-NOZZLE

**FIREFIGHTING EVOLUTION - SKETCH #001**  
**Using Portable AFFF (In-Line) Eductor/Firemain**



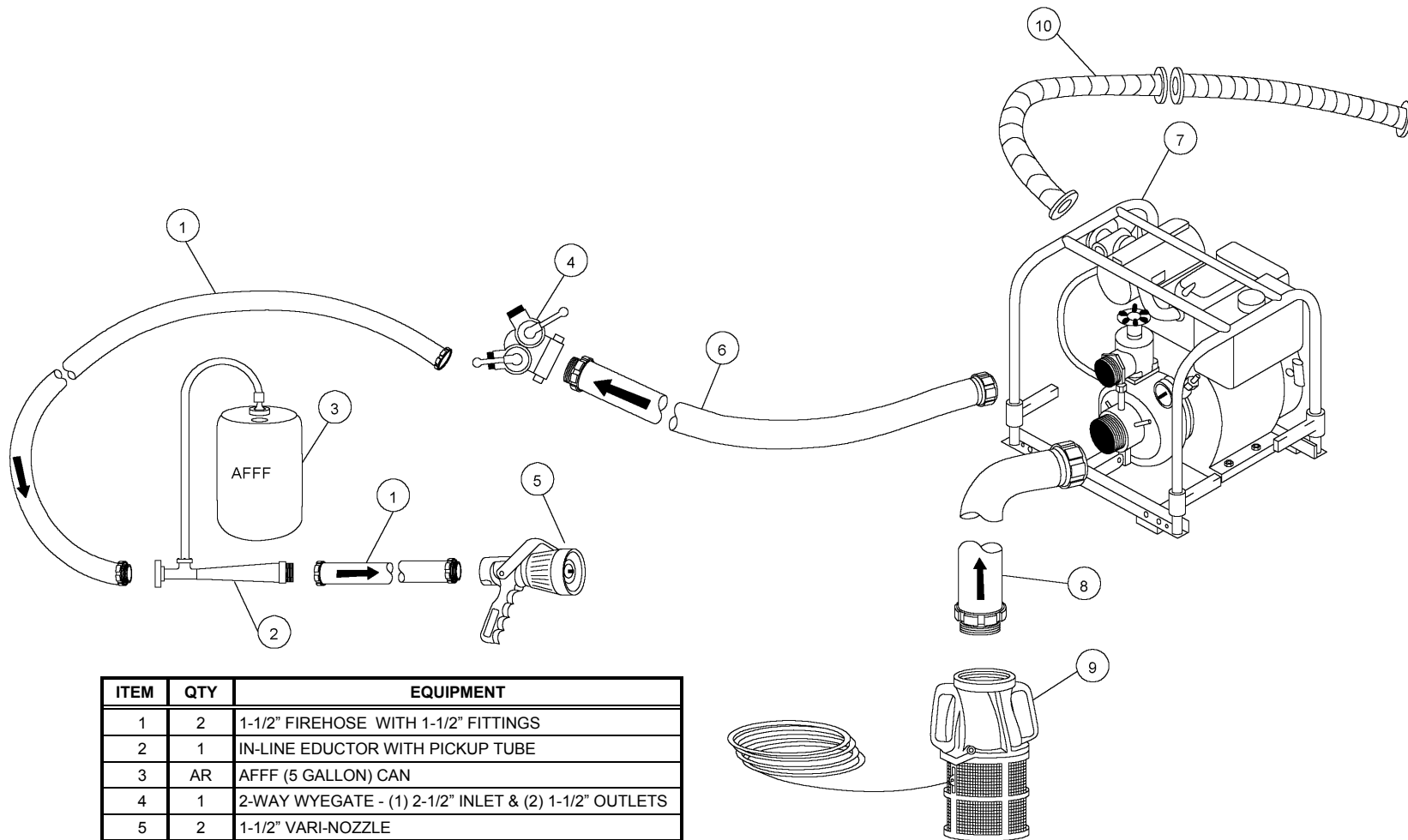
**FIREFIGHTING EVOLUTION - SKETCH #002**  
**Using NAP Nozzle and 4 Foot Applicator**



ITEM	QTY	EQUIPMENT
1	3	1-3/4" FIREHOSE WITH 1-1/2" FITTINGS
2	1	IN-LINE EDUCTOR WITH PICKUP TUBE
3	AR	AFFF (5 GALLON) CAN
4	1	2-WAY WYEGATE - (1) 2-1/2" INLET & (2) 1-1/2" OUTLETS
5	2	1-1/2" VARI-NOZZLE
6	1	2-1/2" FIREHOSE
7	1	2-1/2" X 18" JUMPER HOSE
8	1	P-100 PUMP
9	2	2" X 10' EXHAUST HOSE
10	Note 1	3" X 10' HARD RUBBER SUCTION HOSE
11	1	VALVE, FOOT STRAINER WITH 1/2" X 55' RELEASE LINE

Note 1: Maximum of two, but if two sections of hose are used, a 2" x 50' handling line is required

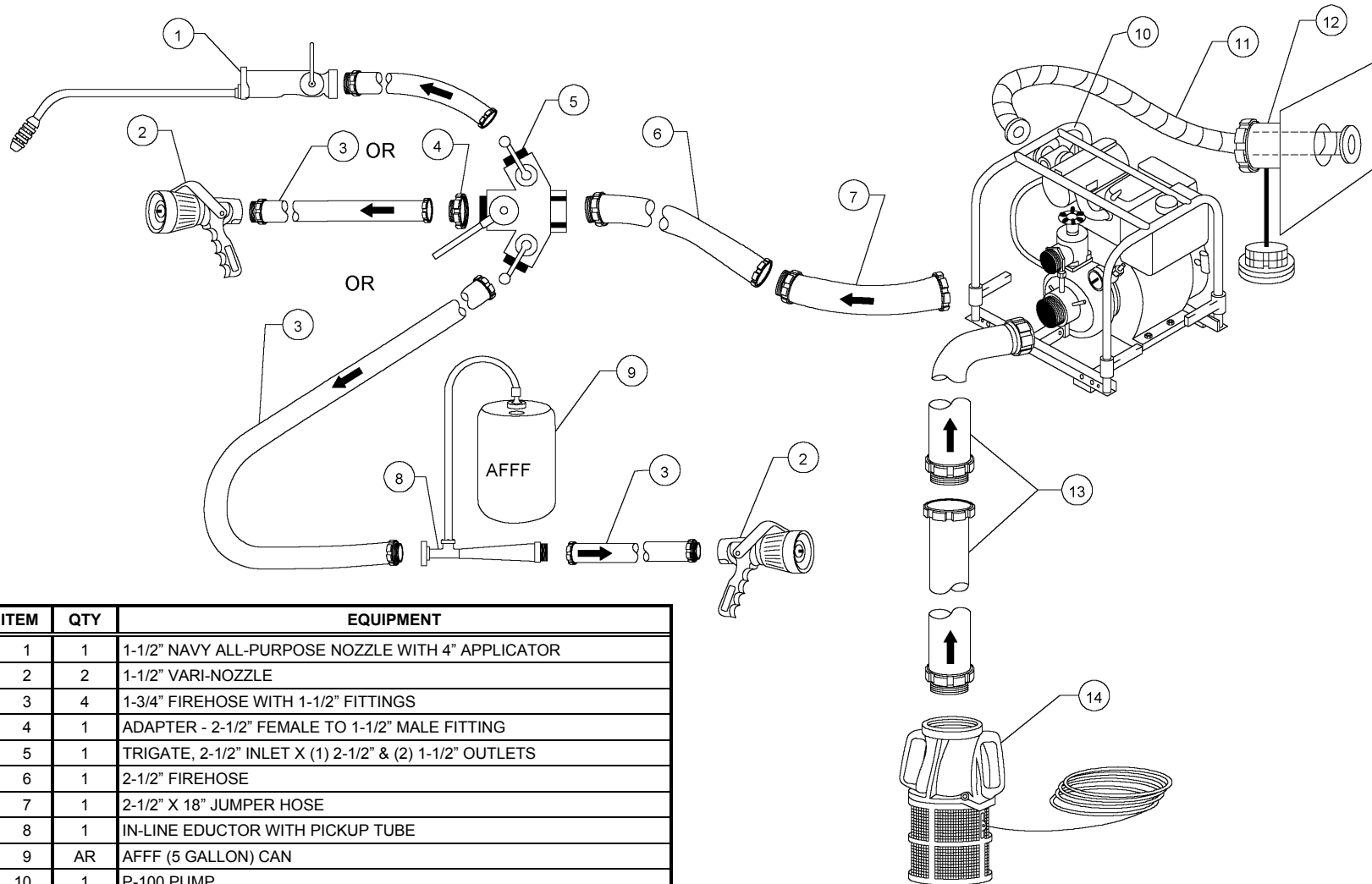
**FIREFIGHTING EVOLUTION - SKETCH #003**  
**Using P-100 Pump and In-Line Eductor Using 1-3/4" Firehose**



ITEM	QTY	EQUIPMENT
1	2	1-1/2" FIREHOSE WITH 1-1/2" FITTINGS
2	1	IN-LINE EDUCTOR WITH PICKUP TUBE
3	AR	AFFF (5 GALLON) CAN
4	1	2-WAY WYEGATE - (1) 2-1/2" INLET & (2) 1-1/2" OUTLETS
5	2	1-1/2" VARI-NOZZLE
6	1	2-1/2" FIREHOSE
7	1	P-100 PUMP
8	Note 1	3" X 10" HARD SUCTION HOSE
9	1	VALVE, FOOT STRAINER WITH 1/2" X 55' RELEASE LINE
10	2	2" X 10' EXHAUST HOSE

