NHFA FIREFIGHTER I COURSE GUIDE, UNIT 7: BUILDING CONSTRUCTION & UTILITIES

СНАР	SKILL DRILL	SKILL#	STAND. EVOL. #
7	Building Construction Type I Fire Resistive	7-1	
7	Building Construction Type II Non-Combustible	7-2	
7	Building Construction Type III Ordinary	7-3	
7	Building Construction Type IV Heavy Timber	7-4	
7	Building Construction Type V Wood-Frame	7-5	
17	Controlling Natural & Propane Gas Utilities	17-7	
17	Controlling Electrical Utilities	17-23	
17	Controlling Water Utilities	17-24	
17	Controlling Photovoltaic Utilities	17-25	
17	Using a Meter for Flammable Gases	17-22	



NH FIRE ACADEMY FIREFIGHTER I

UNIT 7, BLOCK 1 (4 HR)

CLASS NAME: BUILDING CONSTRUCTION & UTILITIES

NUMBER OF INSTRUCTORS: 4

GENERAL INSTRUCTION

EQUIPMENT NEEDED	•	Varie	ty of bu	ilding	constru	ction p	rops	Propan,			aic)	
FACILITY NEEDED		ea with ea large			•			s if poss	ible			
SKILL DRILL REFERE	NCE	7-1	7-2	7-3	7-4	7-5	17-7	17-23	17-24	17-25	17-22	

Alternative would be two evening sessions.

The Lead Instructor shall divide the class in half. Half of the students will attend a morning session and the other half will attend an afternoon session.

NH FIRE ACADEMY FIREFIGHTER I

UNIT 7, BLOCK 1 (4 HR)

EVOLUTION	DESCRIPTION
Utilities	The Instructor shall demonstrate how to identify, locate, and shut off the following Utilities; Water, Electrical, Propane, Natural Gas, and Photovoltaic. The Instructor shall demonstrate using a multi gas meter to identify flammable gas leaks.
	The Students shall demonstrate how to identify, locate, and shut off the following utilities; Water, Electrical, Propane, Natural Gas, and Photovoltaic. Students shall demonstrate using a multi gas meter, recognize alarms and react to alarms, and identify leaks of flammable gas. Skill Drill 17-7, 17-23, 17-24, 17-25, and 17-22
Building Tour	Working with the students the Instructor(s) shall identify different types of building construction, their components, features, and the advantages and disadvantages of each type of construction. Note: Tours can be virtual if an actual tour is not possible. If possible an actual tour should be performed.
	After the tour students shall be able to identify all of the types of building construction, their components, features, and the advantages and disadvantages of each type of construction. Skill Drill 7-1, 7-2, 7-3, 7-4, and 7-5

SKILL SHEET	7-1	Building Construction Classificati Type I Fire Resistive	on		
OBJECTIVE:		NFPA 1001, 4.3.4	FEH Chap	ter: 7	
CANDIDATE N	AME/NUMBER:		No.:		
TEST DATE/TI	ME				
EQUIPMENT REQUIRED: [Add local requirements if needed]		Station Uniform as defined by NHFA Dress Co	ode		
EVALUATOR II	NSTRUCTIONS				
CANDIDATE INSTRUCTIONS: NOTE: The evaluator will read the following exactly as it is written to the candidate		Student will identify the different types of building constructio hazards for each type	n and explaii	n related	
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor G	uides		
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIA	\L]		
Critical?				Pass	Fail
	The stu	dent has identified the type of building construction			
	Explain	hazards related to fire loading			
	Explain	hazards related to building collapse and identify warning signs	;		
	Explain	hazards related to roof coverings			
	Identify constru	the effects of fire on various building materials as related to the ction	e type of		
[ANY COMMEN CON REGARDI STUDENT ACC	ITS PRO OR ING WHAT THE				
EVALUATOR S	SIGNATURE:				
STUDENT SIGN	NATURE:				

