

10/10/2025

THE LANDIS SEWERAGE AUTHORITY

SEWER DESIGN STANDARDS & CHECKLIST



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Objective

To establish standard practices and procedures for sanitary sewer design, design review and construction for proposed sanitary sewer service to properties within the Landis Sewerage Authority's jurisdiction.

To set standards for design and procurement of equipment for the construction of privately owned sanitary sewer pump stations.

Section 1: Sanitary Sewer Design General Info

- A. All information shall be submitted to the Landis Sewerage Authority at 1776 S Mill Rd, Vineland NJ 08360 to the attention of Anthony Tobolski, Executive Director.
 - a. A 'complete' application package shall include, but not limited to:
 - i. Completed application (Residential, Multi-Family, Commercial, Industrial or Public Health/Facility)
 - ii. Completed W-2
 - iii. Signed escrow check for the appropriate amount – see application for details
 - iv. Signed and sealed design plans including a minimum of Cover, Notes/Details, Plan & Profile sheets. Additional sheets may be requires at the LSA's discretion.
 - v. Completed Treatment Works Approval application (if applicable) – see NJDEP website for forms and checklists
 - vi. Completed Sanitary Sewer Design Checklist
- B. The LSA will review sanitary sewer construction plans and related documents in the order in which they are submitted.
- C. The LSA may require project design modifications to facilitate the expansion of the proposed sanitary sewer system collection system to extend sewer service to adjacent properties or to provide conveyance capacity for connection of other collection systems. Modifications may include, but are not limited to, larger pipe sizes or pump station infrastructure, increased depth of sanitary sewer manholes or wet wells, pipe stubs or addition sewer system assets. The Design Professional is expected to fully cooperate with the LSA and other developers as necessary to promote an efficient sanitary sewer system.
- D. Additional information may be required by New Jersey regulatory agencies that are responsible for granting various permits for the construction of sanitary sewer systems. The LSA will communicate those requirements whenever possible, but the

Design Professional is solely responsible for knowing and understanding those requirements and providing the necessary information to the appropriate agency.

- E. The New Jersey Department of Transportation has jurisdiction regarding the location and activity related to sewer or sewer work located in a public right-of-way and must issue a utility installation permit for the work. The Owner/Contractor will apply for this permit on utilizing information supplied by the applicant and therefore requires that all necessary information to obtain a utility installation or traffic control permit from NJDOT be provided by the applicant on the sewer installation plan. Be aware that NJDOT may deny the applicant's request to perform work in the public right-of-way.

Section 2: Sanitary Sewer Design Checklist & Exceptions

- A. The applicant shall include the latest version of the Sanitary Sewer Design Checklist when submitting sanitary sewer construction plans for the LSA's review and approval. All items on the checklist must be clearly address or the submission will be rejected.
- B. Any exception to standards cited or checklist requirements must be clearly identified by the Design Professional when plans are submitted for LSA review, along with technical justification as to why the exception has been requested. At a minimum, justification shall include alternatives investigated by the Design Professional and benefits to the LSA. The LSA will review the information provided and/or require additional information. The LSA shall be the sole judge in all circumstances in determining whether the requested exception is acceptable. Exceptions to these design standards and practices shall be identified as early in the design practice as possible.
- C. The LSA will consider all exceptions on a case-by-case basis. Exceptions may not be construed to establish a standard for future design submissions

Section 2.1: Sanitary Sewer Design Checklist - Submission

YES	NO	N/A	EXCEPTION	ITEM DESCRIPTION
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed Residential/Commercial/Industrial application
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed W-2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Signed Escrow Check
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Signed & Sealed Design Plans
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed NJDEP Treatment Works Approval Application (if applicable) – TWA-1, WQM003T, WQM006 forms or current equivalent

Section 2.2: Sanitary Sewer Design Checklist – Gravity Mains

YES	NO	N/A	EXCEPTION	ITEM DESCRIPTION											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum diameter for sewer mains is eight (8) inches.											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum three (3) feet of cover over the crown of pipe but no more than fifteen (15) feet of cover to final grading.											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Material is PVC SDR-35 or SDR-26 when depth is ten (10) feet or greater.											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The horizontal separation between proposed sewer and water mains shall be a minimum ten (10) feet.											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The horizontal separation between proposed sewer and existing utilities shall be a minimum five (5) feet. A greater separation distance may be required at LSA's discretion pending pipe size and depth.											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum ten (10) feet separation between proposed sewer and existing or proposed trees, fences, lights, business signs, etc.											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Main installation shall comply with the LSA's standard construction details and specifications. All appropriate details are included in the plan set.											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum pipe slope shall be:											
				<table><tr><th>Pipe Dia. (in.)</th><th>Minimum slope (ft/100 ft)</th></tr><tr><td>8</td><td>0.30</td></tr><tr><td>8 (Terminal Segment)</td><td>0.50</td></tr><tr><td>10</td><td>0.20</td></tr><tr><td>12</td><td>0.15</td></tr></table>		Pipe Dia. (in.)	Minimum slope (ft/100 ft)	8	0.30	8 (Terminal Segment)	0.50	10	0.20	12	0.15
				Pipe Dia. (in.)	Minimum slope (ft/100 ft)										
				8	0.30										
				8 (Terminal Segment)	0.50										
				10	0.20										
12	0.15														
Meet minimum velocity of 2 feet per second if pipe type differs from PVC. Any proposed pipe larger than 12 inches requires a meeting with the LSA due to the size of the proposed development.															

