

PSAI Z4.3-2024

Standard for Sanitation

Nonsewered Waste Disposal Systems at Places of Employment: Minimum Requirements



Portable Sanitation Association International

Revision of ANSI/PSAI Z4.3 – 2016

Standard for Sanitation

Nonsewered Waste Disposal Systems at Places of Employment: Minimum Requirements

Standards Developing Organization:
Portable Sanitation Association International

Note: If and when this standard is approved by the American National Standards Institute (ANSI), content regarding the date and other ANSI information will go here.

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Note: If and when this standard is approved by the American National Standards Institute (ANSI), content will be added here regarding the ANS designation.

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Table of Contents

Table of Contents

Table of Contents.....	5
1. Scope and Purpose	3
2. Definitions	3
3. Provision of Nonsewered Equipment and Waste Disposal Systems	8
4. Minimum Specifications for Equipment	12
5. Disposal of Wastewater	16
6. Revisions to Laws and Standards Referenced in this Document	16

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Foreword

(This foreword is not part of the PSAI Standard Z4.3-2024)

The U.S. Public Health Service as Supplement No. 108 to the Public Health Reports in 1933 published the original version of this standard. The American National Standard superseded this with standards for a Sanitary Privy, ANSI Z4.3-1935. The American National Standard was revised and expanded several times over the years. The 1987 edition superseded the American National Standard Minimum Requirements for Non-Sewered Waste Disposal Systems, ANSI Z4.3-1979.

Whereas ANSI Z4.3-1935, as its title indicates, was confined to requirements for a sanitary privy, ANSI Z4.3-1987 and the 1995, 2005, and 2016 editions of the Z4.3 standard have been much broader in scope and have included all devices available and acceptable for disposal of human waste where the lack of water or temporary nature of the installation makes water carriage systems impracticable. Since 1987 the Z4.3- designated standards have primarily been used to provide guidance for those seeking to place and maintain portable sanitation equipment in these situations.

Over the years, the public's expectation of clean portable restroom facilities has evolved considerably, fueled partly by general changes in minimum personal hygiene requirements and also by significant activity on the part of global nongovernmental organizations to ensure that all people have access to clean, dignified toilets.

Between 2016 and 2022, this ongoing evolution of expectations, together with modifications in the provision of portable sanitation, have resulted in the need for a reconsideration of the Z4.3 standard. These changes include more equipment and product types, greater use of these systems in settings that previously did not use them on a consistent basis, and additional options for service. The COVID-19 pandemic has also dramatically impacted best practices for health, hygiene, and measures necessary to limit the spread of disease.

The result of these forces has meant that a substantial revision of the standard is necessary. Significantly, Z4.3 will now cover only nonsewered waste disposal systems at places of employment and those used for non-employment environments will be covered by a revision of Z4.4. The provisions in this standard are the result of extended and careful consideration of

available knowledge and experience on the subject of non-sewered waste disposal systems at places of employment and are intended to present minimum requirements recommended for use by employers, property owners, contractors, and others. The provisions are also suitable for adoption by governmental administrative authorities.

Consensus for this standard was achieved by use of a canvass process. Suggestions for improvement of this standard will be welcome. They should be sent to the Portable Sanitation Association International, 1601 Utica Avenue South Suite 213, Minneapolis, MN, 55416, or to info@psai.org.

The PSAI adheres to all requirements of the American National Standards Institute (ANSI) as well as its own standards development procedures for ensuring that all parties with a direct and material interest have the right to participate in its development process. The following organizations are recognized as having an interest in the standardization of requirements for nonsewered waste disposal systems at places of employment and for their participation as voting members of the consensus body leading to the approval of this standard. Inclusion in this list does not necessarily imply that the organization concurred with the final version of the proposed standard.

Consensus body list to be placed here

Organization Represented

Name of Representative

1.

2.

3.

4.

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7.

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9.

etc.

Standard for Sanitation — Nonsewered Waste Disposal Systems at Places of Employment: Minimum Requirements

1. Scope and Purpose

1.1 Scope

This standard applies to portable nonsewered waste disposal systems at places of employment, wherever such systems are not connected to a sanitary sewer, septic tank or on-site sewage-disposal treatment facility. These systems are typically used by the same people or groups of people over a period of time. Portable nonsewered waste disposal systems used in non-employment settings are outside the scope of this standard.

