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THERMOPLASTIC
SYSTEMS INSTALLER

HANDS-ON PERFORMANCE EXAM ASSIGNMENT for THERMOPLASTIC SYSTEM INSTALLERS



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NATIONAL ROOFING CONTRACTORS ASSOCIATION





TP-A1 ASSIGNMENT: MECHANICALLY ATTACHED THERMOPLASTIC SYSTEMS Installer Performance Assignment and Instructions

Here are the instructions for your performance exam assignment. It is important you pay close attention to these instructions. Some of the tasks in this assignment are ranked high in importance for scoring purposes. These tasks are marked **HIGH!**.

Be aware that you also will be scored on your ability to follow instructions. You will lose points if you do not follow these instructions exactly as they are given. Your ability to follow instructions is also ranked **HIGH!**. You will not be given any more information about this assignment. You can keep this copy of your instructions to look at any time during your exam.

There are two parts to this assignment. In Part One, you will set up and demonstrate how to properly put on and use a personal fall-arrest system, or PFAS. This part of your assignment is not timed. In Part Two, you must install mechanically attached field sheets, parapet wall flashings, a curb flashing and a vent pipe flashing following specific instructions. This part of your assignment is timed. Remember, you must follow all instructions exactly as they are given. Your Qualified Assessor will review the details with you before starting each part of this assignment.

EXAM PART ONE: SETUP, PFAS DEMO AND SAFETY INSTRUCTIONS

1	This is Part One of your assignment. This part is not timed.
2	You may NOT ask your assessor or anybody else questions about: <ul style="list-style-type: none">- How to set up or use any tools, equipment or materials- How to wear or use a personal fall-arrest system- Correct or incorrect procedures, steps or techniques to help you do any task
3 HIGH!	For Part One of this exam, you must demonstrate and explain to your assessor how to use a PFAS, including: <ul style="list-style-type: none">- How to inspect and use each PFAS component and how they work- How to put on your harness- How to connect the lanyard to the harness and to the lifeline- How to use the rope grab device and lifeline so that if you fall, you will not hit the ground or swing sideways and strike something- How and where to attach an anchor device on a roof- How to connect the lifeline to the anchor (Your Qualified Assessor will show you the demo anchor device to use.).
4	When you finish Part One, your assessor will read the instruction for Part Two.
5	Your assessor will now show you the anchor device you will use to connect the lifeline.

EXAM PART TWO: INSTALLATION TASKS INSTRUCTIONS	
6	This is Part Two of your assignment. This part of your exam is timed. Once the timer starts, you will have three hours to complete this part of the exam.
7 HIGH!	You must use the correct PPE when doing the work. Your assessor will stop your work If you do something unsafe. You must correct the safety error before proceeding. You do not get extra time when you are stopped for a safety issue.
8	Take whatever time you need to set up all tools, equipment and materials any way you want. But you cannot ask for help from your assessor or anybody. You must tell your assessor when you are ready to start. Only then will your assessor start the timer.
9	Your assessor will tell you when you have 10 minutes left on the timer.
10	Your assessor will tell you when the time ends, and you must stop.
11	Your assessor will read your assigned tasks. These tasks are not provided in any particular order. You can perform them in any order you think is best within the allotted time. He or she can repeat any instruction for you at any time during the exam if you ask, but you cannot ask questions about how to do any part of the work or ask for help in any way to get the assignment done.
12 HIGH!	Install two 8-foot-long rows of TPO or PVC membrane sheets. Maintain a minimum 6-inch sidelap. Your Qualified Assessor will tell you the direction of the roof slope to follow.
13	Extend sheets a minimum of 4 inches up parapet walls and curbs.
14 HIGH!	Set and align field sheet around the inside and outside corners, and secure. Do not cut sheet at the inside corner.
15	Splice cut the field sheet when installing around the pipe penetration.
16 HIGH!	Mechanically attach field sheet with fastener plates set a maximum of 6 inches on center in seams and within 1 inch from the sheet edge.
17	Mechanically attach field sheets around penetrations using a minimum of four fasteners set a maximum of 6 inches on center.
18 HIGH!	Attach field sheets at parapet walls a maximum of 12 inches on center and a maximum of 1 inch above membrane surface. Follow the details shown in Diagram 1.
19 HIGH!	Hot-air weld 8 feet of sheet sidelap seams with a minimum 2-inch continuous weld.
20	Hot-air weld a minimum 6-inch-wide cover strip with a continuous 2-inch perimeter weld at field sheet cuts as needed, including T-joint covers . Explain where sealant should be applied when installing cover strips.
21 HIGH!	Install a minimum 18-inch square target sheet with a continuous 2-inch weld around its perimeter and install a prefabricated boot flashing on the pipe penetration, including the draw band. Explain where sealant should be applied when installing premanufactured pipe flashing. Follow the details shown in Diagram 2.

