

Monitoring Access Point Guide



Source Control

Public Works Environmental Services
sylvanlake.ca/sourcecontrol


Sylvan Lake

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What's In This Guide

This guide is designed for understanding the proper function, operation, and maintenance of interior and exterior monitoring access points (MAPs). Information is provided for Business Owner/Operators and third-party service providers servicing Commercial, Industrial, and Institutional developments in the Town of Sylvan Lake. For more information visit sylvanlake.ca/sourcecontrol.

What Are Monitoring Access Points?

Monitoring access points (MAPs) are wastewater sampling chambers used to periodically monitor and inspect wastewater at commercial, industrial, and institutional facilities. The term MAP includes both interior and exterior monitoring access points.

Exterior MAPs are standard 1200mm sanitary manholes located on the private wastewater service, at the property line. They capture the combined wastewater flow downstream of where all plumbing fixtures from the common water meter have combined (known as “end of pipe”). This includes all effluent that has passed through pre-treatment equipment and all sanitary waste lines. They are designed and located in such a way to ensure 24-hour access to uncontaminated wastewater samples in all weather conditions.

Interior MAPs are access points located inside the facility accessible during business hours. They are designed to capture the non-domestic wastewater downstream of pre-treatment equipment and upstream from washrooms and all other domestic wastewater. They are used by both facility operators and Town of Sylvan Lake staff to collect verification samples to confirm that the onsite pre-treatment equipment is functional. Depending on the pre-treatment equipment and type of operation the size, shape, and location of interior MAPs can vary considerably.

Contact the Environmental Services Department to confirm your plans before installing any MAPs. Our staff would be pleased to provide guidance and suggestions on the appropriate sampling point, type, and location.

Why Are MAPs Important?

Both facility operators and Town of Sylvan Lake staff must be able to sample wastewater to have accurate knowledge of wastewater quality.

The Town of Sylvan Lake sends all of its wastewater to the City of Red Deer for treatment and eventual discharge into the Red Deer River. Even the most advanced wastewater treatment technologies cannot remove all contaminants. Source Control programs help to protect our water by preventing prohibited and restricted wastes from entering the water sources through sanitary and storm water

collection systems. Restricted and prohibited wastes can damage the collection system and increase operation and maintenance costs.

Verification samples and record keeping help facility operators and regulatory staff confirm pre-treatment equipment is functional, and the wastewater leaving the site meets standards. Wastewater that does not meet standards puts the environment, our utility operators, and our system at risk.

When Are MAPs Required?

Exterior MAPs are required when the pipe is new, when the premises are redeveloped; or when required to do so by the Environmental Services Department. Interior MAP's are required at facilities that are required to have an exterior MAP and have onsite pre-treatment equipment.

Where Should MAPs Be Located?

For safety and compliance requirements, the exterior MAP should be located at the property line or easement line on the sanitary service, and must always be accessible to Town staff. (i.e. not located in traffic, parking, drive-thru area, in a creek, or behind a fence)

To ensure an uncontaminated sample, the wastewater generated from one water meter must combine at one location with a dedicated exterior MAP prior to mixing with wastewater from

another water meter. In the case of a multi-building commercial site (e.g. strip mall, neighbourhood mall, etc.) additional exterior MAPs must be installed on the services to the individual units prior to the service connecting to the site's common main.

If the exterior MAP cannot be located on public property, an access easement will be required. The easement is to be a minimum of 5m x 5m surrounding the MAP and must include a minimum

5m wide access easement from the site's entry point to the manhole to allow Town staff to access the manhole. The requirement for an easement will be determined at the time of the development application and will be a condition of approval.