SKILL SHEET 7	7-2	Building Construction Classification Type II Non-Combustible			
OBJECTIVE:		NFPA 1001, 4.3.4	FEH Chapt	ter: 7	
CANDIDATE NA	AME/NUMBER:		No.:		
TEST DATE/TIN	ЛЕ				
EQUIPMENT REQUIRED: [Add local requirements if needed]		Station Uniform as defined by NHFA Dress Co	ode		
EVALUATOR IN	NSTRUCTIONS				
CANDIDATE IN	STRUCTIONS:	Student will identify the different types of building construction	n and explair	n related	
NOTE: The evaluator will read the following exactly as it is written to the candidate		hazards for each type			
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor G	uides		
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIA	L]		
Critical?				Pass	Fail
	The stu	ident has identified the type of building construction			
	Explain	hazards related to fire loading			
	Explain	hazards related to building collapse and identify warning signs	1		
	Explain	hazards related to roof coverings			
	Identify constru	the effects of fire on various building materials as related to the ction	e type of		
EVALUATOR C	OMMENTS:				
[ANY COMMEN CON REGARDI STUDENT ACC	NG WHAT THE				
EVALUATOR S	IGNATURE:				
STUDENT SIGN	NATURE:				

SKILL SHEET 7	7-3	Building Construction Classificati Type III Ordinary	on		
OBJECTIVE:		NFPA 1001, 4.3.4	FEH Chapt	ter: 7	
CANDIDATE NA	AME/NUMBER:		No.:		
TEST DATE/TIN	Л Е				
EQUIPMENT REQUIRED: [Add local requirements if needed]		Station Uniform as defined by NHFA Dress Co	ode		
EVALUATOR IN	NSTRUCTIONS				
CANDIDATE INSTRUCTIONS: NOTE: The evaluator will read the following exactly as it is written to the candidate		Student will identify the different types of building construction hazards for each type	າ and explair	n related	
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor G	uides		
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIA	L]		
Critical?				Pass	Fail
	The stu	dent has identified the type of building construction			
	Explain	hazards related to fire loading			
	Explain	hazards related to building collapse and identify warning signs	i		
	Explain	hazards related to roof coverings			
	Identify constru	the effects of fire on various building materials as related to the ction	e type of		
EVALUATOR C	OMMENTS:				
[ANY COMMEN CON REGARDI STUDENT ACC	NG WHAT THE				
EVALUATOR S	IGNATURE:				
STUDENT SIGN	NATURE:				

SKILL SHEET 7	7-4 Building Construction Classification Type IV Heavy Timber		on		
OBJECTIVE:		NFPA 1001, 4.3.4	FEH Chap	ter: 7	
CANDIDATE NA	AME/NUMBER:		No.:	No.:	
TEST DATE/TIN	ЛЕ				
EQUIPMENT REQUIRED: [Add local requirements if needed]		Station Uniform as defined by NHFA Dress Co.	ode		
EVALUATOR IN	NSTRUCTIONS				
CANDIDATE INSTRUCTIONS: NOTE: The evaluator will read the following exactly as it is written to the candidate		The student will identify the different types of building constru hazards for each type	ction and ex	plain rela	nted
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor G	uides		
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIA	L]		
Critical?				Pass	Fail
	The stu	dent has identified the type of building construction			
	Explain	hazards related to fire loading			
	Explain	hazards related to building collapse and identify warning signs			
	Explain	hazards related to roof coverings			
	Identify constru	the effects of fire on various building materials as related to the ction	e type of		
EVALUATOR C	OMMENTS:				
[ANY COMMEN CON REGARDI STUDENT ACC	NG WHAT THE				
EVALUATOR S	IGNATURE:				
STUDENT SIGN	NATURE:				

SKILL SHEET	7-5	Building Construction Classificati Type V Wood-Frame	on		
OBJECTIVE:		NFPA 1001, 4.3.4	FEH Chap	ter: 7	
CANDIDATE N	AME/NUMBER:		No.:		
TEST DATE/TII	ME				
EQUIPMENT REQUIRED: [Add local requirements if needed]		Station Uniform as defined by NHFA Dress Co	ode		
EVALUATOR INSTRUCTIONS					
CANDIDATE INSTRUCTIONS: NOTE: The evaluator will read the following exactly as it is written to the candidate		The student will identify the different types of building constru hazards for each type	uction and ex	xplain rela	ited
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor G	uides		
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIA	L]		
Critical?				Pass	Fail
	The car	ndidate has identified the type of building construction			
	Explain	hazards related to fire loading			
	Explain	hazards related to building collapse and identify warning signs	3		
	Explain	hazards related to roof coverings			
	Identify constru	the effects of fire on various building materials as related to the ction	e type of		
EVALUATOR COMMENTS: [ANY COMMENTS PRO OR CON REGARDING WHAT THE STUDENT ACCOMPLISHED]					
EVALUATOR S	SIGNATURE:				
STUDENT SIGI	NATURE:				