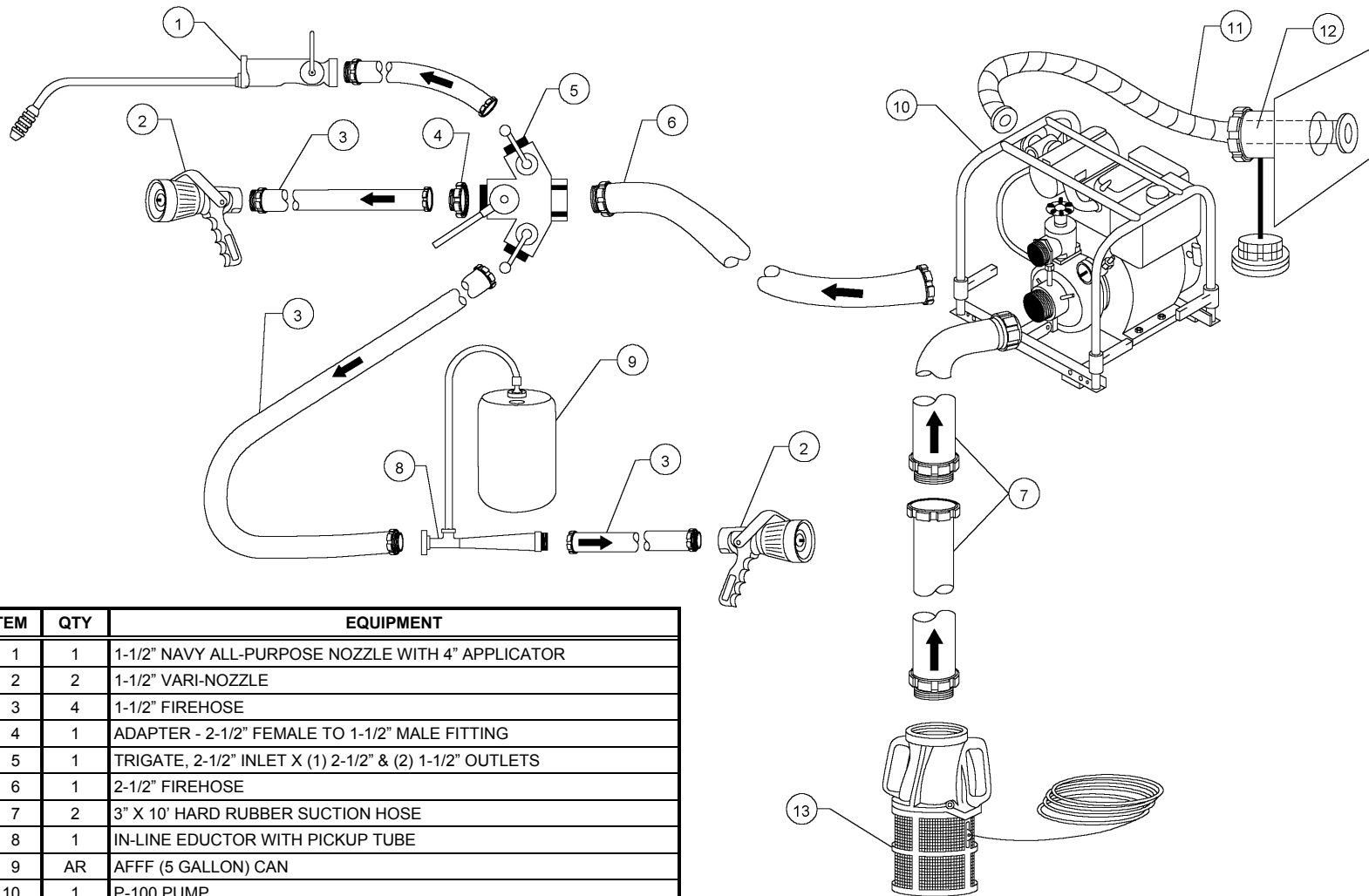
Note 1: Maximum of two, but if two sections of hose are used, a 2" x 50' handling line is required

**FIREFIGHTING EVOLUTION - SKETCH #004**  
**Using P-100 Pump and In-Line Eductor**



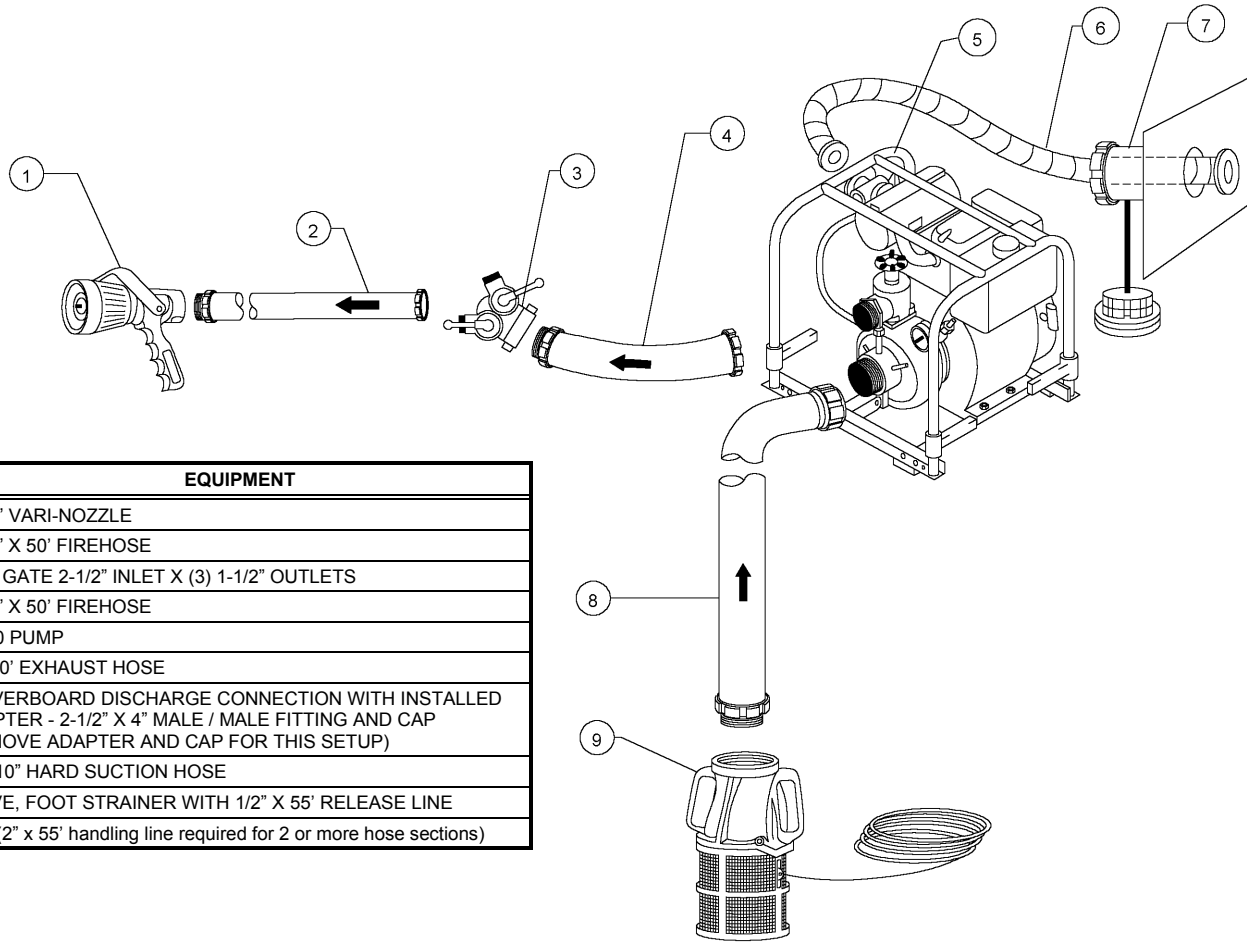
ITEM	QTY	EQUIPMENT
1	1	1-1/2" NAVY ALL-PURPOSE NOZZLE WITH 4" APPLICATOR
2	2	1-1/2" VARI-NOZZLE
3	4	1-3/4" FIREHOSE WITH 1-1/2" FITTINGS
4	1	ADAPTER - 2-1/2" FEMALE TO 1-1/2" MALE FITTING
5	1	TRIGATE, 2-1/2" INLET X (1) 2-1/2" & (2) 1-1/2" OUTLETS
6	1	2-1/2" FIREHOSE
7	1	2-1/2" X 18" JUMPER HOSE
8	1	IN-LINE EDUCTOR WITH PICKUP TUBE
9	AR	AFFF (5 GALLON) CAN
10	1	P-100 PUMP
11	2	2" X 10' EXHAUST HOSE
12	1	4" OVERBOARD DISCHARGE CONNECTION WITH INSTALLED ADAPTER - 4" MALE TO 2-1/2" FEMALE FITTING AND CAP (REMOVE AS UNIT)
13	2	3" X 10' HARD RUBBER SUCTION HOSE
14	1	VALVE, FOOT STRAINER WITH 1/2" X 55' RELEASE LINE

**FIREFIGHTING EVOLUTION - SKETCH #005**  
**Using P-100 Pump Using 1-3/4" Firehose**



ITEM	QTY	EQUIPMENT
1	1	1-1/2" NAVY ALL-PURPOSE NOZZLE WITH 4" APPLICATOR
2	2	1-1/2" VARI-NOZZLE
3	4	1-1/2" FIREHOSE
4	1	ADAPTER - 2-1/2" FEMALE TO 1-1/2" MALE FITTING
5	1	TRIGATE, 2-1/2" INLET X (1) 2-1/2" & (2) 1-1/2" OUTLETS
6	1	2-1/2" FIREHOSE
7	2	3" X 10' HARD RUBBER SUCTION HOSE
8	1	IN-LINE EDUCTOR WITH PICKUP TUBE
9	AR	AFFF (5 GALLON) CAN
10	1	P-100 PUMP
11	2	2" X 10' EXHAUST HOSE
12	1	4" OVERBOARD DISCHARGE CONNECTION WITH INSTALLED ADAPTER - 4" MALE TO 2-1/2" FEMALE FITTING AND CAP (REMOVE AS UNIT)
13	1	VALVE, FOOT STRAINER WITH 1/2" X 55' RELEASE LINE

