



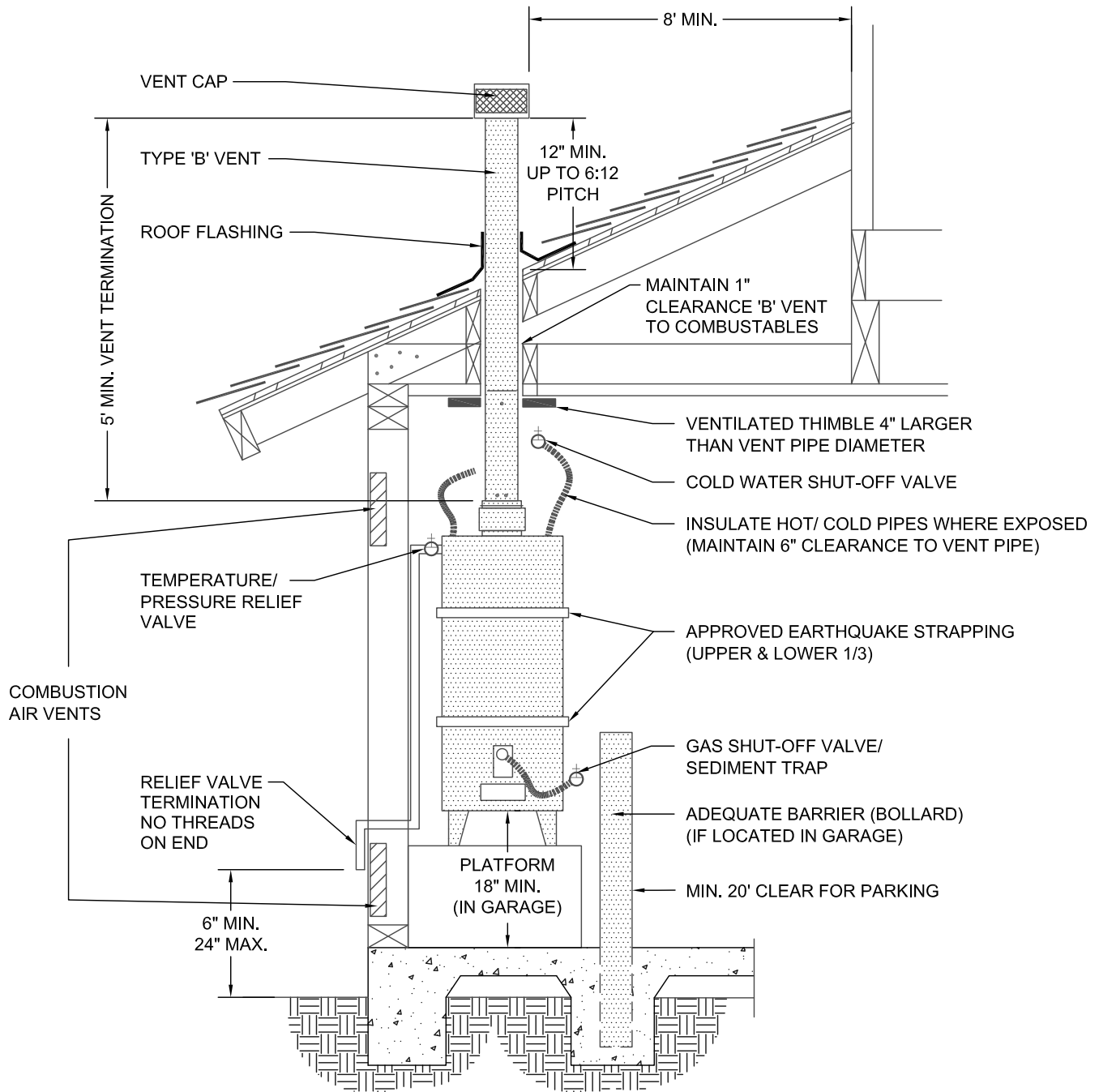
Typical Water Heater Installation in a Dwelling or Garage

APPROVED

BUILDING OFFICIAL _____

DATE _____

	BY	DATE
DRAWN	MC	6-11-2013
CHECKED	MW	6-11-2013





CITY OF WHITTIER BUILDING AND SAFETY DEPARTMENT

PLAN NO.