Section 2.3: Sanitary Sewer Design Checklist – Manholes

YES	NO	N/A	EXCEPTION	ITEM DESCRIPTION
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum diameter for manholes is four (4) feet.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Manholes shall be epoxy lined precast concrete.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grade rings or brick/block and mortar are acceptable. Riser rings are prohibited.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A minimum 0.1' drop across manholes is provided if angle is 45-degrees or less between inlet and outlet direction. A minimum 0.2' drop across manholes is provided for all other cases.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Manholes shall be placed at all locations where a change in pipe size, direction or slope is proposed. Manholes shall be no more than three hundred (300) linear feet apart.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Manhole frame and cover elevations shall match final grading if proposed in roadway, concrete or paved surface.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Manhole frame and cover elevations in unpaved or off-road areas shall be six (6) inches above final grade or one (1) foot above 100-year flood plain elevation.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Any sewer main entering a manhole with an invert more than 24 inches above the channel invert requires an inside drop structure. See LSA Standard Detail.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The LSA may require a specific material and/or interior or exterior coating where conditions warrant. Conditions may include but not limited to: industrial discharge, high velocity, poor subsurface conditions, force main receiving manhole, etc.

Section 2.4: Sanitary Sewer Design Checklist – Laterals

YES	NO	N/A	EXCEPTION	ITEM DESCRIPTION
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum diameter for sewer laterals is six (6) inches.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum three (3) feet of cover over the crown of pipe but no more than fifteen (15) feet of cover to final grading.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Material shall be PVC SDR-35 or SDR-26 when depth is ten (10) feet or greater.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum slope for sewer laterals within the public right-of-way shall be 1% or current plumbing code, whichever is greater.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Laterals connecting to existing sewer mains shall use Romac saddle or approved equal. See LSA standard detail.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Laterals off proposed sewer mains shall be installed per LSA's standard detail.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Laterals shall service one building or unit only. Duplexes shall require two laterals. Commercial buildings with a common discharge shall conjoin in an 8-inch sewer or greater.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lateral installation shall comply with the LSA's standard construction details and specifications. All appropriate details are included in the plan set.

Section 2.5: Sanitary Sewer Design Checklist – Force Mains

YES	NO	N/A	EXCEPTION	ITEM DESCRIPTION
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Diameter of proposed force main shall require sizing and velocity calculations.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum design velocity shall be two (2) feet per second or greater but less than six (6) feet per second.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum 42 inches of cover over the crown of pipe.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Material shall be High Density Polyethylene (HDPE) DR11, C900 PVC SDR-18 or approved equal.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tracer wire is required across entire length of main. Tracer wire access pits are required at 1,000 ft intervals and in accessible locations. Minimum of one (1) per force main.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Force mains shall be pressure tested prior to activation. Add note to plan set.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Connections to existing force mains shall require a Smith & Blair tapping saddle or approved equal. See LSA standard detail.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High points shall require air release manhole with appropriate valve (Brass or stainless steel fittings)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test holes are required for utility crossings prior to installation.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Force main installation shall comply with the LSA's standard construction details and specifications. All appropriate details are included in the plan set.

Section 2.6: Sanitary Sewer Design Checklist – Grinder Pump

YES	NO	N/A	EXCEPTION	ITEM DESCRIPTION
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residential grinder pumps shall be E-One stations.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Commercial/Industrial location grinder pump make/model and details to be provided in plan set for review.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	E-One stations shall be placed at the edge of the right-of-way or within easement in an accessible location. Add note for contractor to contact LSA minimum 72-hours prior to installation for location approval.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	E-One stations shall have integral check valves and have their standard check valve/curb stop assembly installed immediately downstream of the station in an accessible valve pit. See LSA standard details.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	E-One control panel shall be placed in an accessible location.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grinder pump station installation shall comply with the LSA's standard construction details and specifications. All appropriate details are included in the plan set.

Section 2.7: Sanitary Sewer Design Checklist – Miscellaneous

YES	NO	N/A	EXCEPTION	ITEM DESCRIPTION
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A minimum 1,000-gallon external grease interceptor is required for commercial food establishments and food processors. Larger traps may be required at the sole discretion of LSA. See LSA's standard detail.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A minimum 1,000-gallon oil/water separator is required for vehicle maintenance shops, car washes, etc. Requirement is at the sole discretion of the LSA based on the proposed use of the site.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Easements are required for any sanitary sewer main that traverses private property. LSA requires a copy of the recorded easement prior to construction activities. Ownership of the sewer main and easement parties shall be determined on a case by case basis.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LSA requires a note stating "Landis Sewerage Authority requires a minimum 72-hour notice prior to construction activities to schedule inspection services. No work shall be done on the sanitary sewer without LSA staff present"

SUBMISSION PREPARER'S CERTIFICATION

I, _____, hereby state that this checklist is complete and accurate.

Signature

Date

Printed Name