**FIREFIGHTING EVOLUTION - SKETCH #006**  
**Using P-100 Pump and Various Applicators**

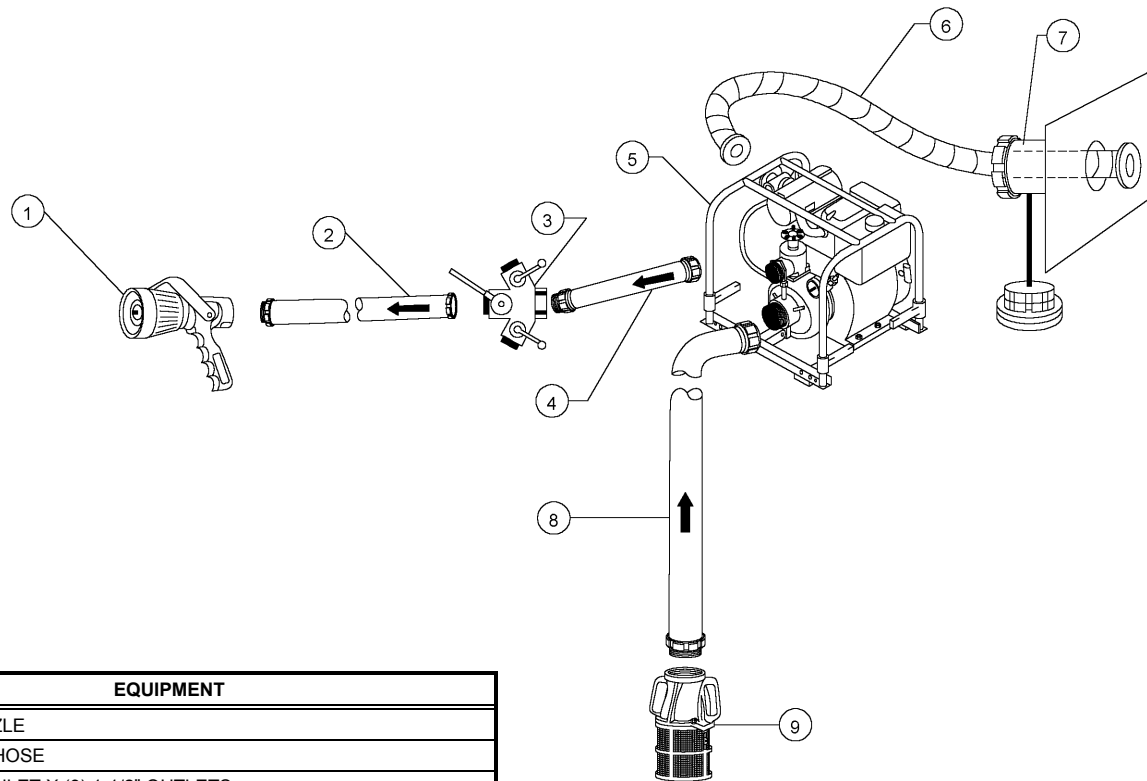


ITEM	QTY	EQUIPMENT
1	3	1-1/2" VARI-NOZZLE
2	3	1-3/4" X 50' FIREHOSE
3	1	WYE GATE 2-1/2" INLET X (3) 1-1/2" OUTLETS
4	1	2-1/2" X 50' FIREHOSE
5	1	P-100 PUMP
6	2	2" X 10' EXHAUST HOSE
7	1	4" OVERBOARD DISCHARGE CONNECTION WITH INSTALLED ADAPTER - 2-1/2" X 4" MALE / MALE FITTING AND CAP (REMOVE ADAPTER AND CAP FOR THIS SETUP)
8	Note 1	3" X 10" HARD SUCTION HOSE
9	1	VALVE, FOOT STRAINER WITH 1/2" X 55' RELEASE LINE

Note 1: As required (2" x 55' handling line required for 2 or more hose sections)

**FIREFIGHTING EVOLUTION - SKETCH #007**  
**Using P-100 Pump Taking Suction from Overboard or Flooded Compartment Using 1-3/4" Firehose**

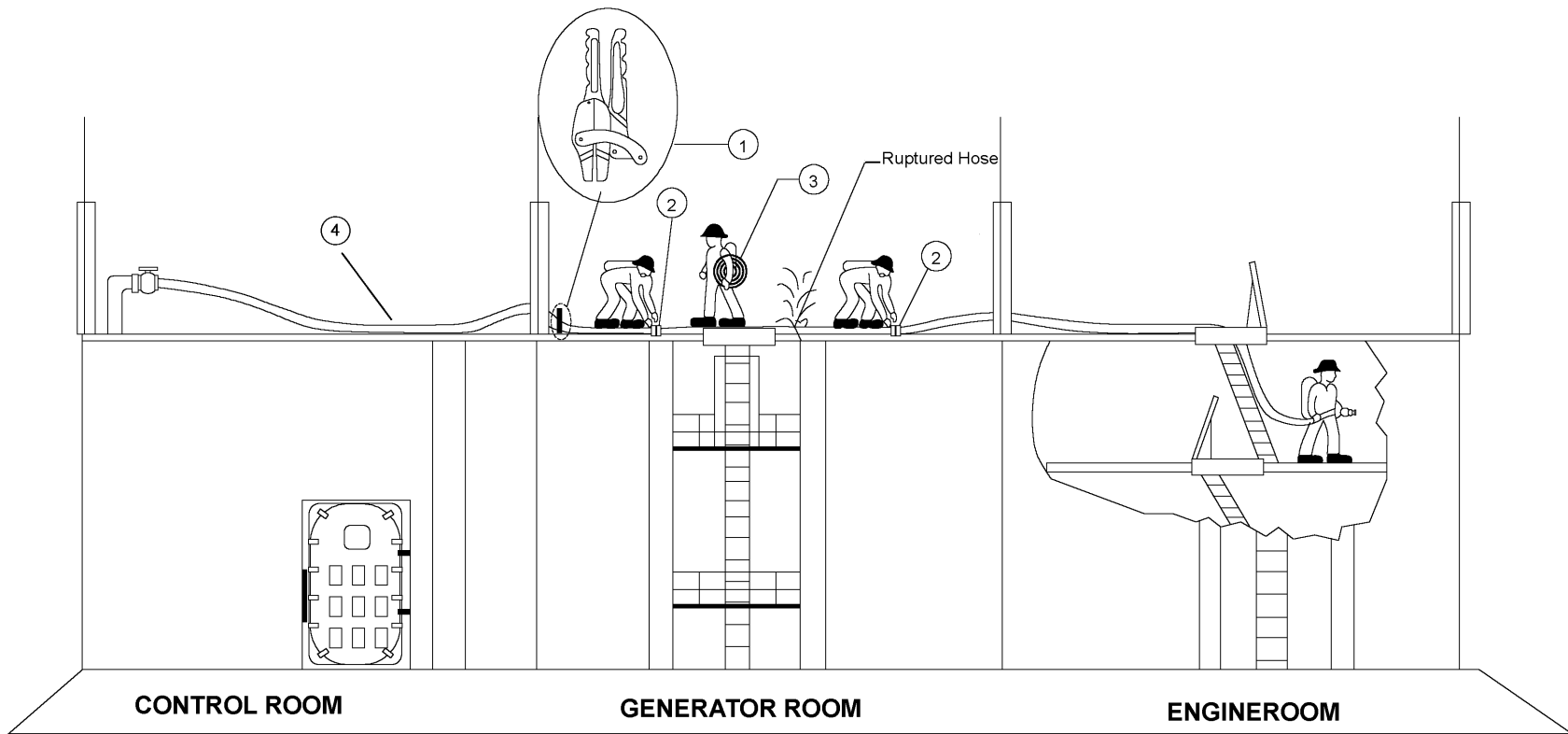




ITEM	QTY	EQUIPMENT
1	1	1-1/2" VARI-NOZZLE
2	1	1-1/2" X 50' FIREHOSE
3	1	TRIGATE 2-1/2" INLET X (3) 1-1/2" OUTLETS
4	1	2-1/2" X 50' FIREHOSE
5	1	P-100 PUMP
6	2	2" X 10' EXHAUST HOSE
7	1	4" OVERBOARD DISCHARGE CONNECTION WITH INSTALLED ADAPTER - 2-1/2" X 4" MALE / MALE FITTING AND CAP (REMOVE ADAPTER AND CAP FOR THIS SETUP)
8	Note 1	3" X 10' HARD RUBBER SUCTION HOSE
9	1	VALVE, FOOT STRAINER WITH 1/2" X 50' RELEASE LINE

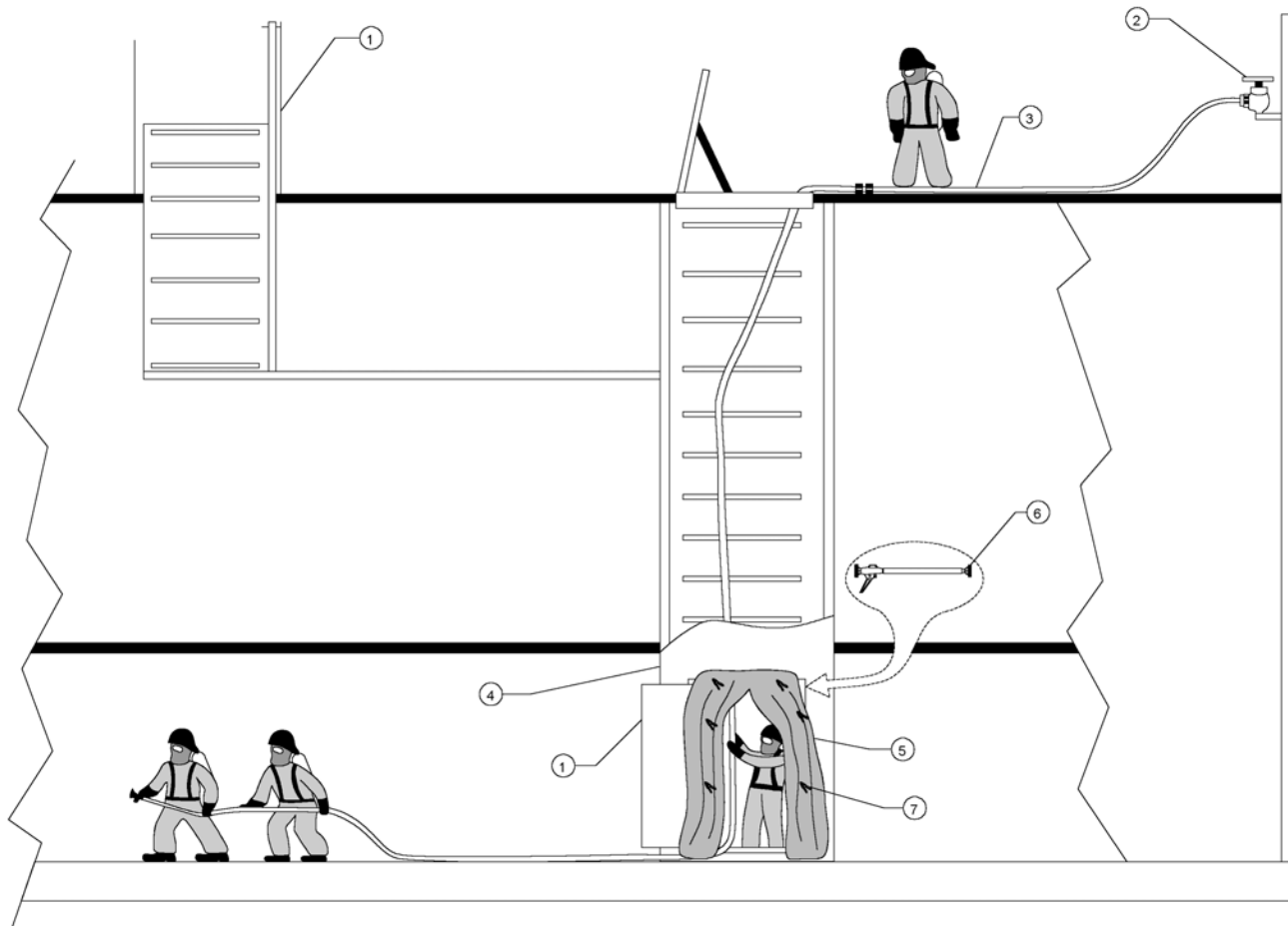
Note 1: As required (2" x 55' handling line required for two or more hose sections)