5

Typical Water Heater Installation in a Dwelling or Garage

SHEET 2 OF 4

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• THE PLANNING DEPARTMENT REVIEWS WATER HEATER LOCATIONS WHEN LOCATED WITHIN A GARAGE OR OUTSIDE THE BUILDING. SUBMIT A DIMENSIONED FLOOR PLAN FOR REVIEW AND APPROVAL OF THE LOCATION OF THE WATER HEATER.

PLEASE NOTE: EXISTING WATER HEATERS THAT ARE LOCATED IN A GARAGE MAY BE REQUIRED TO BE RELOCATED IF A MINIMUM 20' X 20' CLEAR SPACE IS NOT AVAILABLE.

• INSTALL PER MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS

• TERMINATION OF "B" VENT SHALL BE A MINIMUM 4-FEET FROM THE PROPERTY LINE. GRAVITY VENTS SHALL EXTEND IN A GENERALLY VERTICAL DIRECTION WITH OFFSETS NOT EXCEEDING 45-DEGREES.* WATER HEATERS GENERATING A GLOW, SPARK OR FLAME CAPABLE OF IGNITING VAPORS MAY BE INSTALLED IN A GARAGE, PROVIDED THE PILOTS, BURNERS OR HEATING ELEMENTS AND SWITCHES ARE AT LEAST EIGHTEEN (18") INCHES ABOVE THE FLOOR LEVEL.

• DOUBLE WALL TYPE "B" VENT REQUIRES MINIMUM 1" CLEARANCE TO COMBUSTIBLE MATERIALS.

• TYPE "B" VENT MUST BE SECURED TO DOWN DRAFT DIVERTER WITH SHEET METAL SCREWS.

• A FULL WAY SHUT OFF VALVE SHALL BE INSTALLED FOR THE SERVICE OR REPLACEMENT OF THE WATER HEATER.

• APPROVED 24" MAXIMUM FLEXIBLE WATER CONNECTORS ARE APPROVED FOR WATER SUPPLY TO THE HEATER WITHIN THE GARAGE ONLY.

• PROVIDE COMBUSTION AIR FOR WATER HEATER. APPLIANCES IN CONFINED SPACE SHALL BE PROVIDED WITH TWO OPENINGS INTO THE ENCLOSURE, EACH HAVING ONE SQUARE INCH PER 1000 BTU/H. MINIMUM SIZE OF 100 SQ. IN. EACH WITHIN THE UPPER AND LOWER 12 INCHES OF THE ENCLOSURE. IF THE VOLUME OF THE GARAGE EQUALS AT LEAST FIFTY (50) CUBIC FEET PER 1000 BTH/H INPUT OF THE WATER HEATER, NO ADDITIONAL OPENINGS ARE NEEDED. IF NOT, COMBUSTION AIR OPENINGS IN THE EXTERIOR WALL OF THE GARAGE OF 1 SQ. IN. PER 4000 BTU RATING OF THE WATER HEATER IS REQUIRED.

• A PRESSURE/TEMPERATURE RELIEF VALVE IS REQUIRED TO BE INSTALLED ON THE WATER HEATER. TERMINATE THE DISCHARGE LINE OF THE RELIEF VALVE NO MORE THAN 2-FEET, NOR LESS THAN 6-INCHES ABOVE THE GROUND OUTSIDE OF THE BUILDING. NO THREADS ARE PERMITTED ON END OF PIPE.

• WHERE A WATER HEATER IS INSTALLED IN THE MIDDLE OF A DWELLING AND IT IS NOT POSSIBLE TO PLUMB TO THE OUTSIDE, OTHER SAFETY DEVICES MAY BE USED, (E.G.: A WATTS 210 TEMPERATURE SAFETY VALVE), ALONG WITH A PRESSURE RELIEF VALVE INSTALLED ON THE COLD WATER SYSTEM AT EXTERIOR HOSE BIB WITH THE SAME DRAIN REQUIREMENTS AS THE T & P VALVE.

• INSULATE THE WATER HEATER WITH AN R-12 BLANKET IF LESS THAN A 0.58 ENERGY FACTOR.

• INSULATE ALL HOT/COLD PIPES WHERE EXPOSED.

• AN APPROVED GAS SHUT-OFF VALVE AND FLEX GAS CONNECTOR NO LONGER THAN THIRTY-SIX (36") INCHES IS REQUIRED. INSTALL A GAS LINE SEDIMENT TRAP (TEE FITTING WITH A 3" CAPPED NIPPLE) AS CLOSE TO THE INLET AS POSSIBLE.