SKILL SHEET 17-7		Controlling Natural & Propane Gas Utilities		
OBJECTIVE:		NFPA 1001, 4.3.18 FEH C	napter: 17	
CANDIDATE NA	AME/NUMBER:	No.:		
TEST DATE/TIN	ΛE			
EQUIPMENT REQUIRED: [Add local requirements if needed]		PPESCBA		
EVALUATOR IN	ISTRUCTIONS			
CANDIDATE IN	STRUCTIONS:	The student will shut off various utilities.		
NOTE: The evaluator will read the following exactly as it is written to the candidate				
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor Guides		
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL]		
		[
Critical?			Pass	Fail
Critical?		assigned the task of controlling gas utilities, first don all appropriate PPE		Fail
Critical?	includin	assigned the task of controlling gas utilities, first don all appropriate PPE		Fail
Critical?	includin Use Mu	assigned the task of controlling gas utilities, first don all appropriate PPE ag SCBA. ulti Gas Meter to determine LEL the exterior gas shutoff valve. Using a tool, turn the valve to the off		Fail
Critical?	includin Use Mu Locate position	assigned the task of controlling gas utilities, first don all appropriate PPE ag SCBA. ulti Gas Meter to determine LEL the exterior gas shutoff valve. Using a tool, turn the valve to the off		Fail
EVALUATOR C [ANY COMMEN CON REGARDI STUDENT ACC	Includin Use Mu Locate position Inform to OMMENTS: TS PRO OR NG WHAT THE	assigned the task of controlling gas utilities, first don all appropriate PPE ag SCBA. ulti Gas Meter to determine LEL the exterior gas shutoff valve. Using a tool, turn the valve to the off a.		Fail
EVALUATOR C [ANY COMMENTO CON REGARDIO	Includin Use Mu Locate position Inform to OMMENTS: TS PRO OR NG WHAT THE OMPLISHED]	assigned the task of controlling gas utilities, first don all appropriate PPE ag SCBA. ulti Gas Meter to determine LEL the exterior gas shutoff valve. Using a tool, turn the valve to the off a.		Fail

SKILL SHEET	17-23	Controlling Electrical Utilities		
OBJECTIVE:		NFPA 1001, 4.3.18	EH Chapter: 17	
CANDIDATE N	AME/NUMBER:	No	lo.:	
TEST DATE/TIN	ME			
EQUIPMENT R [Add local required		PPE SCBA		
EVALUATOR II	NSTRUCTIONS			
CANDIDATE IN	ISTRUCTIONS:	The student will shut off various utilities.		
NOTE: The evaluator will read the following exactly as it is written to the candidate				
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor Guide	les	
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL]		
Critical?			Pass	Fail
		assigned the task of controlling gas utilities, first don all appropriate ng, if necessary, SCBA.	e PPE,	
	includir	ig, ii fiecessary, ocha.		
	Locate	the exterior electrical panel. Using a gloved hand, turn the master soff position.	switch	
	Locate to the c	the exterior electrical panel. Using a gloved hand, turn the master s	switch	
EVALUATOR C [ANY COMMEN CON REGARDI STUDENT ACC	Locate to the conform COMMENTS: ITS PRO OR NG WHAT THE	the exterior electrical panel. Using a gloved hand, turn the master soff position.	switch	
[ANY COMMEN CON REGARDI	Locate to the comments: ITS PRO OR NG WHAT THE COMPLISHED	the exterior electrical panel. Using a gloved hand, turn the master soff position.	switch	

