





Unit/Standard Number	 <p style="margin: 0;"><b>pennsylvania</b> DEPARTMENT OF EDUCATION</p> <p style="margin: 0;"><u>High School Graduation Years 2017, 2018 and 2019</u></p> <p style="margin: 0;"><b>Mason/Masonry</b> <b>CIP 46.0101</b> <b>Task Grid</b></p>	Proficiency Level Achieved: (X) Indicates Competency Achieved to Industry Proficiency Level
	<b>Secondary Competency Task List</b>	
	<b>100 DEMONSTRATE KNOWLEDGE OF THE MASONRY TRAINING LAB</b>	
101	Identify masonry lab tools and equipment.	
	<b>200 DEMONSTRATE PROPER SAFETY PRACTICES</b>	
201	Explain and use personal protection equipment.	
202	Demonstrate safe use and care of masonry hand tools.	
203	Demonstrate safe use and care of a mortar mixer.	
204	Erect and dismantle steel tubular scaffolding within OSHA guidelines.	
205	Place material and stock scaffolding properly.	
206	Demonstrate knowledge of Safety Data Sheets (SDS) information.	
	<b>300 READ BLUEPRINTS</b>	
301	Identify types of Blueprint Plans.	
302	Read and Interpret Blueprint Plans.	
	<b>400 DEMONSTRATE SAFE AND PROPER USE OF MASONRY HAND TOOLS</b>	
401	Read and use a modular and spacing rule.	
402	Mark and use a masonry guide or corner pole.	
403	Demonstrate the ability to secure mason's line to line blocks, pins, and line stretchers.	
404	Discuss and set a trig properly.	
405	Demonstrate the use of a hammer and chisel to cut block and brick.	
406	Demonstrate proper trowel techniques.	
407	Demonstrate proper use of masonry jointers.	
408	Identify the various cutting blades for a masonry saw.	
	<b>500 PREPARE A BUILDING SITE</b>	
501	Lay a building out using a builders level.	
502	Square a building using the 3-4-5 Pythagorean Theorem.	
	<b>600 DEMONSTRATE THE SAFE USE OF POWER TOOLS</b>	

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601	Safely operate a portable, masonry gas cut-off saw.	
602	Safely operate a mortar mixer.	
603	Safely operate a stationary or portable masonry saw.	
604	Safely operate a hammer drill.	
<b>700</b>	<b>USE MASONRY FASTENERS</b>	
701	Identify different types of masonry fasteners and reinforcements.	
<b>800</b>	<b>DEMONSTRATE PROPER BRICKLAYING TECHNIQUES</b>	
801	Identify brick types and bonds.	
802	Lay out proper dry bond of a brick wall.	
803	Lay brick to the line.	
804	Install window and door openings in brick walls (jambs).	
805	Install flashing for windows and doors.	
806	Install weep holes/vents.	
807	Demonstrate industry standards for laying bricks.	
808	Install a soldier course.	
809	Lay a brick and block composite wall.	
810	Build brick columns.	
811	Construct a brick veneer wall.	
812	Construct a brick cavity wall.	
813	Corbel a brick wall.	
814	Demonstrate cleaning a brick wall.	
815	Lay a course of rowlocks.	
816	Lay a course of headers.	
817	Construct a brick rack back lead.	
818	Construct a 4" brick inside corner.	
819	Construct a 4" brick outside corner.	
<b>900</b>	<b>DEMONSTRATE PROPER BLOCK LAYING TECHNIQUES</b>	
901	Identify and construct various block types and bonds.	
902	Lay block to the line.	
903	Construct a brick ledge using various size block.	

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904	Discuss and install a control joint.	
905	Install window and door openings in block walls.	
906	Set lintels.	
907	Construct block piers.	
908	Clean a block wall.	
909	Parge a block wall.	
910	Construct a jamb block lead.	
911	Construct a corner block lead.	
<b>1000</b>	<b>MIX AND SPREAD MORTAR</b>	
1001	Describe various types of mortars and their characteristics.	
1002	Mix mortar by hand.	
1003	RESERVED	
1004	Demonstrate procedures for tempering mortar.	
1005	Spread mortar for various masonry units.	
<b>1100</b>	<b>CONSTRUCT RESIDENTIAL CHIMNEYS AND FIREPLACES</b>	
1101	Identify parts of a chimney and fireplace.	
1102	Describe how to construct a fireplace, including foundation, firebox, lintel, damper, throat, smoke chamber, hearth, clean-out and mantel.	
1103	Construct a brick chimney.	
1104	Construct a block chimney.	
1105	Discuss and install flashing methods where the chimney meets the roof.	
1106	Describe the proper dimensions of a footer or foundation for a chimney or fireplace.	
1107	Explain how to determine the proper dimensions of a firebox.	
<b>1200</b>	<b>PERFORM ARCH CONSTRUCTION</b>	
1201	Discuss arch terminology.	
1202	Identify types of arches.	
1203	Demonstrate arch construction.	
1204	Describe basic types of arch construction.	
<b>1300</b>	<b>ESTIMATE MASONRY WORK</b>	
1301	Estimate mortar, number of units, and material costs for brick work.	

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1302	Estimate mortar, number of units, and material costs for block work.	
1303	Estimate the area, volume and cost of "ready-mixed" concrete.	