• WHERE A WATER HEATER IS LOCATED IN AN ATTIC, ATTIC-CEILING ASSEMBLY, FLOOR-CEILING ASSEMBLY, OR FLOOR SUB FLOOR ASSEMBLY WHERE DAMAGE MAY RESULT FROM A LEAKING WATER HEATER, A DRAIN PAN SHALL BE INSTALLED WITH A ¾" DRAIN TO AN APPROVED LOCATION.

• THE WATER HEATER SHALL BE ANCHORED OR STRAPPED WITH APPROVED MATERIALS TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION. STRAPPING SHALL BE AT POINTS WITHIN THE UPPER (1/3) ONE THIRD AND LOWER (1/3) ONE THIRD OF ITS VERTICAL DIMENSION. AT THE LOWER POINT, A MINIMUM DISTANCE OF 4-INCHES SHALL BE MAINTAINED ABOVE THE CONTROLS WITH THE STRAPPING.



Typical Water Heater Installation in an Outdoor Enclosure

APPROVED

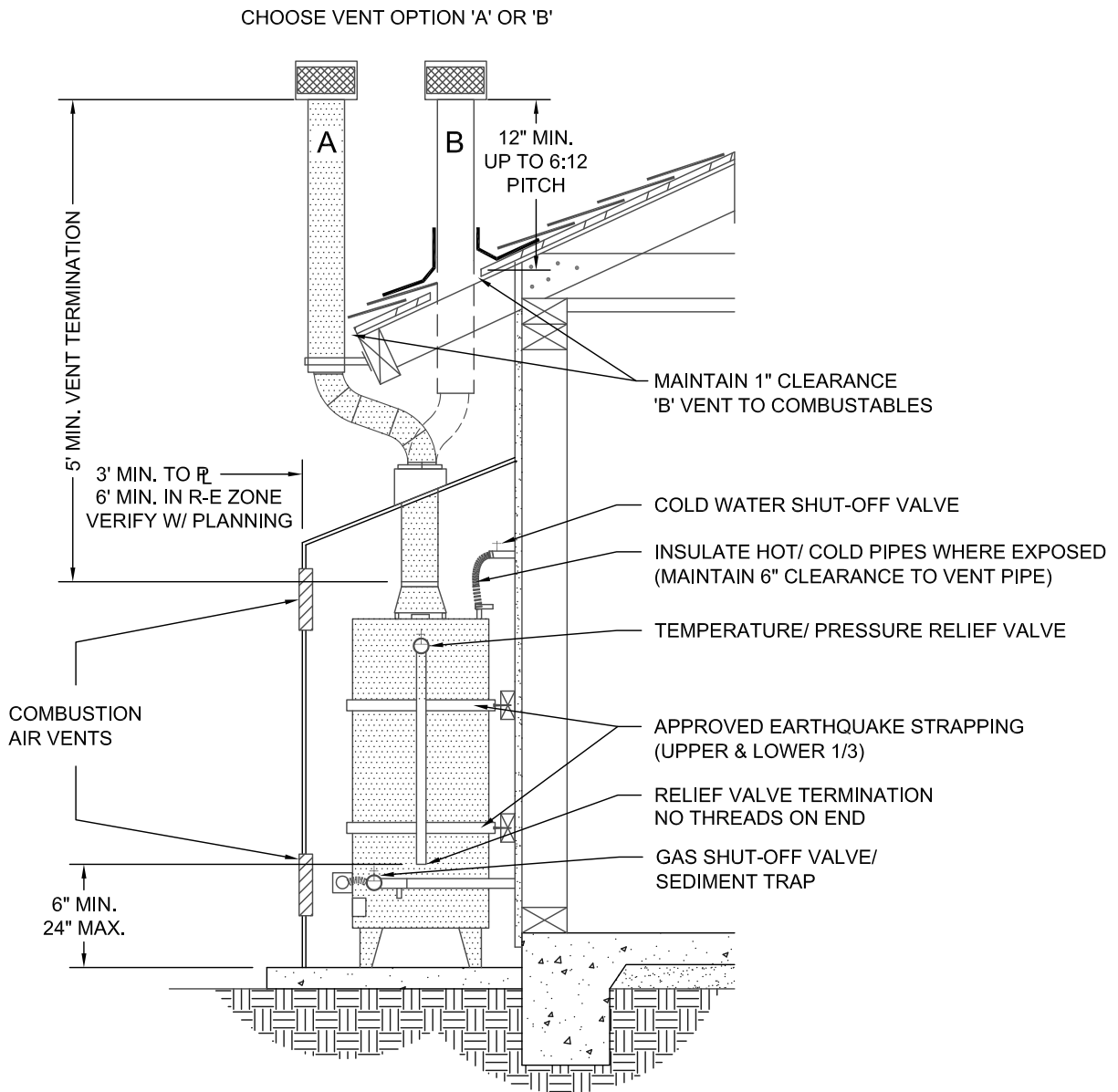
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- THE PLANNING DEPARTMENT REVIEWS WATER HEATER LOCATIONS WHEN LOCATED WITHIN A GARAGE OR OUTSIDE THE BUILDING. SUBMIT A DIMENSIONED SITE/ PLOT PLAN FOR REVIEW AND APPROVAL OF THE LOCATION OF THE WATER HEATER. SHED CLEARANCE TO PROPERTY LINE SHALL MEET MINIMUM SETBACK REQUIREMENTS.
- INSTALL PER MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.
- VERIFY APPROVED LOCATION WITH PLANNING DIVISION. (MIN 3' TO PROPERTY LINE; 6' IN R-E ZONE)
- TERMINATION OF "B" VENT SHALL BE A MINIMUM 4-FEET FROM THE PROPERTY LINE. GRAVITY VENTS SHALL EXTEND IN A GENERALLY VERTICAL DIRECTION WITH OFFSETS NOT EXCEEDING 45-DEGREES.
- DOUBLE WALL TYPE "B" VENT REQUIRES MINIMUM 1" CLEARANCE TO COMBUSTIBLE MATERIALS. DOUBLE WALL VENT PIPE IS REQUIRED OUTSIDE THE ENCLOSURE.