**FIREFIGHTING EVOLUTION - SKETCH #008**  
**Using P-100 Pump Taking Suction from Overboard or Flooded Compartment**



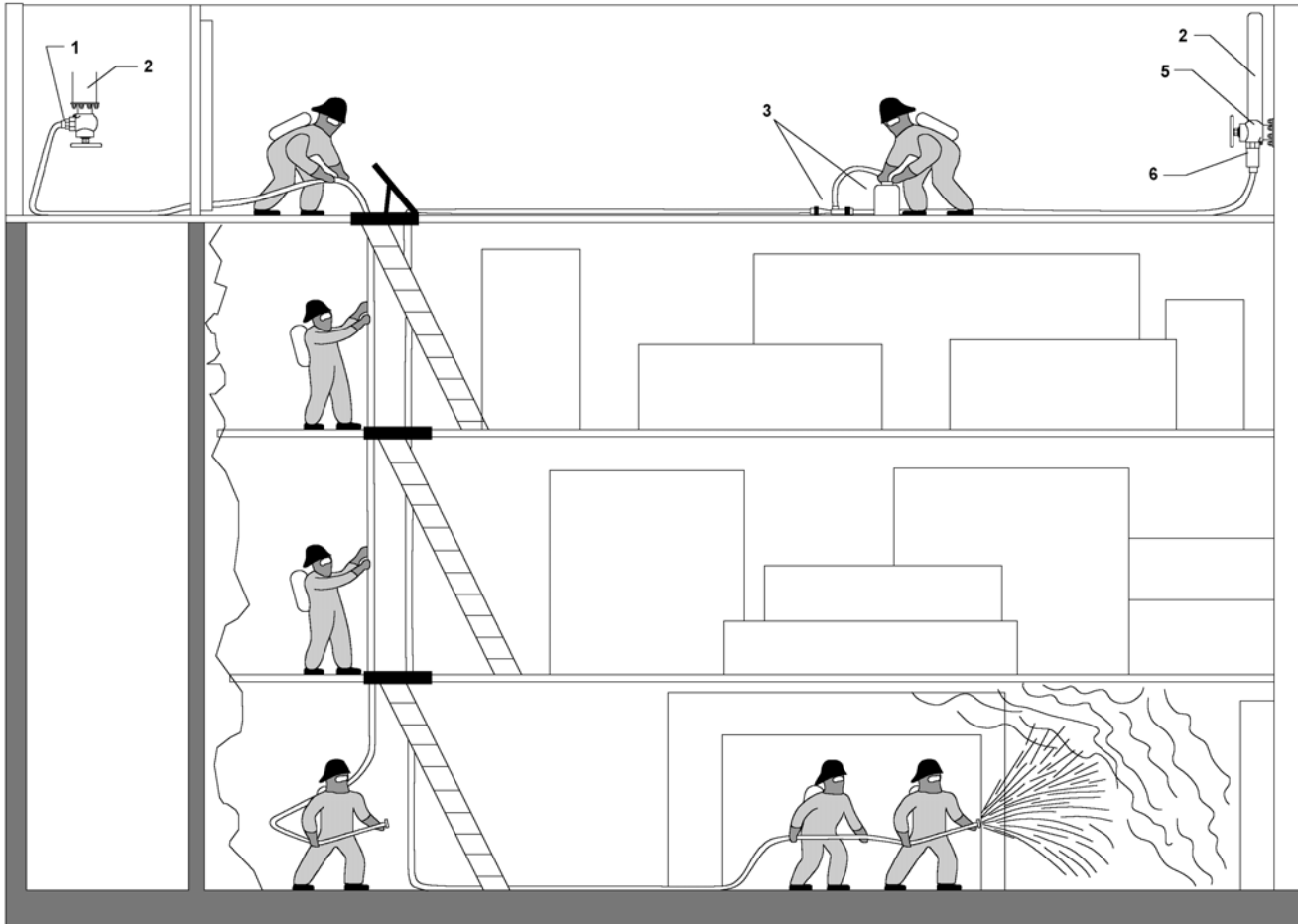
ITEM	QTY	EQUIPMENT
1	1	2-1/2" HOSE CLAMP
2	2	SPANNER WRENCH
3	1	2-1/2" X 50' FIREHOSE (REPLACEMENT ONLY)
4	1	2-1/2" FIREHOSE

**FIREFIGHTING EVOLUTION - SKETCH #009**  
**Replacing Ruptured Firehose Using 2-1/2" Hose Clamp to Control Wild Firehose**



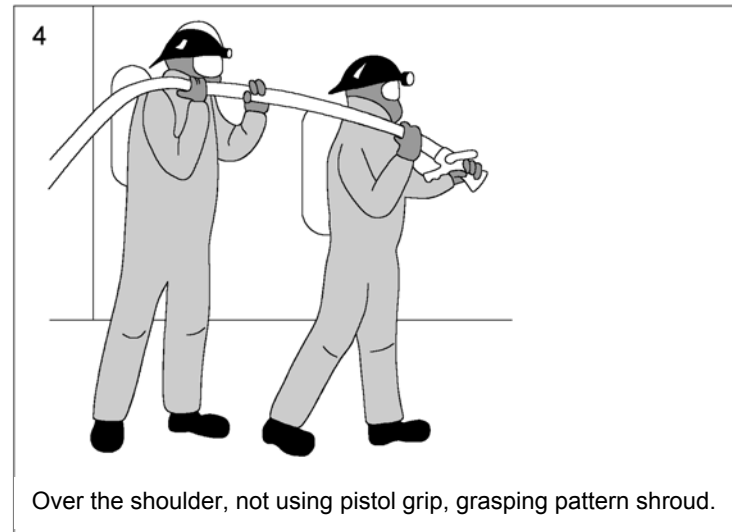
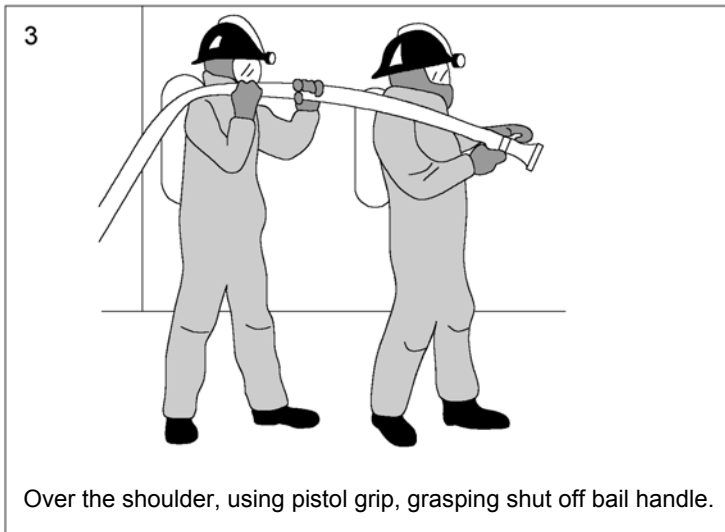
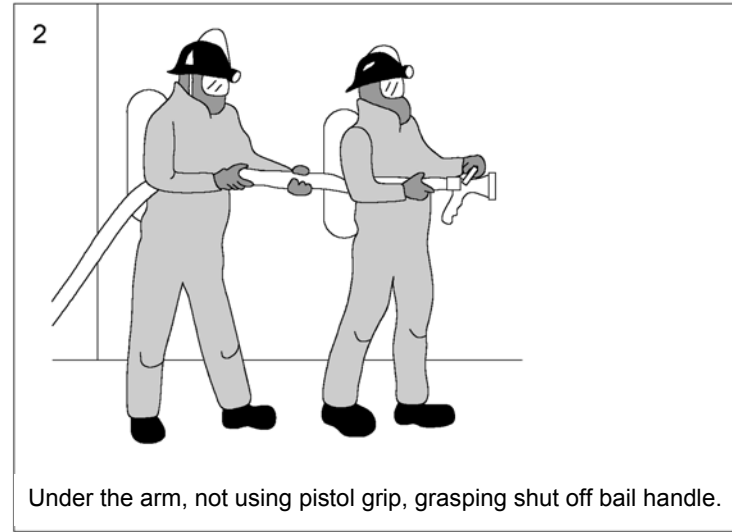
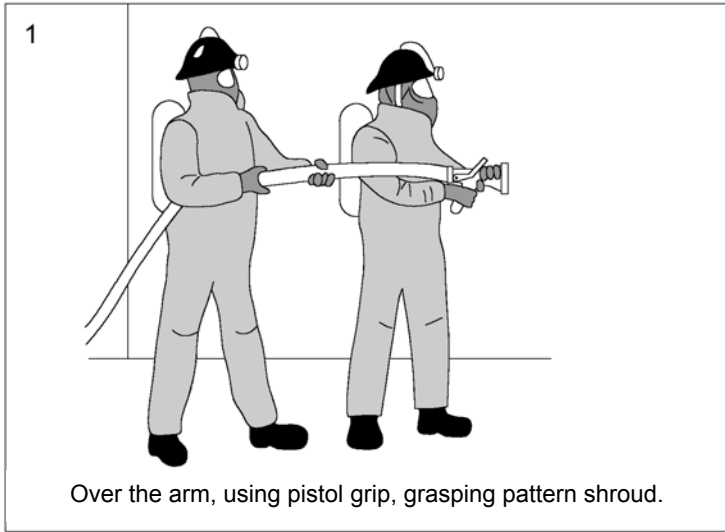
ITEM	EQUIPMENT
1	ELLISON DOOR
2	1-1/2" FIRE PLUG
3	1-1/2" FIREHOSE
4	ESCAPE TRUNK
5	SMOKE CURTAIN
6	EXPANDABLE DOOR BAR
AR	SMOKE CLAMPS