22 HIGH!	Install a 12-inch-tall by 6 lineal feet of base flashing on parapet wall including the inside and outside corners. Do not cut flashing sheet at inside corner. Use the system manufacturer's premolded outside corner. Extend flashing a minimum of 4 inches onto field sheets. Follow the details shown in Diagram 1.
23	Secure top of base flashing with a termination bar anchored a maximum of 6 inches on-center using screws fasteners. Explain where sealant should be applied when installing termination bar.
24	Field-fabricate and install base flashings on all sides of the box curb. Extend sheets over top of curb and attach using capped nails. Extend sheets a minimum of 4 inches out onto field sheet. Use the system manufacturer's premolded outside corners. Follow the details shown in Diagram 3.
25	Remember , you must show and explain to your assessor all areas where all sealants need to be applied, but do not actually install any sealants.
26	You can complete these tasks in any order. When you are all setup and ready to begin, tell your assessor and he or she will start the timer.

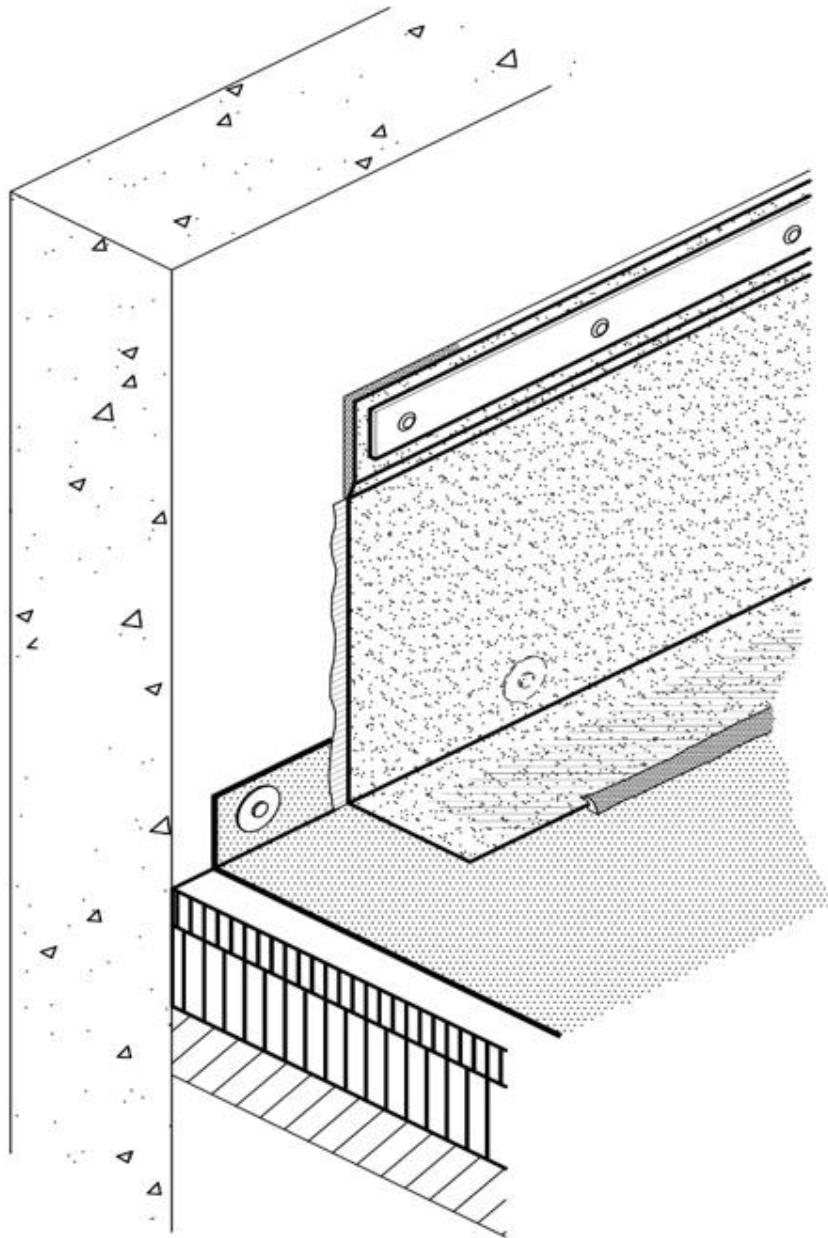


DIAGRAM 1:
DETAIL FOR WALL FLASHING

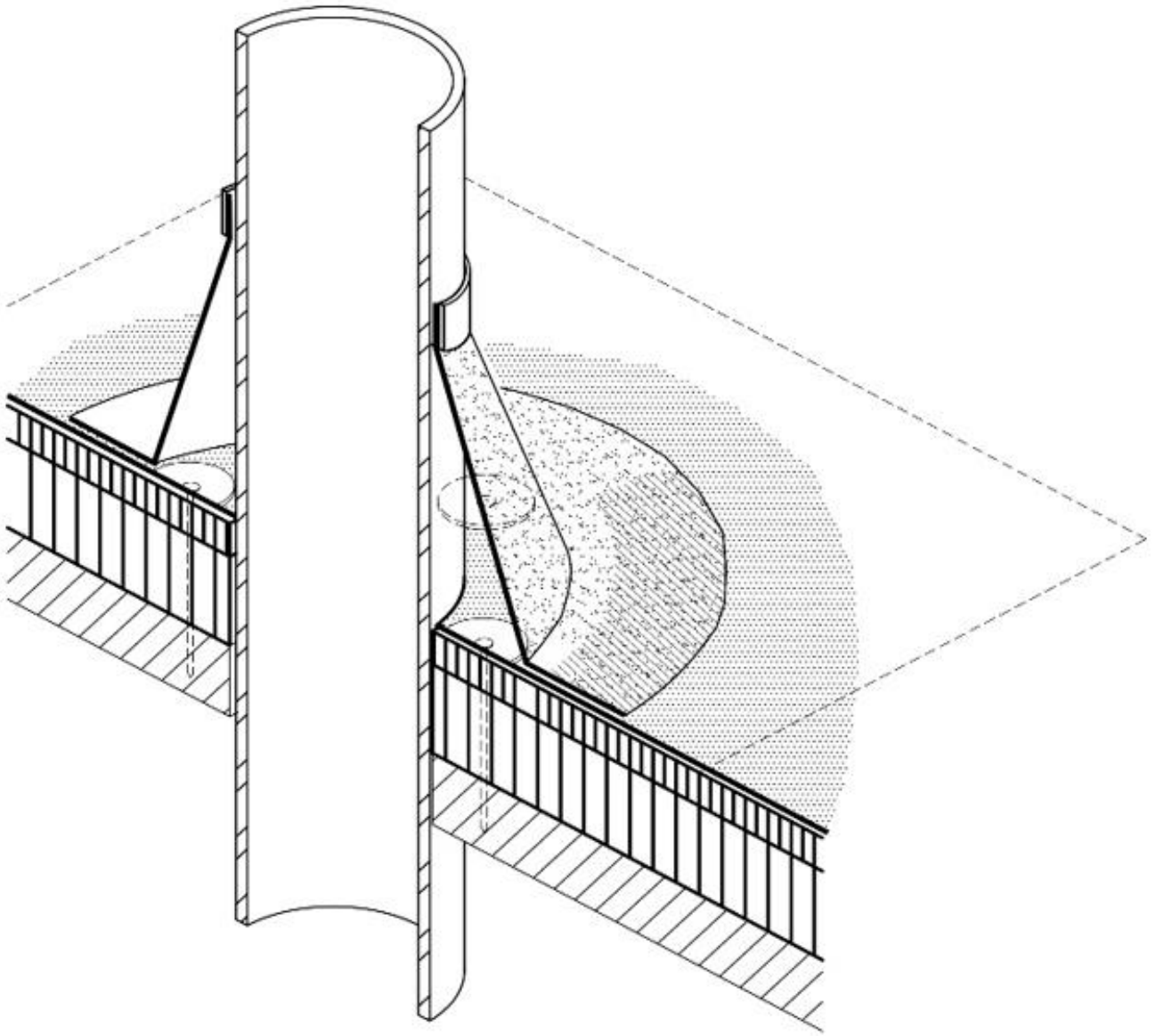


DIAGRAM 2:
DETAIL FOR PIPE PENETRATION FLASHING

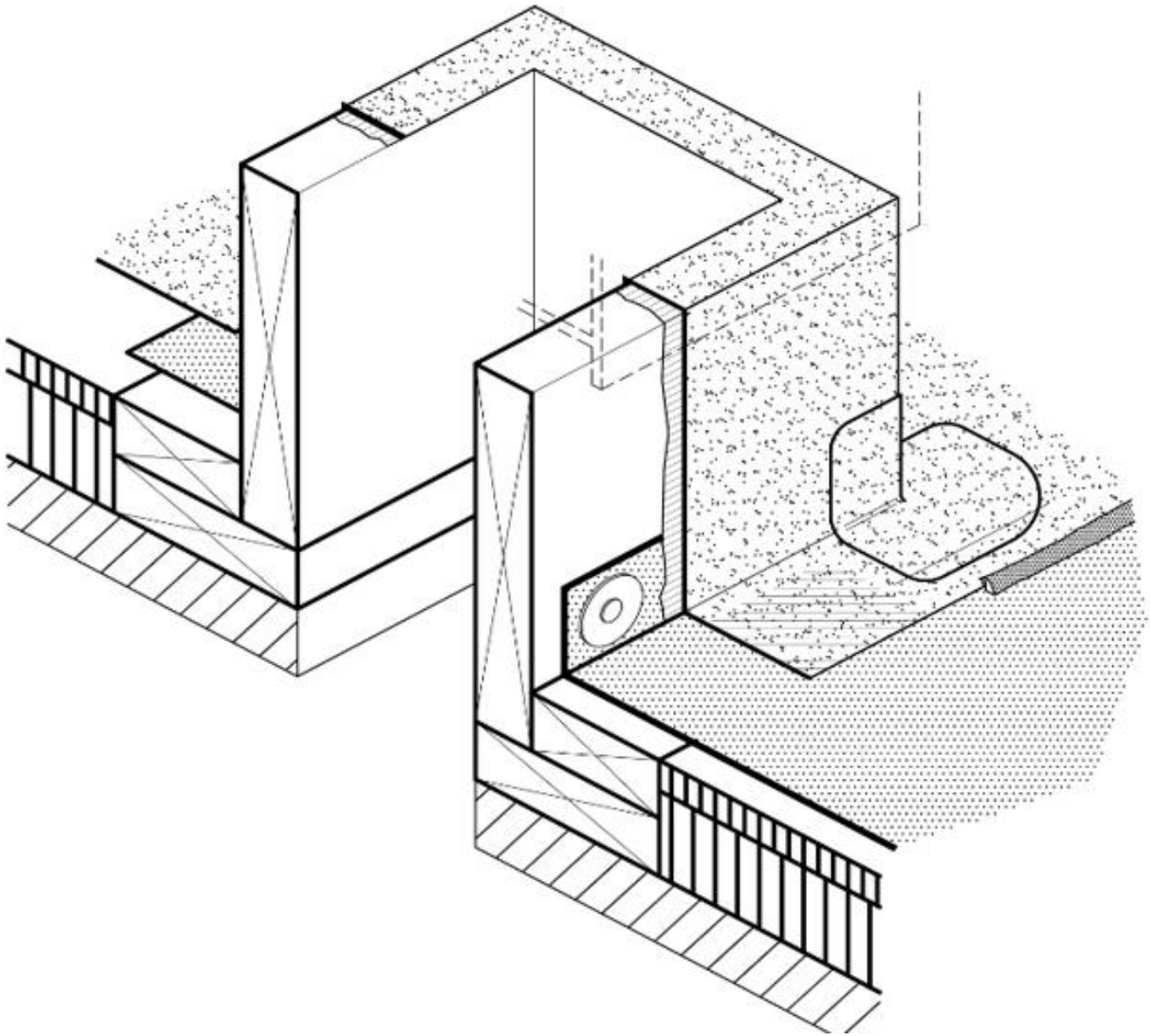


DIAGRAM 3:
DETAIL FOR CURB FLASHING