- SINGLE WALL VENT CONNECTOR MUST BE SECURED TO DOWN DRAFT DIVERTER AND "B" VENT WITH SHEET METAL SCREWS.
- A FULL WAY SHUT OFF VALVE SHALL BE INSTALLED FOR THE SERVICE OR REPLACEMENT OF THE WATER HEATER.
- APPROVED 24" MAXIMUM FLEXIBLE WATER CONNECTORS ARE APPROVED FOR WATER SUPPLY TO THE HEATER WITHIN THE ENCLOSURE ONLY.
- APPLIANCES IN CONFINED SPACE SHALL BE PROVIDED WITH TWO OPENINGS INTO THE ENCLOSURE, EACH HAVING ONE SQUARE INCH PER 1000 BTU/H. MINIMUM SIZE OF 100 SQ. IN. EACH WITHIN THE UPPER AND LOWER 12 INCHES OF THE ENCLOSURE.
- A PRESSURE/TEMPERATURE RELIEF VALVE IS REQUIRED TO BE INSTALLED ON THE WATER HEATER. TERMINATE THE DISCHARGE LINE OF THE RELIEF VALVE NO MORE THAN 2-FEET, NOR LESS THAN 6-INCHES ABOVE THE GROUND. THE END OF THE DISCHARGE LINE SHALL NOT BE THREADED.
- THE WATER HEATER SHALL BE ANCHORED OR STRAPPED WITH APPROVED MATERIALS TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION. STRAPPING SHALL BE AT POINTS WITHIN THE UPPER (1/3) ONE THIRD AND LOWER (1/3) ONE THIRD OF ITS VERTICAL DIMENSION. AT THE LOWER POINT, A MINIMUM DISTANCE OF 4-INCHES SHALL BE MAINTAINED ABOVE THE CONTROLS WITH THE STRAPPING.
- INSULATE THE WATER HEATER WITH AN R-12 BLANKET IF LESS THAN A 0.58 ENERGY FACTOR.* INSULATE ALL HOT/COLD PIPES WITHIN 5' OF WATER HEATER. (MAINTAIN 6" CLEARANCE FROM VENT AND FLUE.)
- AN APPROVED GAS SHUT-OFF VALVE AND FLEX GAS CONNECTOR NO LONGER THAN THIRTY-SIX (36") INCHES IS REQUIRED. INSTALL A GAS LINE **SEDIMENT TRAP** (TEE FITTING WITH A 3" CAPPED NIPPLE) AS CLOSE TO THE INLET AS POSSIBLE.