**FIREFIGHTING EVOLUTION - SKETCH #010**  
**Passing Through Escape Trunk**

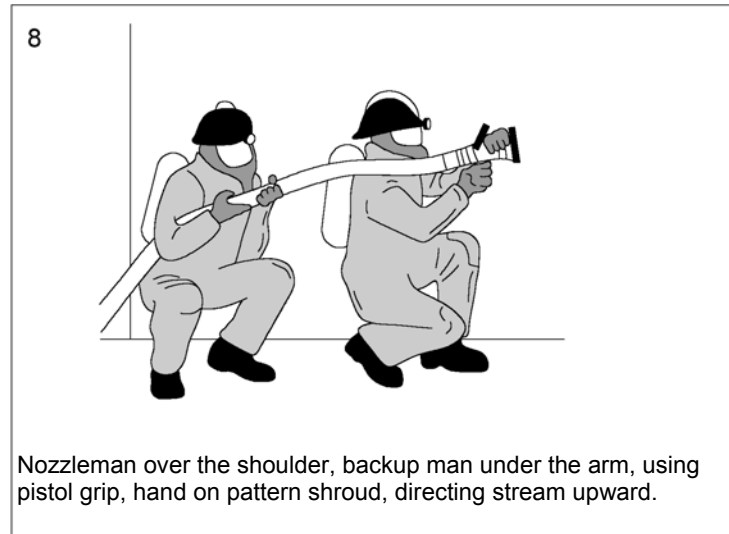
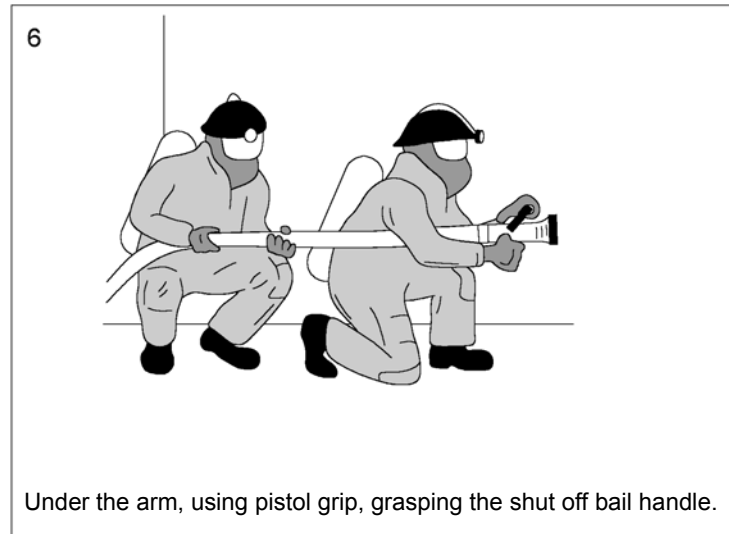
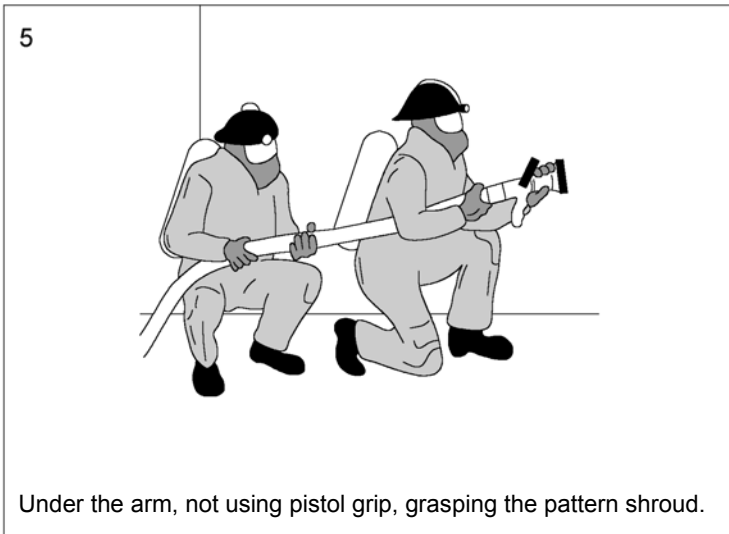


ITEM	EQUIPMENT
1	REDUCER 2-1/2" TO 1-1/2"
2	FIREMAIN SUPPLY PIPE
3	5 GALLON CAN AFFF AND PORTABLE AFFF (IN-LINE) EDUCTOR
5	FIRE PLUG
6	WYE GATE

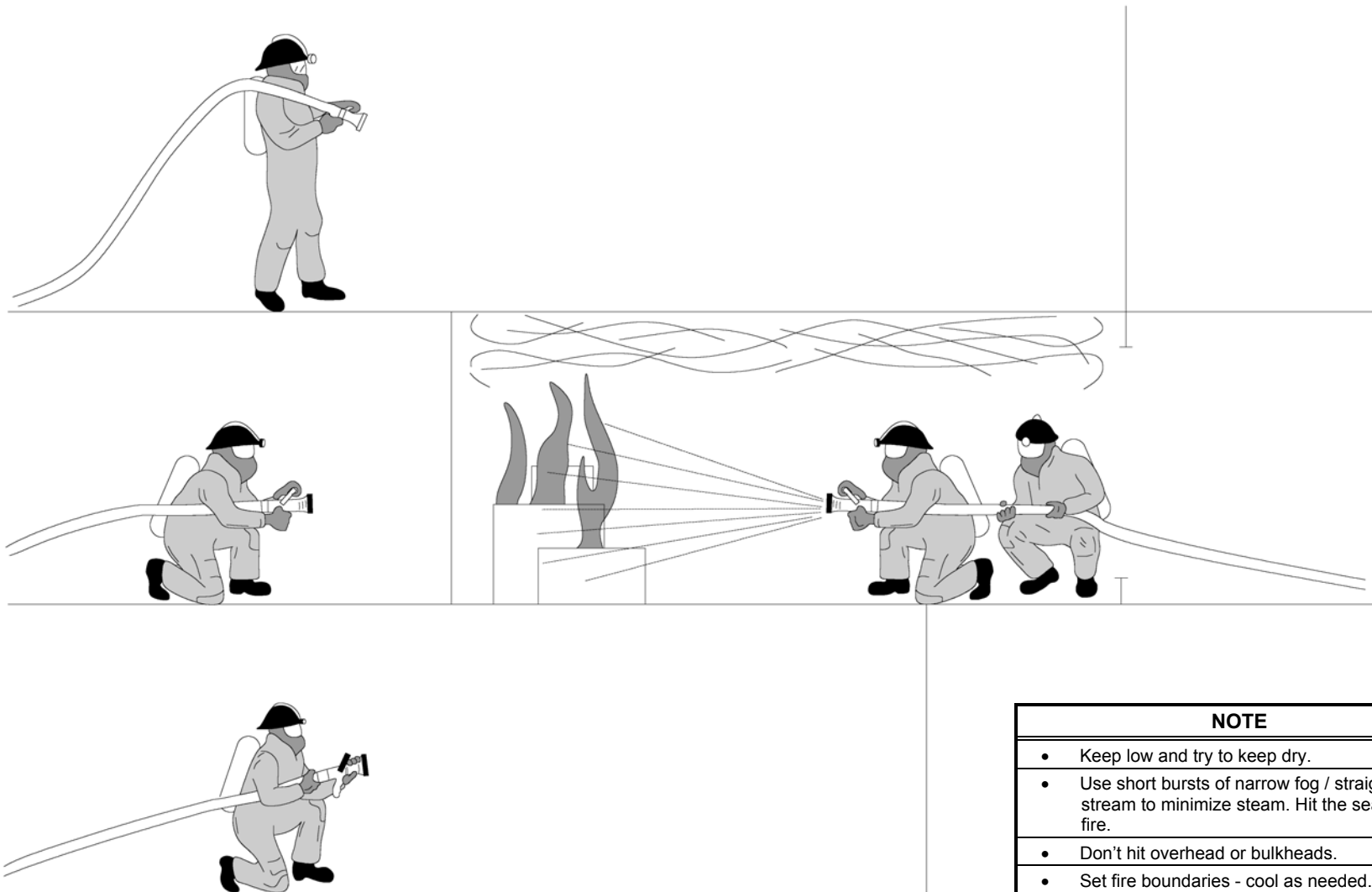
**FIREFIGHTING EVOLUTION - SKETCH #011**  
**Using Portable AFFF (In-Line) Eductor**