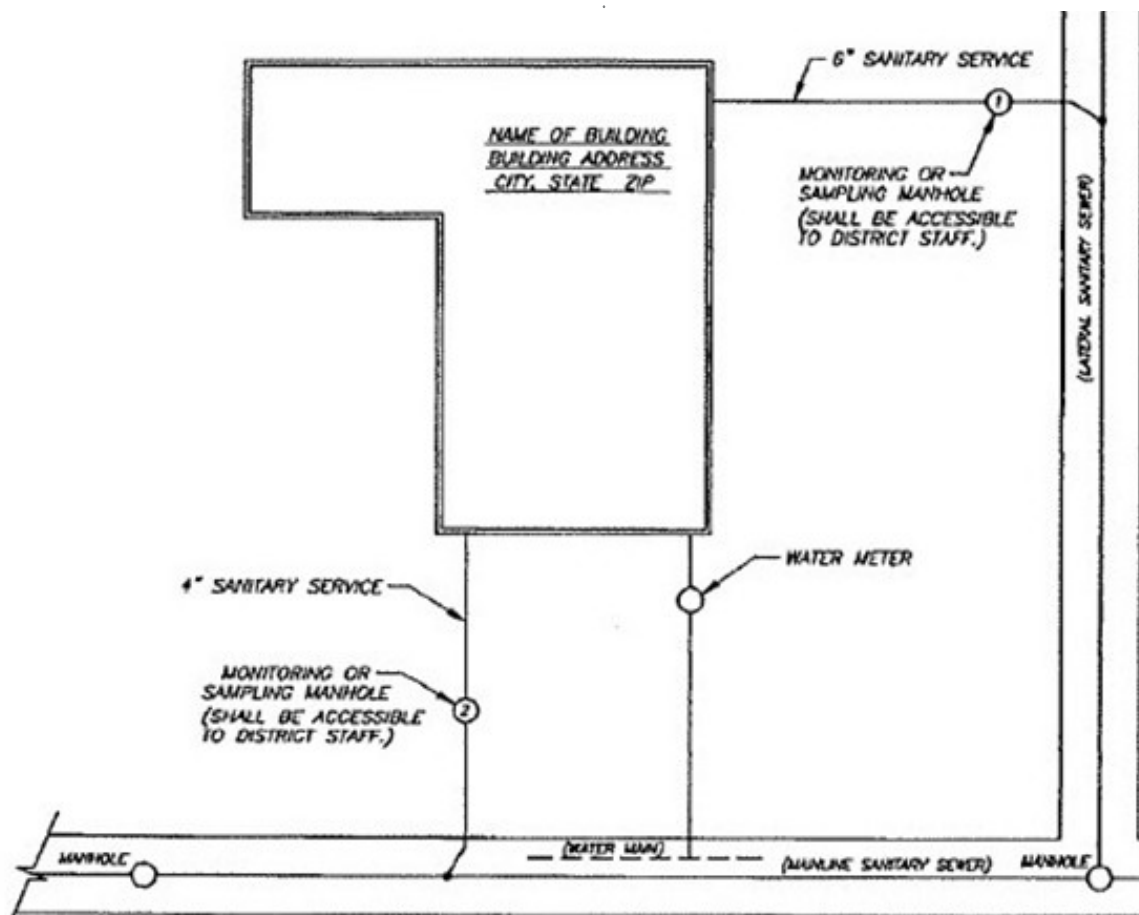
Monitoring and inspection activities are extremely difficult if these requirements are not met. For example, if a MAP is in a vehicular traffic area (driveway, road, restaurant drive-thru), this is extremely dangerous and creates accessibility issues for the sampling and inspection team. Another example is a MAP located in a parking spot in which a vehicle occupies; often, it's difficult to locate the vehicle's owner to move a parked vehicle. All efforts should be made to ensure exterior MAPs are installed in non-traffic, non-parking areas.

Interior MAPs must be;

- » easily accessible during operating hours
- » located downstream of pre-treatment equipment
- » located upstream from washrooms and domestic waste

Consult the pre-treatment device's manufacturer technical specifications for recommended distances from the pre-treatment equipment to the interior monitoring access point location.

Contact the Environmental Services Department to confirm your plans before installing any MAPs. Our staff would be pleased to provide guidance and suggestions on the appropriate sampling point, type, and location.



1. Figure 3-4 | ASPE Plumbing Engineering Design Handbook-Volume 3 2023

Design Criteria

It is the responsibility of the Developer/Consulting Engineer to ensure that the design conforms to all Municipal, Provincial, Federal and other regulatory requirements and to notify the Town if any deviations from these guidelines are requested.

All exterior MAPs must be built to the current Town of Sylvan Lake General Construction Specifications and the Development Process and Design Guidelines (DPDG) as amended from time to time.