1.2 Purpose

The purpose of this standard is to promote the health and safety of workers at places of employment wherever portable nonsewered waste disposal systems are present. It is intended to guide employers, workers, their advocates, and relevant government agencies in the provision and maintenance of these systems.

2. Definitions

ADA: The Americans with Disabilities Act of 1990.

ADA-compliant: A device that is fully compliant, when properly installed, with the current requirements of the Americans with Disability Act Standards for Accessible Design as legislated by the Americans with Disabilities Act of 1990.

Adequate power: A supply of energy of a type specified by the equipment manufacturer, delivered and used in a manner that conforms to the manufacturer's specifications for safely operating the equipment and complies with all relevant regulations for use of that type of power.

Adequate ventilation: Provided with a sufficient means to permit circulation of air sufficient to remove an excess of heat, fumes, or vapors.

Algae: As used in the standard, any simple, non-flowering aquatic plant that renders drinking water unsafe or unpleasant for human consumption.

Approved: Accepted or authorized by the authority having jurisdiction.

Cabin: An enclosure either for a single user or subdivided for single user privacy, typically portable, that encloses one or more of the following: toilet(s), urinal(s), handwashing facility(ies), shower facility(ies), related facility(ies); wherein the user(s) may defecate, urinate, or maintain personal hygiene in a private manner.

Chlorine/bleach: A dilute solution of sodium hypochlorite useful for disinfecting or sterilizing equipment to prevent the growth of bacteria, algae, and viruses.

Cleanliness: The result of a process of cleaning to remove germs, dirt, and impurities from surfaces or objects by using soap or detergent and water; the process may or may not kill the germs but, at a minimum, reduces their numbers and the risk of spreading them through infection.

Communicable disease: Any illness spread directly or indirectly by an agent of infection through contact, airborne transmission, or droplets.

Conservation: The preservation and protection of natural resources.

Consumable supplies: As used in the standard, the term refers to any products necessary for user hygiene including but not limited to toilet paper, soap, paper toweling, and the like.

Construction site: Any location where worker activities covered under United States Department of Labor Occupational Safety and Health Administration (OSHA) standard 29 CFR 1926 occur.

Corrosion-resistant: The inherent ability of a metallic or non-metallic material to withstand corrosion damage caused by either oxidation or other chemical reactions.

Deodorizer/biological agent: Any substance, whether derived from chemical or organic sources, employed for the purpose of reducing or eliminating unpleasant odors.

Dignified and sanitary condition: The maintenance of the physical attributes of nonsewered sanitation equipment in a manner consistent with respect for user sensibilities and public health standards or requirements.

Dusk: The period of twilight after sunset but before complete darkness.

Fit for intended use: Capable of being deployed in a manner that is consistent with achieving the item's function or purpose.

Fixture: A device for receiving water and/or waste matter that directs these substances into a sanitary drainage system. A fixture can include bathtubs, lavatories, showers, sinks, toilets, and urinals.

Flushing portable toilet: A flushing toilet is one utilizing a water or non-water flushing fluid that may be deposited into a container or receptacle or may be re-circulated by a closed system for flushing purposes housed in a portable structure.

Foot pump: A non-powered device typically using a spring, valve, hose, and suction to deliver fresh water to a tap by stepping on a pedal or similar object.

Freshwater: As used in the standard, water is considered fresh if it comes from a public source or private well, meets United States Geological Survey freshwater criteria by containing less than 1,000 milligrams per liter of dissolved solids, most often salt, and has not been used for any prior purpose that would add contaminants making it unsuitable for washing or bathing.

Gender: Either of the two sexes (male and female), considered with reference to social and cultural differences in addition to biological ones.

General contractor: A person or business entity with a legal and binding agreement placing them in charge of a construction project, usually involving responsibility for naming and overseeing the work of any subcontractors.

Good agricultural practices (GAP): A series of activities to ensure fruits and vegetables are produced, packed, handled, and stored to minimize risks of microbial food safety hazards.

Grey water: Water that has already been used for bathing, washing, laundry or dishwashing but does not contain human or food waste.

Handrails: A long, narrow bar of wood, metal, or other hard composite substance that people can hold on to for support, especially when going up or down stairs.

Hand sanitizer/hand sanitizing product: A liquid or gel, typically one containing alcohol, that is used to clean the hands and kill infection-causing microorganisms.

Hand wash facility: As used in the standard a piece of equipment, typically portable, with at least one spout providing water for the cleansing of human hands.