**FIREFIGHTING EVOLUTION - SKETCH #012**  
**Hose Line and Nozzle Handling Methods (Sheet 1 of 2)**

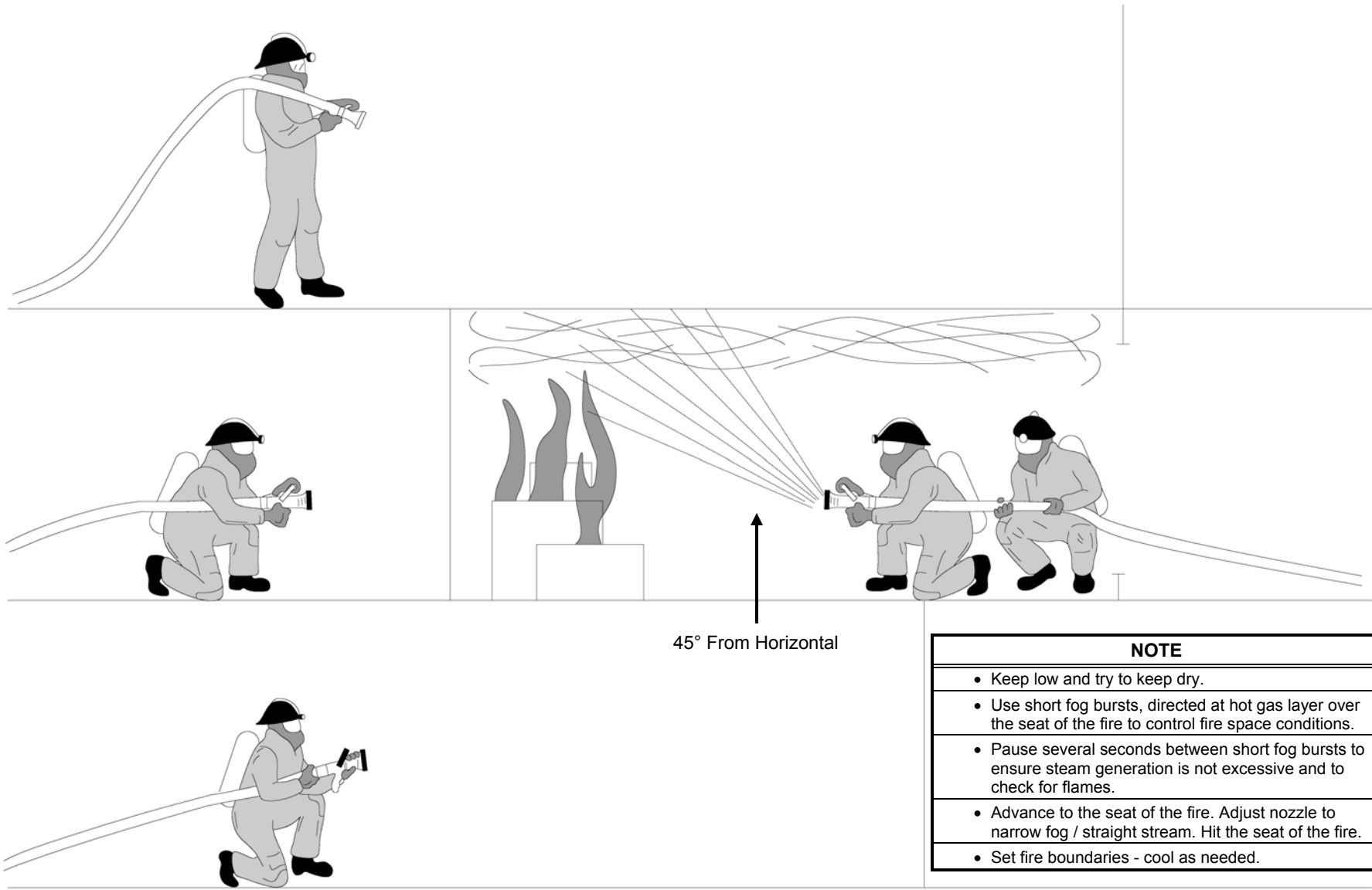


**FIREFIGHTING EVOLUTION - SKETCH #012**  
**Hose Line and Nozzle Handling Methods (Sheet 2 of 2)**



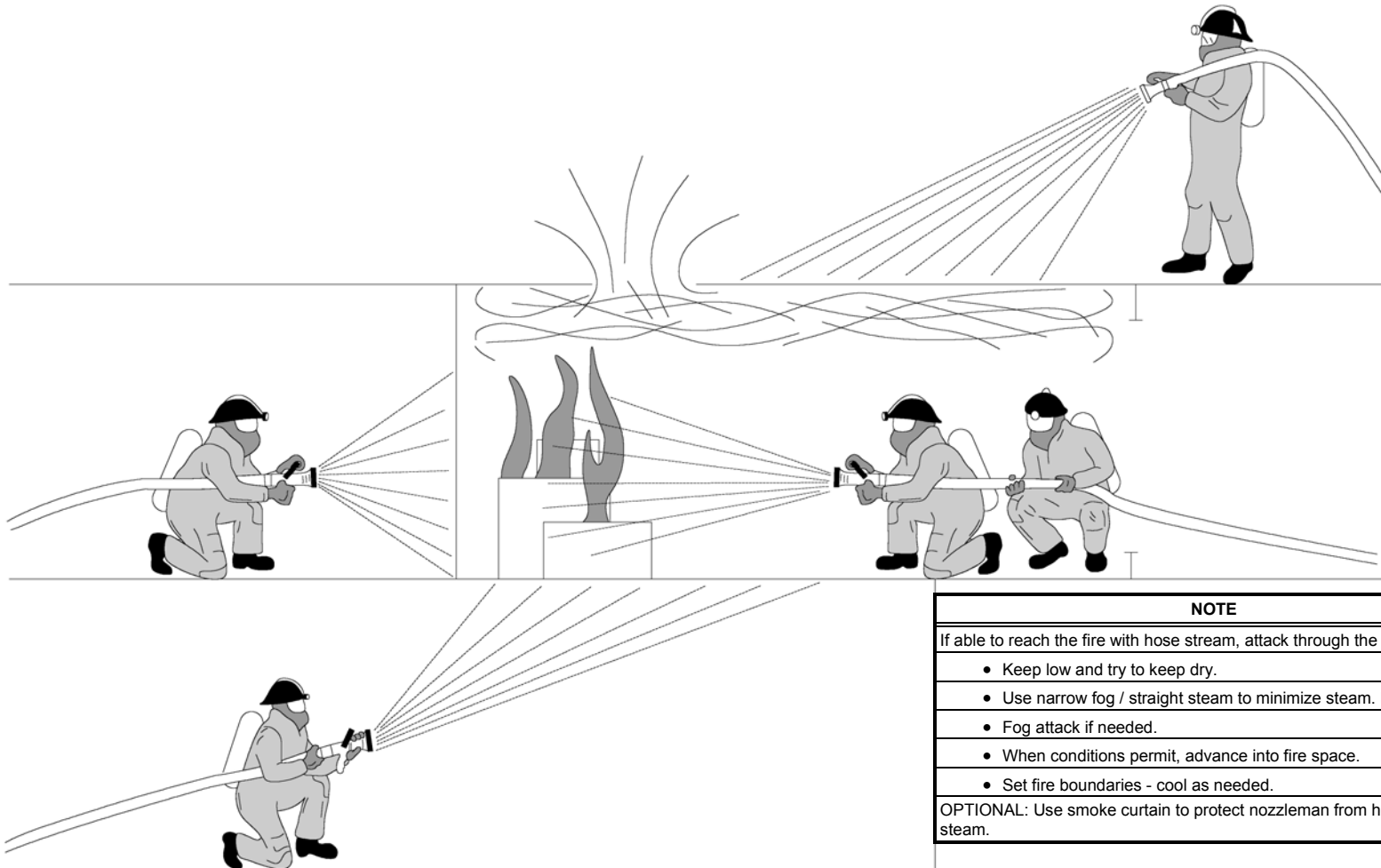
**Preferred Method: Enter Space and Attack Fire Directly.**

**FIREFIGHTING EVOLUTION - SKETCH #013  
Fire Attack - Direct Attack**



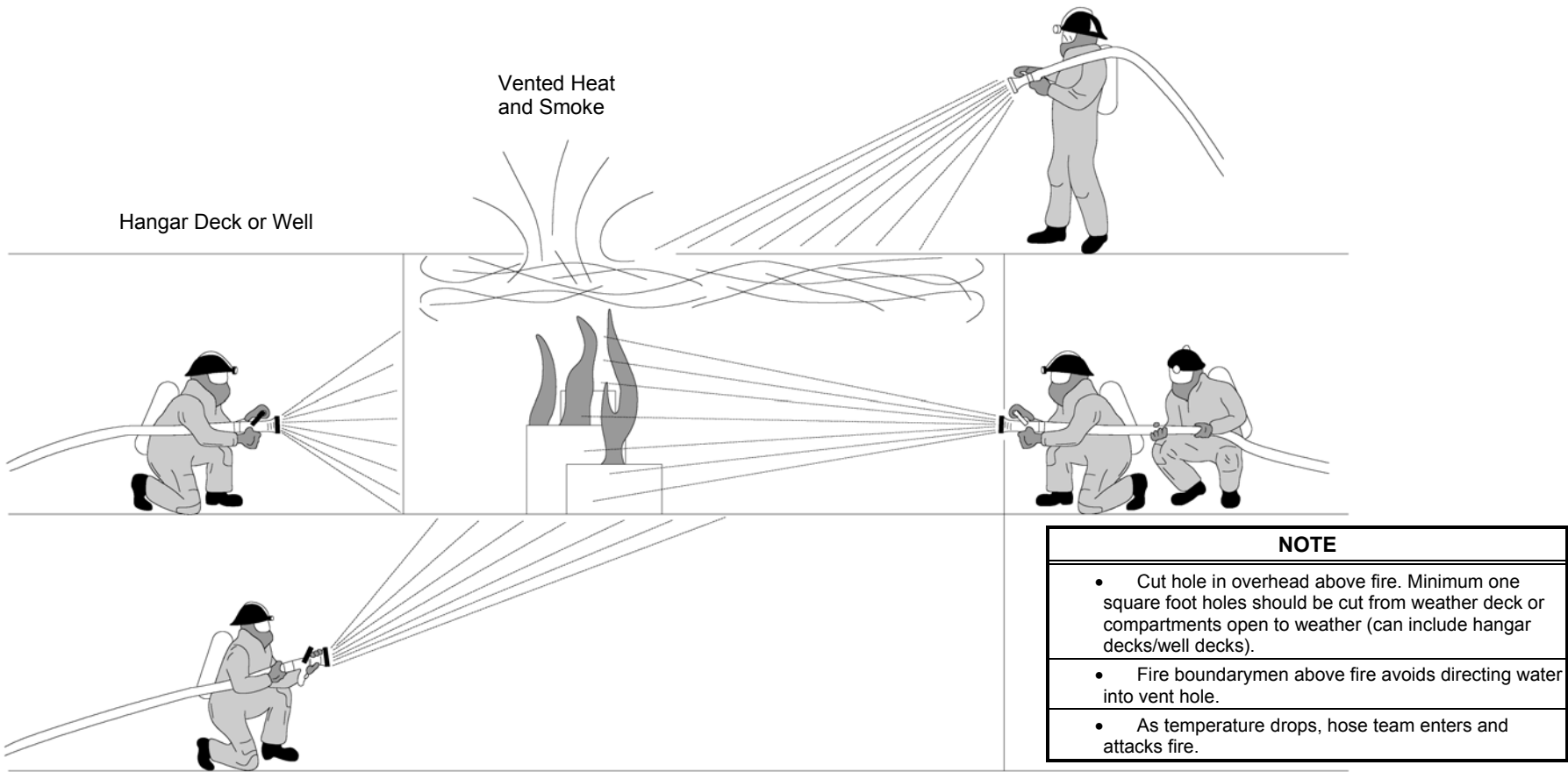
**FIREFIGHTING EVOLUTION - SKETCH #014**  
**Fire Attack - Fog Attack to Control Fire**



