

GUIDELINES

DIVISION OF SANITATION FACILITIES CONSTRUCTION

Office of Environmental Health and Engineering
Navajo Area Indian Health Service
Window Rock, Arizona

CHAPTER 16--Individual House Service Design

Section 1: Plumbing Procedures
Guideline No. 16.1 (07-04)
May 2007

Supersedes: G 16.1 (96-3), G 78-12, Plumbing Procedures, G 88-20 Plumbing Procedures

Distribution: Standard List

The following procedure will be used to accomplish the plumbing part of the Public Law 86-121 projects:

1. When projects are in the planning phase (i.e., planning funds allotted and right-of-way and archeological clearances initiated), the engineering technician, project manager, and/or the plumbing coordinator will visit each homeowner to be served.

Homeowners should be informed of:

- a. What the project will consist of.
- b. The type of service the homeowner's home will receive (community or individual water and waste disposal).
- c. What will be required of the homeowner (maintenance of completed on-site facilities, payment of water bill). See the attached table.
- d. If the home is scheduled for plumbing, what plumbing options are available. Also, explain the advantages and disadvantages of each (see attached table). The options available to a given homeowner will depend on the type of system or facilities to be installed.
- e. When the homeowner makes his decision as to which option he desires, have him sign the application/screening form saying that he agrees to the responsibilities stated for his option. The application/screening forms

must state all of the homeowner's responsibilities (walled off bathroom, bathroom addition). Also, attach a floor plan sketch of the proposed plumbing. This documentation shall be kept in the homeowner's file.

2. After the Project Summary is approved, but before project construction starts, a second trip should be made to each home by the engineering technician or the plumbing coordinator together with the project manager. During this visit the following items should be covered:
 - a. The homeowner should be reminded of his responsibilities, especially if he must have his addition or bathroom ready for plumbing. Stress that, if his addition or room is not complete when the plumber is scheduled to the project area, the IHS will not be able to provide plumbing according to his wishes, due to time limits on the project life.
 - b. At this time the project manager and the engineering technician, along with the homeowner, will decide exactly where the water line will enter and the waste line will exit the house. The wall of the house should be distinctly marked so that the NECA crews will know exactly where (and how) to stub out the water and sewer lines at the house. These stub out locations should also be documented in the homeowner file. Also, record the finalized individual drawing showing type and location of agreed upon facilities into the homeowner file.
 - c. The Individual Agreement is to be signed by the homeowner and the IHS representative.
3. The plumbing can begin at any time after Step 2. Try to complete the plumbing (at least the bathroom addition) before the NECA crew installs the septic tank or service lines. However, the date the plumber will be in the project area has to be set at the beginning and complied with so that the homeowners can schedule their contribution to the project.
4. Our goal as a Public Health Agency is to get water complying with the Safe Drinking Water Act safely into the home and then out and disposed of in a sanitary manner.

Another goal is to insure that we do everything possible to ease operation and maintenance of what we construct. This includes maximizing the potential number of customers. We may not be able to find an operating entity for a project with a less-than-adequate customer potential.

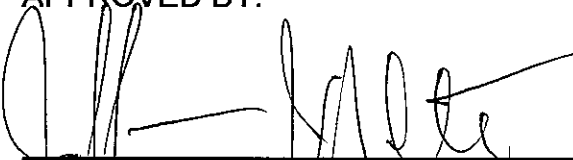
- a. Therefore, if the homeowner does not have his interior partition or addition completed when he is supposed to and the plumber arrives to plumb his house, then the homeowner may only have the choice of accepting an

IHS plumbing wall or of completing his plumbing at a later date at his expense. This is true even if funding and coordination of partition/addition is being provided by a program such as the Navajo Nation Capital Improvement Program (CIP), Community Development Block Grants (CDBG), or local Chapters.

- b. Document with letters, hand-delivered if necessary, attempts to encourage homeowners to complete their share of the project, including those instances where CIP or similar programs are actually providing the additions/partitions.
 - c. Under no circumstances can you substitute the installation of a yard hydrant for interior plumbing. For public health reasons, we must get running water into the home, even if it only has a kitchen sink or lavatory for plumbing fixtures. In addition, the installation of a yard hydrant can be a disincentive for a homeowner, and other project participants, to ever complete and provide space for interior plumbing.
5. NECA has been given the responsibility of providing plumbers and plumber's helpers to install plumbing facilities in the IHS project homes. Administratively, the NECA plumbing program will parallel the NECA utility installation program. NECA has a Plumbing Superintendent who will have identical authority and responsibilities as the Area Field Superintendents do on the utility side. He is under the direct supervision of the General Superintendent of IHS Construction.

The Plumbing Superintendent will work directly with the IHS plumbing coordinator designated by the District Engineers for each district and/or field office. He will be responsible for scheduling the plumbers for the various IHS projects. The IHS technician, plumbing coordinator, project manager, or project engineer is responsible for the ordering and scheduling delivery of all plumbing materials. This includes the responsibility of making arrangements for storage of the materials on the job site, whether it is a NECA plumbing van or a Chapter warehouse.

