



SSTS Installer Task Analysis

Subsurface Sewage Treatment System (SSTS) Program

Doc Type: Task Analysis

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7083.0760 Subp.1 A licensed installation business is authorized to construct, install, alter, extend, maintain, or repair all SSTS and the building sewer connected to a subsurface sewage treatment system only according to an approved design.

7083.0760 Subp.2 Installation licensees must: (A) ensure all work is done according to a design report approved by the local SSTS authority under part 7082.0500 and the plumbing program administrative authority as required under part 1300.0215, subpart 6; (B) provide adequate notice to the local unit of government and the plumbing program administrative authority when work requires inspection; (C) ensure that all work is done according to applicable storm water regulations and the Minnesota Plumbing Code; (D) provide as-built drawings to the owner and local unit of government within 30 days of system installation; (E) maintain quality control and quality assurance records for five years; (F) provide system owners with information concerning system operation and maintenance; (G) follow recommended standards and guidance documents for registered products and check the quality of materials used; (H) negotiate with the system owner and jointly determine who will be responsible for seeding, erosion and frost protection, watering, and other vegetation establishment activities; and (I) pay the septic system tank fee and submit the form according to Minnesota Statutes, section 115.551, including notification if no tanks were installed during the reporting year. The form and payment are due to the commissioner by January 31 for the previous calendar year's installations.

7083.0760 Subp.3 Certified installers must be at the worksite to meet supervision needs as determined by the training and experience level of the crew and local requirements and to ensure that the installation, alteration, or extension of an SSTS is in accordance with an approved design report and permit. The certified installer must prepare quality control and quality assurance records and prepare and sign as-built drawings. The certified installer must personally determine, supervise, and verify: (A) the system layout and placement; (B) that site conditions allow for construction; (C) the proper soil moisture conditions for excavation; (D) the elevations of sewage tanks and soil treatment systems; (E) the quality of tanks and suitability of other materials; (F) solutions to problems encountered; and (G) upgrade and repair advice provided.

I.	Participate in certification program	
	I.A	Complete required training
	I.B	Pass certification exam
	I.C	Apply for certification
	I.D	Complete experience with mentor and meet observation requirements
	I.D.1	Conduct work duties in compliance with restrictions of apprentice or employee designation
	I.E	Complete continuing education
II.	Obtain Installer business license	
	II.A	Apply for a business license
	II.A.1	Employ a Designated Certified Individual
	II.A.2	Maintain appropriate surety bond and insurance coverage
	II.A.3	Pay business license fee
	II.B	Renew business license
	II.C	Submit tank installation form and fees to the Minnesota Pollution Control Agency (MPCA)
III.	Communicate with clients, colleagues, and authorities	
	III.A	Contact local unit of government
	III.A.1	Participate in and comply with local SSTS construction permit program and conditions
	III.A.2	Comply with local requirements for SSTS repair or rejuvenation
	III.A.3	Call for construction inspections in accordance with local program requirements
	III.B	Identify additional administrative authorities and comply with all applicable requirements (e.g., Commercial Driver's License and Minnesota Department of Transportation, Department of Labor and Industry (DLI) plumbing program, DLI electrical program, Minnesota Department of Health well program, MPCA Construction Stormwater, Occupational Safety and Health Administration, U.S. Environmental Protection Agency Class V Underground Injection Control Program, etc.)
	III.C	Coordinate with system owner throughout project duration