SKILL SHEET 17-24		Controlling Water Utilities					
OBJECTIVE:		NFPA 1001, 4.3.18 FEH Cha	pter: 17				
CANDIDATE NA	AME/NUMBER:	No.:	No.:				
TEST DATE/TIME							
EQUIPMENT REQUIRED: [Add local requirements if needed]		PPESCBA					
EVALUATOR IN	NSTRUCTIONS						
CANDIDATE IN	STRUCTIONS:	The student will shut off various utilities.					
NOTE: The evaluator will read the following exactly as it is written to the candidate							
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor Guides					
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL]					
		[ADDITIONAL LINES FOR AND TO ADD OTHER MATERIAL]					
Critical?		[ADDITIONAL LINES FOR AND TO ADD OTHER MIATERIAL]	Pass	Fail			
Critical?		assigned the task of controlling gas utilities, first don all appropriate PPE, ng, if necessary, SCBA.	Pass	Fail			
Critical?	includir	assigned the task of controlling gas utilities, first don all appropriate PPE, ng, if necessary, SCBA.	Pass	Fail			
Critical?	includir Locate positio	assigned the task of controlling gas utilities, first don all appropriate PPE, ng, if necessary, SCBA.	Pass	Fail			
EVALUATOR CON REGARDI STUDENT ACC	Includir Locate positio Inform COMMENTS: ITS PRO OR NG WHAT THE	assigned the task of controlling gas utilities, first don all appropriate PPE, ng, if necessary, SCBA. the water meter for the property. Using a tool, turn the meter to the off n.	Pass	Fail			
EVALUATOR COMMENCON REGARDI	Includir Locate positio Inform COMMENTS: ITS PRO OR NG WHAT THE OMPLISHED]	assigned the task of controlling gas utilities, first don all appropriate PPE, ng, if necessary, SCBA. the water meter for the property. Using a tool, turn the meter to the off n.	Pass	Fail			

SKILL SHEET 1	17-25	Controlling Photovoltaic Utilities			
OBJECTIVE:		NFPA 1001, 4.3.18	FEH Chapte	er: 17	
CANDIDATE NA	AME/NUMBER:		No.:		
TEST DATE/TIN	ИΕ				
EQUIPMENT RI [Add local requ needed]		PPESCBA			
EVALUATOR IN	NSTRUCTIONS				
CANDIDATE IN	STRUCTIONS:	The student will shut off various utilities.			
NOTE: The evaluator will read the following exactly as it is written to the candidate					
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor Gu	uides		
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL	L]		
Critical?				Pass	Fail
		assigned the task of controlling gas utilities, first don all appropriag, if necessary, SCBA.	ate PPE,		
	includir Locate				
	includir Locate to the c	g, if necessary, SCBA. the exterior electrical panel. Using a gloved hand, turn the mast			
EVALUATOR C	includir Locate to the o	g, if necessary, SCBA. the exterior electrical panel. Using a gloved hand, turn the master ff position.			
EVALUATOR C [ANY COMMEN CON REGARDI STUDENT ACC	Includir Locate to the o Inform	g, if necessary, SCBA. the exterior electrical panel. Using a gloved hand, turn the master ff position.			
[ANY COMMEN CON REGARDI	Includir Locate to the components: Locate to the components Information Informa	g, if necessary, SCBA. the exterior electrical panel. Using a gloved hand, turn the master ff position.			

SKILL SHEET 17-		Meter for flammable gases			
OBJECTIVE:		NFPA 1001, 4.3.21 FEH	FEH Chapter: 17		
CANDIDATE NAME/NUMBER:		No.:	No.:		
TEST DATE/TIME					
EQUIPMENT REQUIRED: [Add local requirements if needed]		Atmospheric Monitor or trainer with LEL sensor.			
EVALUATOR INSTRUCTIONS					
CANDIDATE INSTRUCTIONS:		Given a running and zeroed Atmospheric Monitor the student will monitor the atmosphere of a given location for flammable hazards and verbalize actions to be			
NOTE: The evaluator will read the following exactly as it is written to the candidate		taken.			
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor Guides			
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL]			
Critical?			P	ass	Fail
	Student will monitor high medium and low at a pace allowing the meter to respond.		ter to		
	St	udent will verbalize actions to take when the meter enters the alarm.			
EVALUATOR COMMENTS:					
[ANY COMMENTS PRO OR CON]					
EVALUATOR SIGNA	ATURE:		,		

STUDENT SIGNATURE:	