Impact resistant: A material's ability to withstand sudden or intense force or shock without being damaged or compromised.

Installed: To place or fix equipment in position and take all necessary action to ready it for use.

International Symbol of Accessibility (ISA): An internationally accepted symbol that denotes a place, facility, or piece of equipment is accessible for persons with special needs, especially wheelchair users. The symbol consists of a blue square with overlaid stick image of a person in a wheelchair.

Legal contract: An agreement between private parties creating mutual obligations enforceable by law.

Maintained: As used in the standard, to keep equipment in good working order and supplied with all necessities for dignified and sanitary conditions.

Mobile crew: Workers who continually or frequently move from jobsite to jobsite on a daily or hourly basis would be considered a "mobile crew." Workers who report to a conventional construction project, where they work for more extended periods of time (days, weeks, or longer), would not be considered a "mobile crew" for purposes of the standard.

Multiple occupancy facility: As used in the standard, any facility specifically designed for use by more than one person at a time.

Nonabsorbent: A surface or coating that repels, resists or lacks the capacity to take in moisture.

Non-flushing toilet: A non-flush toilet is one wherein the waste is deposited directly into a container or receptacle without flushing, sometimes containing a solution of water and deodorizer. For purposes of this standard, non-flushing toilets are assumed to be portable.

Nonpotable water: Water that is not safe for drinking or cooking.

Nonsewered sanitation equipment: Any piece of equipment used for addressing the hygienic needs of human beings that is not connected to a sanitary sewer, septic tank, or on-site sewage disposal system.

Nonsewered waste disposal equipment/system: A piece of equipment used for collecting and disposing of human waste or a sanitary waste-disposal system for human waste that is not connected to a sanitary sewer, septic tank or on-site sewage disposal system.

Number of workers: For the purpose of this standard, the maximum number of people present and engaged in labor on a site during a regular 40-hour workweek.

On-site sewage disposal treatment facility: Any one of various multi-stage systems that collect, treat, and disperse wastewater generated by a home or business at its location rather than at a wastewater treatment plant located elsewhere.

Operated: Controlled the functioning of a piece of equipment to execute a task or achieve an objective.

Permanent: For the purpose of this standard, the term “permanent” means not readily or not easily relocatable.

Place of employment: Any location where one or more workers are present as a condition of their employment.

Portable: For the purpose of this standard, the term “portable” means readily or easily re-locatable.

Potable water: Water that is free of objectionable pollution, contamination, minerals or infection, is approved for drinking, culinary and domestic purposes by the authority having jurisdiction, or in the absence of such authority, water meeting the requirements of the U.S. Environmental Protection Agency.

Ramp: A walking surface that has a running slope steeper than 1:20.

Readily accessible: Capable of being reached quickly for use, service, or inspections, without requiring those to whom ready access is requisite to climb over or remove obstacles or to resort to portable ladders, chairs, etc.

Recycled (reclaimed) wastewater: Water that has passed through a treatment facility mainly for use in irrigation, dust control or fire suppression and is clearly marked non potable and unsafe for consumption, therefore encouraging conservation of potable water.

Safety data sheet (SDS): Documentation required by Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)), revised in 2012, and supplied by the chemical manufacturer, distributor, or importer, which covers the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical, in a 16-section format.

Sanitary condition: Within the meaning of this standard, a physical condition which will tend to lower the risk of spreading infection and disease.

Sanitary sewer: A system that collects and transports domestic, commercial, and industrial wastewater and limited amounts of stormwater and infiltrated ground water to treatment facilities for appropriate treatment.

Sanitize: A cleaning and/or disinfecting process that lowers the number of germs on surfaces or objects to a safe level, as judged by public health standards or requirements in order to lower the risk of spreading infection.

Septic tank: An underground tank to collect waste from homes that is not connected to a municipal sewer system.

Service—hand wash facility: For purposes of the standard, service of a hand wash facility includes greywater removal, trash and debris removal, cleaning and sanitizing interior and exterior surfaces, restocking supplies, inspecting and repairing equipment as needed, and updating on-site records.

Service—toilet: For purposes of the standard, service of a toilet includes wastewater removal, greywater removal, trash and debris removal, refilling any freshwater tank associated with the toilet, recharging the waste tank with water, deodorizer/biological agents, and seasonal additives if required to prevent freezing, cleaning and sanitizing interior and exterior surfaces, restocking supplies, inspecting and repairing equipment as needed, and updating on-site service records.