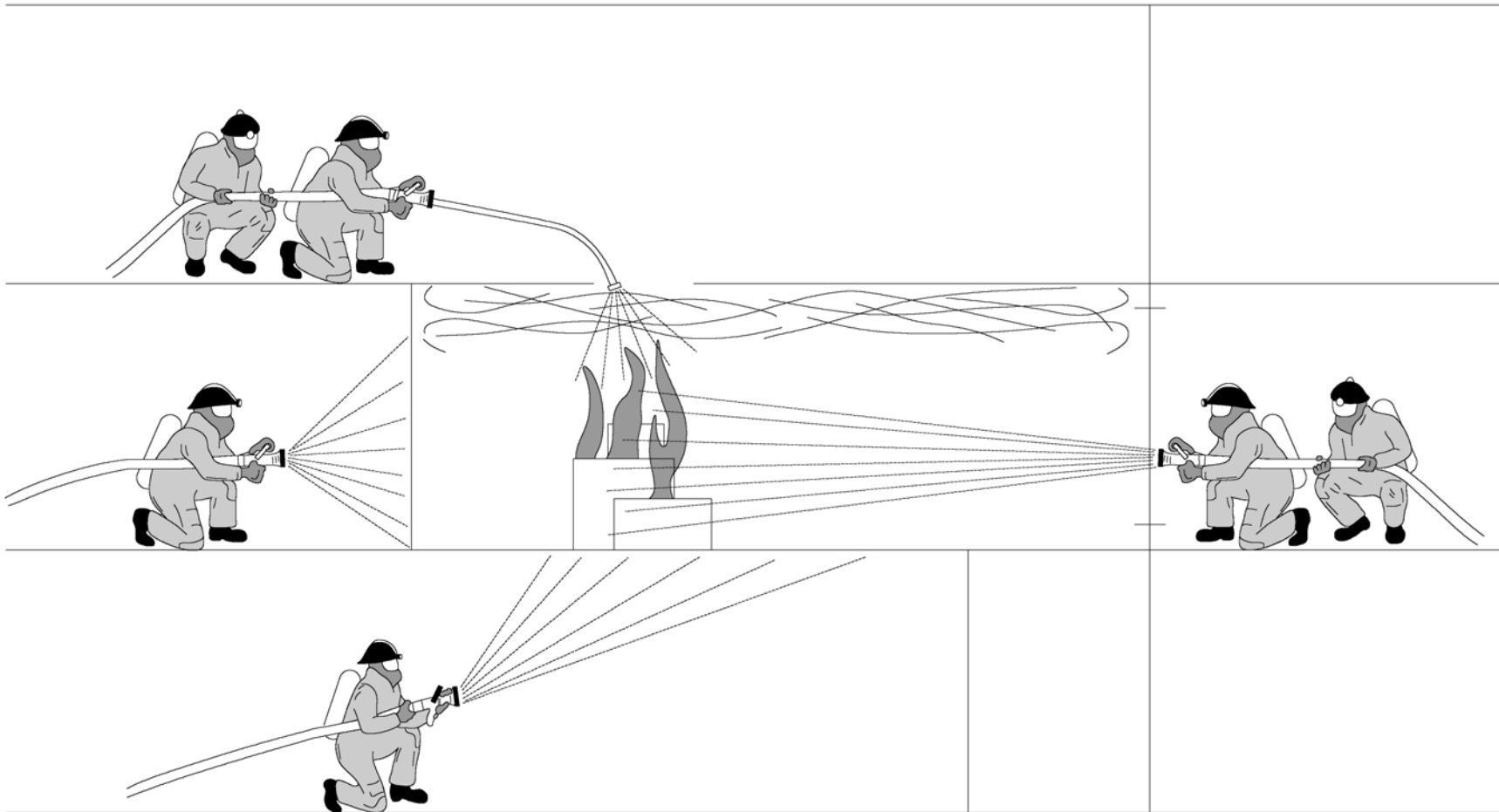


If high temperature attack from an access when fire can be reached with hose stream.

**FIREFIGHTING EVOLUTION - SKETCH #015**  
**Fire Attack - Attack from an Access**



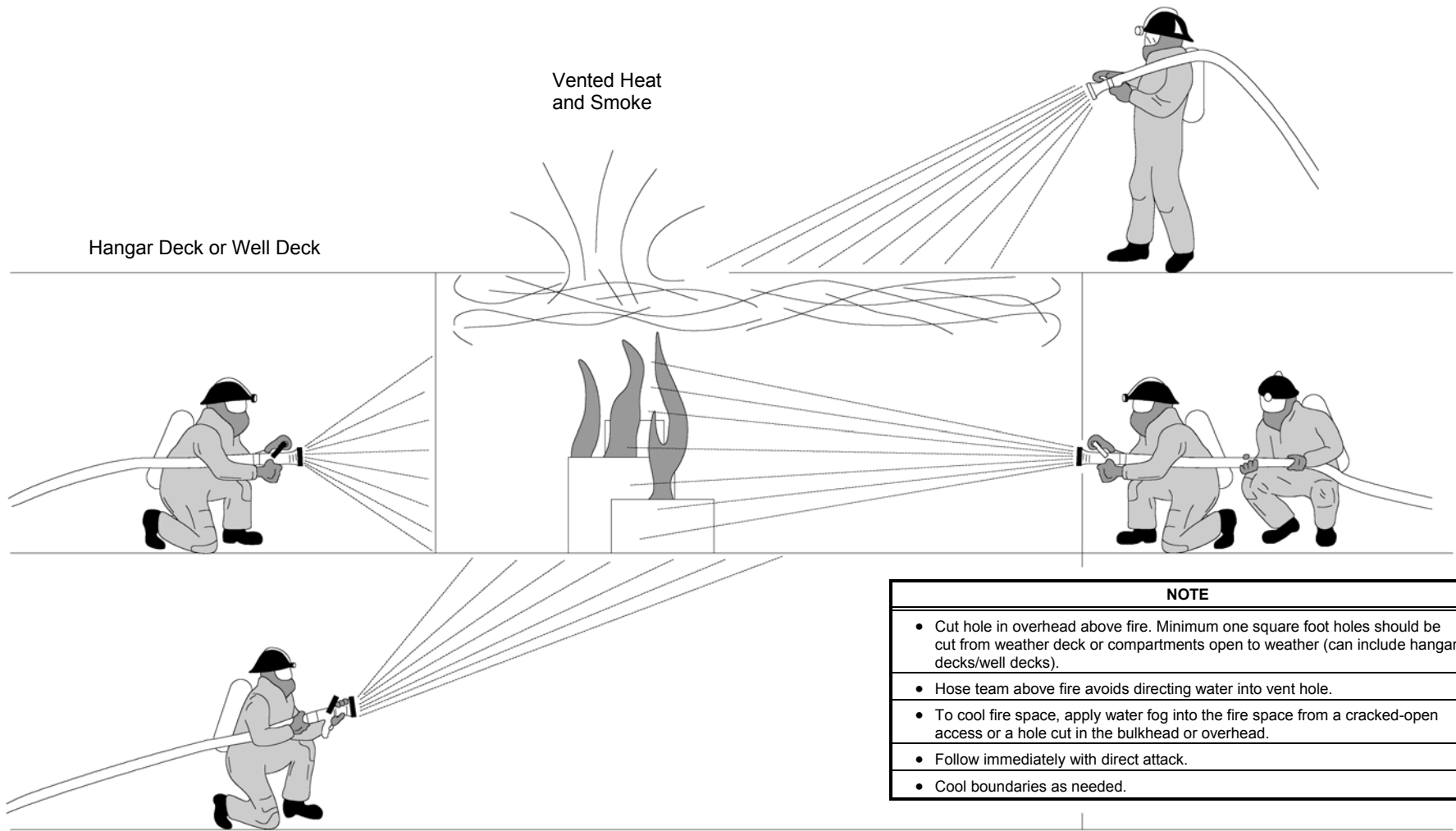
**FIREFIGHTING EVOLUTION - SKETCH #016**  
**Fire Attack - Direct Attack with Vent to Weather**



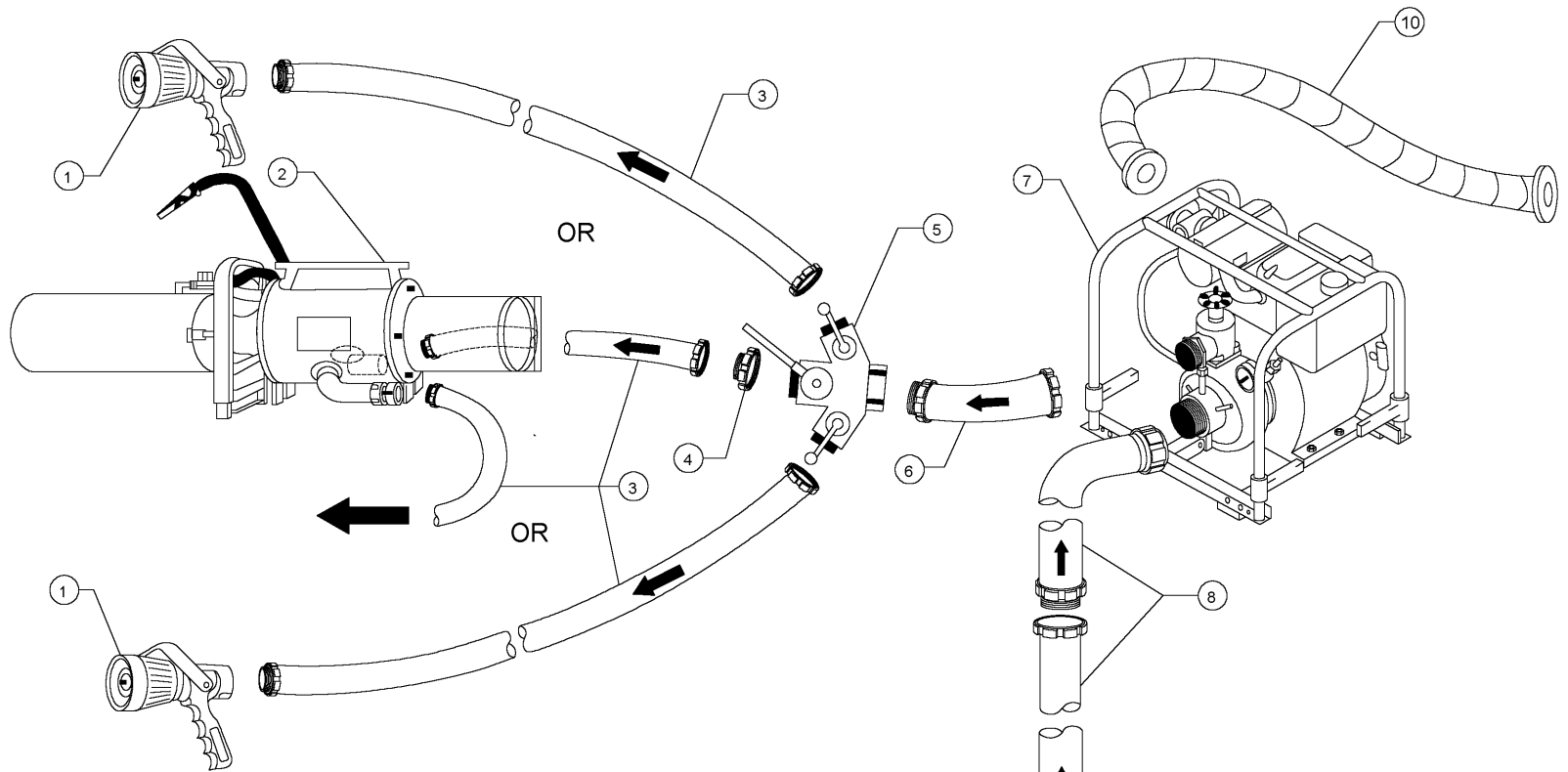
**If high temperature denies access, conduct indirect attack.**

NOTE	
•	To cool fire space, apply water fog into the fire space from a cracked-open access or a hole cut in the bulkhead or overhead.
•	Follow immediately with direct attack.
•	Cool boundaries as needed.