APPROVED BY:



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Attachment A - Table of Plumbing Options

**Table of Plumbing Options
P.L. 86-121 Projects
Navajo Area Indian Health Service**

Attachment A
Guideline 16.1 (07-04)

Plumbing Options	Initial Responsibility of Homeowner	ADVANTAGES	DISADVANTAGES	Maintenance Responsibility of Homeowner
1. No Plumbing in house.		<ol style="list-style-type: none"> 1. No space required in house. 2. No electricity required 	<ol style="list-style-type: none"> 1. Must go outside to use privy or use honey bucket. 2. Must haul water 	<ol style="list-style-type: none"> 1. Must dig new pit for privy every couple years. 2. Privy must be kept painted.
2. Kitchen Sink, Water Heater & Septic Tank	<ol style="list-style-type: none"> 1. Provide area in house for Sink (5.5ft. x 2½ ft.). 	<ol style="list-style-type: none"> 1. Will have water inside house. 2. Could add toilet at later date as septic tank will be included initially. 3. 	<ol style="list-style-type: none"> 1. Must go outside to use privy (no toilet in house). 2. Must set aside room for sink in house. 3. If toilet is added later, it will be the complete responsibility of homeowner. 4. Electricity recommended . 	<ol style="list-style-type: none"> 1a. Must dig new pit for privy every couple years, or; 1b. Septic tank must have sludge removed every 5 years at a cost of about \$150-200. 2. Sink and faucet must be maintained & repaired occasionally. 3. Privy must be kept painted, and repaired occasionally. 4. Must pay for water and electricity or propone used.
3. Sink, toilet, lavatory, water heater, and septic tank (without IHS plumbing wall).	<ol style="list-style-type: none"> 1. Provide walled room in house or an addition so IHS can install the fixtures & plumbing (7ft. x 5ft.). Partition should be 2" x 6" construction 	<ol style="list-style-type: none"> 1. Will have plumbing in house including sink, toilet and lavatory. 	<ol style="list-style-type: none"> 1. Must set aside room in house or build addition for small bathroom and sink. 2. Will not have bathtub. 3. Must have the walled room or addition completed when plumbers arrived. 4. Electricity recommended. 	<ol style="list-style-type: none"> 1. All fixtures inside house must be maintained and repaired occasionally. 2. Septic tank must have sludge removed every 3 – 5 years at a cost of about \$150-200. 3. Must pay for water used.
3a. Sink, toilet, lavatory, water heater, and septic tank (using IHS short plumbing wall).	<ol style="list-style-type: none"> 1. Provide area in house for fixtures & plumbing wall (6ft. x 12ft. minimum). 	<ol style="list-style-type: none"> 1. Will have plumbing in house including sink, toilet and lavatory. 2. Will not have to provide walled room or addition. 	<ol style="list-style-type: none"> 1. Must set aside room in house or build addition. 2. Will not have bathtub. 3. Sink must be back to back w/toilet & lavatory. 4. Electricity recommended. 	Same as Option 3

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Plumbing Options	Initial Responsibility of Homeowner	ADVANTAGES	DISADVANTAGES	Maintenance Responsibility of Homeowner
4. Complete plumbing in house (sink, toilet, hot water heater, lavatory, and tub/shower without IHS plumbing wall).	1. Must provide walled room in house or an addition so IHS can install the fixtures (8ft. x 8ft. minimum).	1. Will have complete plumbing facilities inside house.	1. Must set aside room in house or build addition for large bathroom and sink. 2. Must have walled room or addition completed when plumbers arrive to plumb house. 3. Electricity recommended.	Same as Option 3
4a. Complete plumbing in house (sink, toilet, hot water heater, lavatory, and tub/shower) (using IHS long plumbing wall)	1. Provide area in house for fixtures and plumbing wall (8ft. x 10ft. minimum).	1. Will have complete plumbing facilities inside the homes. 2. Will not have to provide walled room or addition.	1. Must set aside room in house for large bathroom and sink. 2. Sink must be back to back with toilet and lavatory. 3. Electricity recommended.	Same as Option 3
5. Handicap facilities with options 4 or 4a.	1. Provide area in house for fixtures and plumbing wall (12ft. x 12ft. minimum).	1. Will have complete handicap plumbing facilities inside the homes. 2. Will not have to provide walled room or addition.	1. Must set room aside in house for large bathroom and sink. 2. Sink must be back to back with toilet and lavatory. 3. Electricity recommended.	Same as Option 3

NOTES:

1. If a community sewer system is being installed, Plumbing Options 2, 3, 3a, 4, 4a, and 5, can be used. The comments listed for these options are valid except there is no maintenance of a septic tank required. However, there would be a monthly charge for sewer service. Medical referrals only.
2. If a community water is being installed, all plumbing options are available except for houses without electricity, a gas water heater will be required.
3. If individual water facilities (cistern) are being installed, options 1, 2,3a and 3b are available with the following restrictions:
 - a. The cistern must be located on a hill to provide gravity feed or an electric pump will be necessary for options 2, 3, and 3a. If pump is provided an additional maintenance responsibility is incurred.
 - b. For all options water must be hauled from a distance source and water have to be batch chlorinated and conserved.
 - c. Cistern must be cleaned every 3 or 4 years.