Service—trailer facility: For purposes of the standard, service of a trailer facility includes wastewater removal, grey water removal, trash and debris removal, refilling freshwater tanks, recharging waste tanks with additives including deodorizer/biological agents and seasonal additives if required to prevent freezing, cleaning and sanitizing the interior and exterior surfaces, restocking supplies, inspecting and repairing equipment as needed, and updating on-site records.

Site authority: The individual on any work site that is designated, approved, or assigned as responsible for worksite operations including, but not limited to, those involving health and safety compliance.

Stair: A series of steps or flights of steps for passing from one level to another.

Stair nosings: The edge of a step or stair tread that projects beyond the riser and usually adds a rounded edge to the stair.

Subcontractor: A person or entity that has been awarded the performance of part of the work or services of an existing contract between the general contractor and the (original) contracting party.

Sufficient access: Capable of being reached quickly and in a manner that allows inspection, operating, servicing, and/or repair by service vehicles and personnel without requiring those to whom sufficient access is requisite to climb over, remove obstacles, or experience delays while waiting for others to assist with accessibility.

Toilet: A series of fixtures maintained within a cabin for the purpose of defecation, urination, or maintaining personal hygiene.

Trailer facility (nonsewered): A prefabricated structure, built on a permanently attached chassis and intended for transport over public highways, which contains the necessary equipment for one or more hygienic services such as toilets, hand washing facilities, laundry facilities, showers, and the like; trailers used for transporting portable nonsewered equipment that is routinely removed from the trailer to stand alone is excluded from this definition.

Urinal: A fixture, either freestanding or maintained within a cabin, for the sole purpose of urination.

Waste container/tank: A container for storing grey water or wastewater.

Wastewater: Used water that includes substances such as human waste, food scraps, oils, soaps, and chemicals.

Watertight: So constructed that moisture will not enter or exit the enclosure.

Worker: Any person, including any regular employee, part-time employee, or temporary laborer/day laborer, present on a worksite and engaged in activities assigned by others for pay.

3. Provision of Nonsewered Equipment and Waste Disposal Systems

3.1 In places of employment, a minimum of one non-flushing toilet is required per 10 workers and one hand wash facility is required per 20 workers, provided they are working no more than 400 cumulative hours and service occurs no less than once every seven days. Additional toilets and handwash facilities shall be provided according to the tables below. Whenever either the cumulative number of workers or the cumulative number of work hours is exceeded, additional equipment or service is required to maintain minimum standards of cleanliness and sanitary conditions. See Tables 1 and 2.

3.2 Nonsewered toilet and hand washing equipment shall be installed, maintained, and operated in a manner that will not endanger the health or safety of workers or any person using that equipment.

3.2.1 To maintain dignified and sanitary conditions for workers, service that is consistent with the definitions in section 2 must be provided at the intervals shown on Tables 1 and 2, and in no case less than once every seven days.

3.2.2 Equipment in excess of the requirements described in section 3.1 must be provided if necessary to ensure workers have prompt access to toilet and hand wash facilities.

3.2.3 Employers who do not provide nonsewered equipment at the levels shown in Tables 1 and 2 must be able to demonstrate how they will meet the minimum requirements in a manner that complies with all federal, state, and local laws.

3.2.4 ADA-compliant equipment must be supplied in ratios consistent with the ADA if it will be used by the general public or by any worker protected under the ADA.

3.3 Toilets, with separate fixtures for each gender, shall be provided in all places of employment whether indoors, outdoors or underground, except where cabins will be occupied by no more than one person at a time, can be latched from the inside, and contain at least one toilet.

When these conditions are all met, separate toilet cabins for each gender need not be provided (See 3.8).

3.4 The number of toilet units to be provided for each gender shall be based upon the number of employees of that gender for whom the facilities are furnished and shall be in accordance with Table 1. Where single-occupancy toilets are equipped with more than one type of fixture, only one toilet shall be counted for the purpose of Table 1. Where multiple-occupancy facilities are equipped with numerous fixtures (urinals/toilets), only one fixture in each facility will be counted for the purpose of Table.