**FIREFIGHTING EVOLUTION - SKETCH #017  
Indirect Attack**



**FIREFIGHTING EVOLUTION - SKETCH #018**  
**Indirect Attack with Venting**



ITEM	QTY	EQUIPMENT
1	2	1-1/2" VARI-NOZZLE
2	1	WATER DRIVEN RAM FAN
3	4	1-1/2" FIREHOSE
4	1	ADAPTER - 2-1/2" FEMALE TO 1-1/2" MALE FITTING
5	1	TRIGATE, 2-1/2" INLET X (1) 2-1/2" AND (2) 1-1/2" OUTLETS
6	1	2-1/2" X 18" JUMPER HOSE
7	1	P-100 PUMP
8	2	3" X 10' HARD RUBBER SUCTION HOSE
9	1	VALVE, FOOT STRAINER WITH 1/2" X 55' RELEASE LINE
10	Note 1	(1) 2" X 10' EXHAUST HOSE

NOTE 1: IF DISTANCE IS GREATER THAN 10' TO WEATHER OR OVERBOARD CONNECTION, INSTALL THE NUMBER OF HOSES REQUIRED.

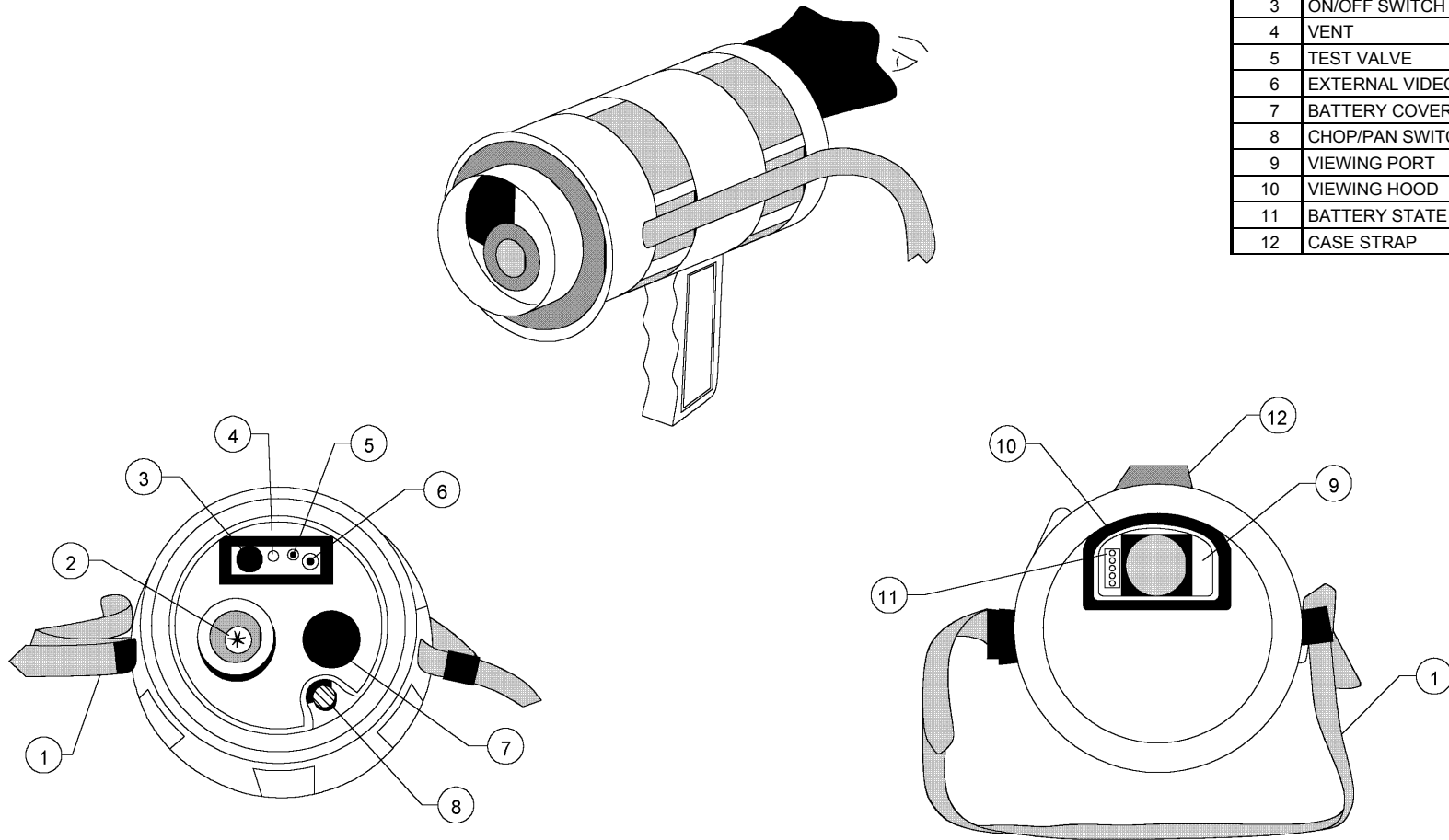
**FIREFIGHTING EVOLUTION - SKETCH #019**

**Using P-100 Pump Taking Suction from Overboard or Flooded Compartment Suction Lift Less than 20 Feet**

**DAMAGE CONTROL LAYOUT SKETCHES**  
**SECTION 9 - NAVAL FIREFIGHTERS' THERMAL IMAGER**

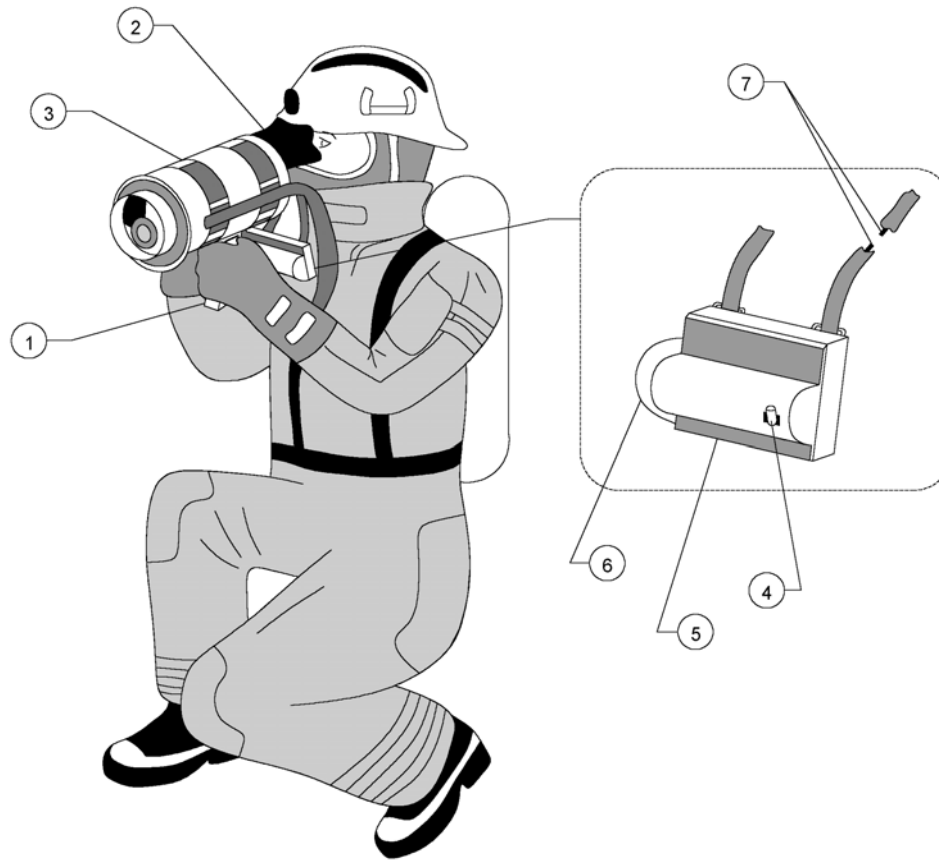
<b>SKETCH NO.</b>	<b>TITLE OF SKETCH</b>	<b>SHEET NO.</b>
001	Allowing Sight through Dense Smoke and Light Steam to Locate Seat of Fire, in Overhaul Operations and for Search and Rescue of Personnel	9-2
002	Typical Operating Scenario (SCBA)	9-3

ITEM	EQUIPMENT
1	CARRYING STRAP
2	GERMANIUM LENS
3	ON/OFF SWITCH
4	VENT
5	TEST VALVE
6	EXTERNAL VIDEO SOCKET
7	BATTERY COVER
8	CHOP/PAN SWITCH
9	VIEWING PORT
10	VIEWING HOOD
11	BATTERY STATE INDICATOR
12	CASE STRAP



**NAVAL FIREFIGHTER'S THERMAL IMAGER - SKETCH #001**

**Allowing Sight through Dense Smoke and Light Steam to Locate Seat of Fire, in Overhaul Operations and for Search and Rescue of Personnel**



ITEM	EQUIPMENT
1	REMOVABLE HANDLE
2	VIEWING HOOD
3	HARNESS
4	ON/OFF SWITCH (RED)
5	VOLTAGE STABILIZER UNIT
6	BATTERY CAP
7	CABLE CONCEALED IN HARNESS

**NAVAL FIREFIGHTER'S THERMAL IMAGER - SKETCH #003**  
**Typical Operating Scenario (SCBA)**



**DAMAGE CONTROL LAYOUT SKETCHES**  
**SECTION 10 - PATCHING/PLUGGING EVOLUTION**

<b>SKETCH NO.</b>	<b>TITLE OF SKETCH</b>	<b>SHEET NO.</b>
001	Use of Wooden Plugs and Wedges in Filling Holes	10-2
002	Plugging with Mattresses	10-3
003	Box Patch	10-4
004	Hinged Plate Patch	10-5
005	Securing Patch with Hook Bolts	10-6
006	Folding T-Patch	10-7
007	Plate Patch	10-8
008	Bucket Patch	10-9
009	Patching and Sealing Crack	10-10
010	Caulking Thin Plating and Torn Seams	10-11
011	Cloth Patch	10-12
012	Emergency Leak Plugging Using Flange Clamp	10-13