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III.D	Clearly define contractor deliverables and client obligations when preparing project bid based on design specifications and entering into contractual agreement with client	
III.E	Access resources to identify and reconcile conflicts and concerns	
	III.E.1	Coordinate with Designer and local program official to request design change, change orders, clarification or further instructions
	III.E.2	Coordinate with subcontractors (plumbing, electrical, general contractor, etc.) to ensure project needs are met
	III.E.3	Contact MPCA representative
	III.E.4	Contact Minnesota Onsite Wastewater Association representative
	III.E.5	Contact SSTS Advisory Committee representative
	III.E.6	Contact University of Minnesota Onsite Sewage Treatment Program
	III.E.7	Contact proprietary product representative
III.F	Provide proper training and required supervision of work crew	
	III.F.1	Ensure all work is in accordance with approved design report and permit
	III.F.2	Provide mentorship and observation services according to state rule and best practices
IV.	Plan and prepare for installation	
IV.A	Read construction permit and identify any differences from design report	
IV.B	Contact <i>Gopher State One-Call</i> , obtain ticket number, and ensure all utilities have been located or cleared	
IV.C	Ensure private utilities are located or cleared by property owner	
IV.D	Ensure site clearing is completed without impairing future treatment abilities or hydraulic performance of the site, according to contract	
IV.E	Source registered or approved materials according to design specifications	
	IV.E.1	Source tanks, risers, effluent screens, maintenance hole covers, and sealants
	IV.E.2	Source pumps, alarms, control panel(s), and floats or sensors
	IV.E.3	Source piping for building sewer and supply pipe
	IV.E.4	Source soil treatment area supplies; distribution product or media, clean sand, geotextile material, inspection pipes, clean-outs, caps, drop boxes, fittings, primer, and glue
	IV.E.5	Source vegetative cover, erosion control, and freeze protection
	IV.E.6	Source registered treatment products
IV.F	Clarify electrical needs for project and identify parties responsible for installation	
IV.G	Confirm primary and secondary sites are protected from disturbance, compaction, or damage	
IV.H	Plan for material and equipment staging, delivery, and storage	
IV.I	Confirm site matches design report and construction permit	
	IV.I.1	Confirm designer has laid out and staked system on site
	IV.I.2	Identify benchmark and verify component elevations
	IV.I.3	Confirm setbacks will be met
	IV.I.4	Confirm system location will provide access for system management
	IV.I.5	Confirm usability of components proposed for reuse in design report
	IV.I.6	Encourage in-field soils verification prior to breaking ground
IV.J	Check plastic limit of soils and confirm constructability of site before installation	
V.	Install building sewer and collection system piping according to approved design	
V.A	Excavate trench for piping at depths defined in design	
V.B	Install building sewer in accordance with American Society for Testing Materials (ASTM) 2321 (gravity) or ASTM 2774 (pressure), with bedding and support to prevent sagging, settling, and freezing	
V.C	Install building sewer connected to septic system in accordance with Plumbing Program requirements	
V.D	Install piping using directional drilling method	
V.E	Install high density polyethylene piping using proper equipment, materials, and methods in accordance with ASTM 2774	
V.F	Install pipe lining properly	
V.G	Install piping to comply with backflow prevention and other floodplain requirements	
V.H	Install tracer wire, especially when piping travels long distances or changes direction	
V.I	Repair and maintain building sewer and collection system piping	