Table 1: Minimum number of non-flushing toilets

		Service Frequency (per week)									
		1x	2x	3x	4x	5x	6x	7x	10x	14x	21x
Cumulative Workers on Site	Cumulative Site Work Hours Limit	Minimum number of toilet facilities									
10	400	1	1	1	1	1	1	1	1	1	1
20	800	2	1	1	1	1	1	1	1	1	1
30	1,200	3	2	1	1	1	1	1	1	1	1
40	1,600	4	2	2	1	1	1	1	1	1	1
50	2,000	5	3	2	2	1	1	1	1	1	1
60	2,400	6	3	2	2	2	1	1	1	1	1
70	2,800	7	4	3	2	2	2	1	1	1	1
80	3,200	8	4	3	2	2	2	2	1	1	1
90	3,600	9	5	3	3	2	2	2	1	1	1
100	4,000	10	5	4	3	2	2	2	1	1	1
200	8,000	20	10	7	5	4	4	3	2	2	1
300	12,000	30	15	10	8	6	5	5	3	3	2
400	16,000	40	20	14	10	8	7	6	4	3	2
500	20,000	50	25	17	13	10	9	8	5	4	3
600	24,000	60	30	20	15	12	10	9	6	5	3
700	28,000	70	35	24	18	14	12	10	7	5	4
800	32,000	80	40	27	20	16	14	12	8	6	4
900	36,000	90	45	30	23	18	15	13	9	7	5
1,000	40,000	100	50	34	25	20	17	15	10	8	5
2,000	80,000	200	100	67	50	40	34	29	20	15	10
3,000	120,000	300	150	100	75	60	50	43	30	22	15
4,000	160,000	400	200	134	100	80	67	58	40	29	20
5,000	200,000	500	250	167	125	100	84	72	50	36	24
6,000	240,000	600	300	200	150	120	100	86	60	43	29
7,000	280,000	700	350	234	175	140	117	100	70	50	34
8,000	320,000	800	400	267	200	160	134	115	80	58	39
9,000	360,000	900	450	300	225	180	150	129	90	65	43
10,000	400,000	1,000	500	334	250	200	167	143	100	72	48

Table 2: Minimum number of hand wash facilities

		Service Frequency (per week)									
		1x	2x	3x	4x	5x	6x	7x	10x	14x	21x
Cumulative Workers on Site	Cumulative Site Work Hours Limit	Minimum number of toilet facilities									
20	800	1	1	1	1	1	1	1	1	1	1
40	1,600	2	1	1	1	1	1	1	1	1	1
60	2,400	3	2	1	1	1	1	1	1	1	1
80	3,200	4	2	2	1	1	1	1	1	1	1
100	4,000	5	3	2	2	1	1	1	1	1	1
200	8,000	10	5	4	3	2	2	2	1	1	1
300	12,000	15	8	5	4	3	3	3	2	2	1
400	16,000	20	10	7	5	4	4	3	2	2	1
500	20,000	25	13	9	7	5	5	4	3	2	2
600	24,000	30	15	10	8	6	5	5	3	3	2
700	28,000	35	18	12	9	7	6	5	4	3	2
800	32,000	40	20	14	10	8	7	6	4	3	2
900	36,000	45	23	15	12	9	8	7	5	3	3
1,000	40,000	50	25	17	13	10	9	8	5	4	3
2,000	80,000	100	50	34	25	20	17	15	10	8	5
3,000	120,000	150	75	50	38	30	25	22	15	11	8
4,000	160,000	200	100	67	50	40	34	29	20	15	10
5,000	200,000	250	125	84	63	50	42	36	25	18	12
6,000	240,000	300	150	100	75	60	50	43	30	22	15
7,000	280,000	350	175	117	88	70	59	50	35	25	17
8,000	320,000	400	200	134	100	80	67	58	40	29	20
9,000	360,000	450	225	150	113	90	75	65	45	33	22
10,000	400,000	500	250	167	125	100	84	72	50	36	24

3.5 Where workers from more than one employer are present at a place of employment such as, but not necessarily limited to, construction sites with employees of several subcontractors, it shall be the responsibility of the site authority or general contractor to provide nonsewered toilet and hand wash facilities sufficient for the total number of workers on the site at the ratios described in section 3.1 and Tables 1 and 2.

3.5.1 If responsibility for providing nonsewered toilet and hand wash facilities is otherwise designated in the scope of a subcontractor's agreement or other legal contract, it is the responsibility of the designated party or parties to provide nonsewered equipment sufficient for the total number of workers at the ratios described in section 3.1 and Tables 1 and 2.

