TYPICAL RESIDENTIAL GAS-FIRED WATER HEATER

(The following information is not meant to replace complete set of plans.)

1) 5' min to roof line,
2) 8' min. to wall or window,
3) 4' min. to private property lines,
4) 3' above make-up air inlet within 10'

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ATTACHMENT(S)
Min. 3 sheet metal screws, per joint, spaced equally (TYP.)

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Expansion Tank
(Where Required)

Approved Piping
Cold

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Unions required for Hot and Cold if hard piping is installed

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Insulate pipes in Unconditioned Areas

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Earthquake Strapping
Strapping sized for Equipment

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Energy Label
(First Hour Rating)
Size water heater per Table 5-1

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Instruction Plate

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Gas Line with Shut-off Valve
No reduction in size permitted in flex line.

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Sediment Bleed Valve or Drain Valve

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18" Min. Above Finished Floor in Garages

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Exterior sheathing
Pressure treated sill plate shot pinned to slab

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Maintain the Fire Wall between the House and Garage

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Listed Vent Cap

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Max. slope 1/6

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Min. slope 1/4" per foot

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“B” type vent

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Min. 3 sheet metal screws, per joint, spaced equally (TYP.)

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Draft Hood

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Shut-off Valve

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Pressure/Temperature Relief Valve (Faulty valves must be replaced)

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"B" type vent

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Double Wall Vent, 1’ min to combustibles

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Single Wall Vent
(6’ min to combustibles) (not permitted in enclosed spaces)

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Double Wall Vent
(If within 1” TI 6” to combustibles)

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75% of "H" Max.

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PIPE MATERIALS
Hard Pipe from top to point of termination
(Copper, Galvanized, CPVC Only)

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(CPVC shall be weather protected when exposed)

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SIZE OF OVERFLOW
No less than the size of the Water Heater relief valve outlet

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Maintain 1/8" Min. downward slope

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Outlet not to be threaded, Discharged to Outside,
6” Min. / 24” Max. above grade

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WATER HEATER DETAIL

CITY OF SANTA CLARITA
BUILDING & SAFETY DIVISION
23920 Valencia Boulevard, Suite 140
Santa Clarita, CA  91355     (661) 255-4935

s:pw/bldg/b&s policy manuall/public information sheets/standard detail sheets/water heater detail.vsd - Revised:  3/31/2010  PAGE 1 OF 2
WATER HEATER
- Approved water heater by a recognized agency and installed per the manufacturers recommendations.
- Shall be installed plumb (vertical position) or as close as possible for proper operation of the unit.
- Prior to placing the water heater, please have prior approval from Building & Safety. If located in a garage, the 20’ x 20’ inside dimensions must be maintained, without any encroachment.

PRESSURE & TEMPERATURE RELIEF VALVE
- Installed per water heater manufacturer instructions.
- The drain line shall be no smaller than the relief valve outlet. The internal bore of the pipe should match.
- The drain line shall be of galvanized steel, hard drawn copper piping and fittings, CPVC, or PB.
- The drain line installed to protect from vehicle damage.
- The discharge shall be to the outside with the end of the pipe not more than 24” and not less than 6” above grade. The pipe shall point downward.
- No part of the drain line shall be trapped (plumbing trap) and the terminal end shall not be threaded.
- Drain shall be hard piped from P & T to termination.
- Discharge from a relief valve into a water heater pan shall be prohibited.

EXPANSION TANK
- Any water system valve, backflow preventer, or other normally closed device that prevents dissipaton of building pressure back into the water main shall be provided with normally closed device that prevents dissipaton of building pressure back into the water main shall be provided with an approved, listed, and adequately sized expansion tank pressure back into the water main shall be provided with normally closed device that prevents dissipaton of building pressure back into the water main shall be provided with
- Shall extend in a generally vertical direction with offsets installed per the manufacturers recommendations.
- Installed per water heater manufacturer instructions.
- Shall be installed plumb (vertical position) or as close as possible for proper operation of the unit.
- Prior to placing the water heater, please have prior approval from Building & Safety. If located in a garage, the 20’ x 20’ inside dimensions must be maintained, without any encroachment.

"B" VENT
- Shall extend in a generally vertical direction with offsets not exceeding 45 degrees, except that a gravity vent may have only one offset not more than 60 degrees.
- Angles greater than 45 degrees from the vertical is considered a horizontal run. The total horizontal run of a vent, plus the length of horizontal vent connector, shall not exceed 75 percent of the vertical height.
- Vent offsets shall be supported for their weight and shall be installed to maintain proper clearance, prevent physical damage, and to prevent separation of the joints.
- The venting connector shall have a minimum slope of not less than 1/2” per foot measured from the appliance vent collar to the vent.
- Gravity-type vent system, other than listed appliance otherwise, shall terminate not less than 5 feet above the highest vent collar which it serves, (Due to draw).
- Listed vent caps, connectors, buckets, pipe, etc.
- Single wall vents shall be connected with a minimum of 3 sheet metal screws at the joints, spaced equally apart.
- Double wall vents that snap together shall not also be screwed together or it will destroy the integrity of the vent.

WATTS VALVE
- Watts valves shall not be used in lieu of the P & T valve.

CRASH POST
- A crash post is required when located in a garage and the vehicle could drive into the water heater. Wheel stops are not sufficient to stop a vehicle.

ENERGY
- California Energy Commission approved and insulated per the energy regulations.
- First hour rating of water heaters shall conform to Table 5-1.

<table>
<thead>
<tr>
<th>Number of Bathrooms</th>
<th>1 to 1.5</th>
<th>2 to 2.5</th>
<th>3 to 3.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Bedrooms</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>First Hour Rating, Gallons</td>
<td>42</td>
<td>54</td>
<td>54</td>
</tr>
</tbody>
</table>

Notes:
1 Non-storage and solar water heaters shall be sized to meet the appropriate first hour rating as shown in the table.
2 The first hour rating is found on the “Energy Guide” label.