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VI.	Install registered sewage tanks according to approved design and manufacturer requirements	
	VI.A	Excavate hole for sewage tank(s) at depth defined in design
	VI.B	Receive tank delivery, verify tank information, and attach written tank documentation to as-built
	VI.C	Install sewage tanks level using proper bedding
	VI.D	Establish watertight seal at all connections, meeting requirements of ASTM C923
	VI.E	Establish watertight seal at all joints, meeting requirements of ASTM C990
	VI.F	Install method to protect against tank flotation if specified in design
	VI.G	Install properly rated pumps to be reachable, removable, and replaceable
	VI.H	Install discharge assembly configured to provide proper flow and prevent freezing and siphoning
	VI.I	Install flow measurement device
	VI.J	Install siphon dosing system
	VI.K	Install demand dosing controls to design, permit, and manufacturer specifications
	VI.L	Install timed-dosing controls to design, permit, and manufacturer specifications
	VI.M	Coordinate installation of buried wires with electrician
	VI.N	Verify control panel is operational and alarms are properly assembled on a separate circuit
	VI.O	Install baffles and effluent screen
	VI.P	Install privy
	VI.Q	Install holding tank system
	VI.R	Conduct in-field watertightness testing for all holding tanks and where otherwise required
	VI.S	Install watertight risers and secure maintenance hole covers
	VI.T	Insulate tank and covers as required
	VI.U	Backfill tank hole excavation and provide acceptable cover depth
	VI.V	Repair, reuse, and maintain sewage tank components
	VI.W	Abandon sewage tanks no longer in use
VII.	Install distribution system according to approved design	
	VII.A	Excavate trench for supply pipe and distribution system network
	VII.B	Install supply pipe in accordance with ASTM 2321 (gravity) or ASTM 2774 (pressure), with bedding and support to prevent sagging, settling, and freezing
	VII.C	Install manifold and confirm proper drainback
	VII.D	Construct distribution network laterals - cut pipe, drill holes, clear burrs, glue joints, and clear of construction debris
	VII.E	Install serial gravity distribution network
	VII.F	Install parallel gravity distribution network only if serial distribution is not possible
	VII.G	Install level pressure distribution network
	VII.H	Install non-level pressure distribution network
	VII.I	Install cleanouts for service access to distribution laterals
	VII.J	Install tracer line, especially when piping travels long distances or changes direction
	VII.K	Install flow-splitting/zoned distribution system
	VII.L	Repair, reuse, and maintain distribution system components
VIII.	Install soil dispersal system according to approved design	
	VIII.A	Install below-grade soil dispersal systems
		VIII.A.1 Excavate trenches along contour at depth and location defined in design
		VIII.A.2 Excavate seepage bed along contour at depth and location defined in design
		VIII.A.3 Place public domain or registered distribution media in accordance with design specifications and recommended standards or product registration guidance
	VIII.B	Install above-grade soil dispersal systems
		VIII.B.1 Cut vegetation in excess of two inches in length and remove organic debris
		VIII.B.2 Roughen absorption area surface properly along the contour
		VIII.B.3 Place clean sand across prepared mound absorption area to depth specified in design
		VIII.B.4 Construct level distribution media bed out of public domain or registered distribution media in accordance with design specifications and recommended standards or product registration guidance

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	VIII.C	Use appropriate construction equipment and protect soil dispersal area and reserve area from compaction
	VIII.D	Install anchored inspection pipes
	VIII.E	Place geotextile fabric between distribution media and cover soil
	VIII.F	Backfill and place acceptable soil cover materials and depth
	VIII.G	Repair, reuse, extend, or alter soil treatment area in accordance with design report and construction permit
	VIII.H	Abandon soil dispersal system no longer in use
	VIII.I	Install water table monitoring device
IX		Install Type IV treatment products and Type V system components according to approved design and manufacturer requirements
	IX.A	Install advanced treatment technology in accordance with Recommended Standards and Guidance or product registration requirements
	IX.B	Install aerobic treatment unit blower and vent
		IX.B.1 Install fixed film aerobic treatment unit
		IX.B.2 Install suspended growth aerobic treatment unit
	IX.C	Install single pass media filter
	IX.D	Install recirculating media filter
	IX.E	Install Type V system components in accordance with engineering specifications
		IX.E.1 Install constructed wetland
		IX.E.2 Install drip distribution
	IX.F	Install custom control panels
	IX.G	Install chlorine disinfection systems
	IX.H	Install UV disinfection system
	IX.I	Install access for sampling or monitoring
	IX.J	Repair, reuse, maintain advanced treatment products
	IX.K	Abandon advanced treatment products
X		Finish system and complete project
	X.A	Ensure that vegetation establishment activities begin immediately after placement of topsoil
	X.B	Prepare, sign, and submit as-built drawing and required forms to owner and local SSTS program within 30 days
	X.C	Maintain quality control and quality assurance records for a period of at least five years
	X.D	Provide system owners with information concerning system operation and maintenance
	X.E	Conduct system start-up and operational visit to assure operation - e.g., calibrate pumps, verify floats, check for settling, etc.
	X.F	Submit abandonment form to Local Governmental Unit