3.5.2 Where the number of workers at a place of employment fluctuates, the number of nonsewered toilet and hand wash facilities required should be determined by the maximum number of workers present during any continuous four-hour period.

3.6 It shall be the responsibility of the employer to ensure that adequate quantities of toilet and hand washing facilities are provided, and that all facilities and fixtures are maintained in a dignified and sanitary condition including periodic cleaning and wipe downs of toilet cabins and hand wash facilities, as well as replenishment of consumable supplies required by users. When nonsewered equipment requires servicing, the responsibility lies with the employer to ensure servicing occurs in a timely manner to prevent the stated capacity of those facilities from being exceeded and therefore resulting in unsanitary conditions. The employer shall also assure that anyone providing service to the toilet and hand washing facilities shall have ready and sufficient access to the equipment.

3.7 Facilities shall be located so as to be readily accessible to the employees for whom they are furnished, capable of being reached quickly for operation, renewal, or inspections, and not guarded by locked doors, elevation, obstacles, or other effective means.
(See 3.8).

3.7.1 Toilets and hand wash facilities should be located no more than 10 minutes total travel time from where workers are assigned to work, including all necessary means of conveyance and transportation from their individual work locations. Employers must provide readily accessible transportation to toilet and hand wash facilities if the equipment is not otherwise readily accessible.

3.7.2 Toilets and hand wash facilities for farmworkers must be located no more than a quarter mile from the location where workers are positioned.

3.7.3 Additional toilet and hand wash facilities may be appropriate if several workers will need to use the restroom at the same time (e.g., during scheduled breaks.)

3.7.4 The placement and stocking of hand washing facilities shall comply with good agricultural practices (GAP) on any site where workers are harvesting food.

3.8 The requirements of 3.1, 3.2, 3.3, and 3.4 do not apply to mobile crews or to normally unattended work locations so long as workers at these locations have transportation immediately available to facilities that are sewerred or that meet the minimum requirements of Section 3.

3.8.1 The determination of whether work crews are mobile is dependent upon factors such as worksite operations and circumstances. In general, the job functions of mobile crews require continual or frequent movement from job site to job site on an hourly basis. Movement of a crew within a large job site does not meet the requirements for being considered “mobile.”

3.8.2 Work crews involved in construction are not considered to be mobile, and minimum requirements for these workers are found in Tables 1 and 2.

3.9 All nonsewered sanitation equipment shall be situated so that after dusk there is a form of light available to ensure safe user access and to deter vandalism. Lighting may be natural or artificial but must be sufficient for users to conduct toileting and washing activities in conditions that allow visual cues without carrying another form of light.

3.10 During cold weather hand washing must be made available. This may be done by providing hand wash facilities which are prevented from freezing or with an alcohol-based hand sanitizing product and dispenser. Employers must ensure the hand washing solution they provide conforms with federal, state, and local requirements.

3.11 Nonsewered sanitation equipment containing waste shall never be moved on a public roadway. When units containing waste are moved within a private site, care must be taken to prevent spills and leakage. If spills or leakage occur, actions must be taken to restore the site of the discharge to a condition that is equal to or better than the conditions that existed before the discharge occurred.

3.12 In any employment situation where additional or more stringent sanitation requirements apply than those found within this standard, the additional and/or more stringent requirements shall be met.

4. Minimum Specifications for Equipment

4.1 General equipment requirements

4.1.1 Waste containers and tanks used in all equipment shall be fabricated from nonabsorbent, watertight materials.

4.1.2 Deodorizers or biological agents, if used in the waste containers, comply with all applicable federal, state and local provisions. At each time of service, the waste container shall be completely drained and sanitized, then recharged with water and deodorizers before use. Safety data sheets for all such chemicals shall be made available to employees upon request.

4.1.3 All materials used in the construction of nonsewered waste disposal systems that are in contact with waste, deodorizers, grey water, or that are routinely subjected to wet conditions, shall be nonabsorbent and corrosion resistant.

4.1.4 All exterior materials used in the construction of nonsewered waste disposal systems which are intended to be portable shall be impact resistant.

4.1.5 All nonsewered equipment must be placed on clear and flat terrain allowing safe ingress/egress from traffic and other hazards. Equipment should be secured according to the manufacturer's instructions when required.

4.1.5.1 At the time of equipment placement, the site should be evaluated and measures to prevent tripping by users when entering or exiting enclosed units should be taken if necessary.

4.1.5.2 Adequate measures should be taken to stabilize equipment and deter tip-over in high wind situations. Suppliers of equipment shall provide information to customers regarding appropriate techniques for securing the equipment onsite.

4.1.6 All ADA-compliant portable equipment must be manufactured and supplied in accordance with the most current requirements of the Americans with Disability Act Accessibility Guidelines (ADAAG) Every effort must be made to provide the same opportunity and user experience for any worker with a disability as an able-bodied person may have. Only equipment meeting the specifications of the ADA shall bear the International Symbol of Accessibility (ISA).

4.2 Portable toilet requirements

4.2.1 Structures housing portable toilets may be mobile trailers or prefabricated, skid mounted, or otherwise portable unit. If they contain more than one toilet fixture, each fixture shall occupy a separate compartment with a door and walls or partitions between fixtures to assure privacy. Toilet cabins intended for male use may be equipped with urinals. Urinals do not need to occupy separate compartments.

4.2.2 The interior floors, walls, ceilings, partitions and doors of all portable structures shall have a finished surface of solid material that can be easily sanitized. Toilet units shall be enclosed and not transparent from the outside to ensure privacy for the user.

4.2.3 Every portable toilet shall provide adequate space for the user with minimum inside dimensions of 91 cm (3 ft) front-to-back and side-to-side, inside clear height of 1.98 m (6 ft 6 in) and a toilet fixture riser height of 35 to 51 cm (14 to 20 in).

4.2.4 The door housing a single toilet shall be provided with an inside latch. Any door leading to the outside shall be self-closing.

4.2.5 If the toilet cabin contains a tank in which waste is stored, that tank shall be vented to the outside of the structure with a minimum nominal vent area of 45 cm² (7 in²).

4.2.6 Portable toilets shall be provided with a screened ventilation opening having a cross-sectional area of at least 0.09 m² (1 ft²) per fixture.

4.2.7 In flushing portable toilets, waste passages shall have smooth surfaces and shall be free of obstructions, recesses or chambers that would allow fouling to occur. Flushing shall be accomplished by controls operable without special knowledge and that are clearly identifiable. The unit must have a sufficient flow to carry waste into the container.

4.2.8 Toilet units which do not use liquid must employ a mechanism to remove all waste from the bowl and isolate it from the user. Removal of waste from the bowl shall be accomplished by controls operable without special knowledge and that are clearly identifiable. The removal mechanism must ensure the bowl is clean between uses. Waste passages shall have smooth surfaces and shall be free of obstructions, recesses or chambers that would allow fouling to occur.

4.2.9 Toilet paper with a holder fixture shall be provided for every toilet fixture. Toilet paper shall be available for users at all times. Employers shall ensure an adequate supply

of toilet paper is on the job site at all times and shall see that it is replenished in the toilet cabins promptly.

4.2.10 Every toilet shall have a seat made of substantial material having a nonabsorbent finish; this does not preclude a seat molded into the fixture when a urinal is provided.

4.2.11 Every toilet seat shall be provided with a hinged lid.

4.3 Hand wash facility requirements

4.3.1 Each hand wash facility must have at least one spout delivering hot and cold or tepid running water, and it must provide access to soap for the cleaning of hands. If the unit has more than one spout, each spout constitutes a hand wash facility as required in table 2.

4.3.2 Water supplied for hand wash facilities must be potable when transferred to the freshwater compartment of the service vehicle. At the moment of transfer, the water becomes non-potable and unsafe for consumption.

4.3.3 All facilities supplying water intended for hand washing must be labeled and clearly identified as not for consumption or with an equivalent warning not to drink the water.

4.3.4 Freshwater and wastewater passages shall have smooth surfaces and shall be free of obstructions, recesses or chambers that would allow fouling or algae build up to occur.

4.3.5 At each time of service the greywater container shall be completely drained. The equipment exterior including all fixtures shall be sanitized, and the freshwater container shall be recharged with water that was potable prior to being transferred to the service truck. All necessary items including hand soap and paper towels are to be restocked in order for the unit to be considered fully functional.

4.3.6 At the time of service, freshwater and chlorine or bleach treatment should be added as necessary to the freshwater tank to prevent stagnation and algae build up.

4.3.7 Hand wash facilities shall be equipped with a foot pump or hands-free system to deter the exchange of communicable diseases and be equipped with their own grey water tank.

4.3.7 Hand wash facilities which supply alcohol-based sanitizer may only be used in lieu of hand wash units supplying hot and cold running water or tepid running water when applicable federal, state, or local regulations allow the substitution or when cold weather conditions render the use of water-based hand washing units impossible.

4.4 Nonsewered sanitation trailer facility requirements

4.4.1 Types of manufactured portable sanitation trailers include enclosed portable restrooms, decontamination units, locker compartments, shower facilities or combination units, and laundry equipment among others.

4.4.2 Unless otherwise designated, all trailer systems must be in accordance with Title 24, Code of Federal Regulations, Part 3280 for Mobile/Manufactured Home Construction Standards, including Part 3280.607 – Plumbing Fixtures, in addition to all applicable federal, state and local provisions.

4.4.3 Nonsewered sanitation trailers must meet Federal Motor Carrier Safety Administration regulations for transport on public highways. They must be prepared for transport according to manufacturer requirements and must never be entered onto a roadway if they fail to meet any condition for roadworthiness defined in applicable federal, state, and local statutes.

4.4.4 When trailers are not level to the ground stairs or ramps, as well as handrails, must be provided.

4.4.4.1 When stairs are provided, the rise of each step shall be no more than 8 inches (20 cm), and the first step off the ground should be equivalent to the rise of the other steps.

4.4.4.2 The surface of the steps and ramps should either be made of non-slip materials or non-slip materials should be added to the surface. The means for water drainage on the steps and ramps should not create a tripping hazard.

4.4.4.3 When trailers are not intended to be ADA-compliant, handrails are required on at least one side of stairs and ramps. The top of gripping surfaces of handrails shall be 34 inches (865 mm) minimum and 38 inches (965 mm) maximum vertically above the walking surfaces, stair nosings, and ramp surfaces. Handrails shall be at a consistent height above walking surfaces, stair nosings, and ramp surfaces. Clearance between handrail gripping surfaces and adjacent surfaces shall be 1½ inches (38 mm) minimum.

4.4.4.4 When trailers are intended to be ADA-compliant, or when they display the international accessibility symbol (ISS), stairs, ramps, and handrails must conform to the specifications and requirements listed in the 2010 ADA Standards for Accessible Design that apply to Titles II and III Facilities.

4.4.5 The user cabins and wastewater holding tanks on trailers must be adequately ventilated. Additional ventilation is required when the activities occurring within the trailer produce heat or steam that could be hazardous to users or promote the growth of mold.

4.4.6 Adequate power is required for the operation of trailers. The power must be delivered from an approved source in a manner that is consistent with manufacturer specifications.

4.4.7 Water supplied to trailers must be fit for its intended use or better regardless of the source.

4.4.7.1 Water for bathing must be potable at the source.

4.4.7.2 Water for hand washing must either be potable at the source or have been potable before transfer to the freshwater tank on the trailer.

4.4.7.3 Freshwater tanks should be emptied and flushed no less than once every 30 days when stationary on a site and any time the trailer is moved to a different site.

4.4.8 Wastewater must be handled in a manner that minimizes risk to public health and the natural environment.

4.4.8.1 Trailers must be placed in a manner that provides accessibility for service vehicles and personnel to safely remove wastewater.

4.4.8.2 All tanks must be fully drained prior to relocation of a trailer.

4.4.8.3 When water requirements during use of the trailer may exceed freshwater capacity, additional tanks for the provision of freshwater and holding of wastewater may be supplied to supplement the onboard tanks, provided this is allowed by local law and the manner of doing so minimizes any danger of leakage or spills.

5. Disposal of Wastewater

5.1 Employers must ensure the collection and disposal of wastewater from nonsewered sanitation systems used on their sites conform to all applicable federal, state and local laws and occurs in accordance with procedures mandated by the authorities having jurisdiction.

5.2 Employers must ensure vendors supplying nonsewered sanitation solutions for their worksites meet all federal, state, and local standards, licensing, and permitting requirements for collecting, transporting, and disposing of liquid waste.

5.3 Every effort must be made to minimize any potential threat to the environment by following safety procedures and policies for accidental spills set forth by local authorities.

6. Revisions to Laws and Standards Referenced in this Document

When a law or standard referenced in this document is superseded by a revision approved by the American National Standards Institute, Inc., a similar standards body, or a government agency having jurisdiction, the most current approved revision shall apply.