1. For all private sewage lines with a pipe diameter of 300mm (12 inches) or less, an acceptable exterior MAP is a standard 1200mm diameter pre-cast concrete manhole with an appropriate frame and cover.
2. Manhole bases must be pre-cast complete with flow channel, benching, and pipe stubs.
3. The flow channel through manholes, must conform to the shape and slope of the sewer pipe.
4. The minimum flow channel depth is at least one-half the diameter of the downstream sewer.
5. The entire outer surface of all sanitary precast concrete manholes must be coated with two (2) coats of an approved bitumastic coating. Coating must be either:
 - » Koppers 300 M Epoxy
 - » Pennsbury 32-B-4 Epoxy
 - » Sealmastic 501
 - » or approved equal
6. In areas where high water table is above the bottom of the exterior MAP, the structure is to have both a concrete waterproofing admixture added to the mix design and a fully sealed exterior waterproofing membrane cover the full exterior including under the base slab. Shop drawings are to be provided to the Town for review and approval prior to installation. Buoyancy proofing may also be required.
7. The collar and cover for the exterior MAP shall not exceed 200 mm above or 100 mm below grade.
8. The sewer pipe at the base of the exterior MAP must be exposed (open) to the wastewater flow.
9. The manhole collars and covers must be aligned with the interior walls or cone at all times.
10. For retrofits only: If space limitations will not allow the installation of a standard 1200 mm manhole, alternative plans may be submitted to the Town of Sylvan Lake for consideration. These alternative plans may include a dipwell (standpipe) which is a vertical pipe that extends from a sewer pipe for purpose of obtaining a wastewater sample.
 - a) A dipwell (standpipe) must meet the following criteria:
 - » TOSL staff must be able to view the flow;
 - » it must have a minimum diameter of 200 mm (8 inches);
 - » it must have a removable cap; and
 - » it must have a sheltered and tamper proof enclosure accessible 24 hours a day to accommodate both automated sampling and/or flow monitoring equipment.

Installation Process

Exterior monitoring access points can be installed two (2) ways.

» Town installed

» Developer/Consulting Engineer installed

Town installed exterior MAPs

1. Once the development permit is approved the customer requiring an exterior MAP submits a request to install to the Town for review.

Make a request to the Town to install your exterior MAP by scanning this code or by visiting: [Sylvanlake.ca/sourcecontrol](https://sylvanlake.ca/sourcecontrol).



2. Upon receipt of all required information and fees, verification of the customer's identity and the accuracy of the information, the Town will advise the customer whether and on what terms the Town is prepared to supply an exterior MAP to the customer, and any conditions, including without limitation, payments by the customer, that must be satisfied as a condition of installation of a MAP.
3. The unit price for an exterior MAP will include the supply of all materials, equipment, and labour including supply and installation of precast manhole sections, supply and installation of cast-in-place concrete, base structure, pipe stub outlets, benching, grouting,

sealing joints, and all other incidental work required to adhere to the requirements of installation.

4. Once approved, a date is set for installation. Please note that although the Town would like to accommodate the preferred installation date of the customer, installation dates are dependant on access, locates, weather, and contractor availability.
5. The Town will provide and install a suitable exterior MAP.
6. The Town shall ensure that all installation work complies with all applicable legal requirements and standards.

NOTE: The Town does not install interior monitoring access points. Our staff would be pleased to provide guidance and suggestions on the appropriate sampling point, type, and location however the customer is advised to hire a licensed plumber who can perform the work.

Developer/Consulting Engineer installed

1. The customer requesting a MAP shall follow submittal procedures as outlined in the Town of Sylvan Lake's General Construction Specifications.
 - » Review submittals prior to submission to the Town. Submittals not stamped, signed, dated, and identified will be returned without being examined and shall be considered rejected.
 - » The Contractor's responsibility for errors or omissions in submission from requirements of the contract documents is not relieved by the Towns' review

- » Only applications prepared to professional drafting standards will be accepted. All materials submitted must be of high quality and include all applicable plans and documents. This allows us to meet our review timelines and provide thorough and accurate reviews.
 - 2. Work affected by the submittal must not proceed until the Town's Engineers' review is complete. Approval will be provided in writing.
 - 3. The Developer/Consulting Engineer must ensure that all installation work complies with all applicable legal requirements and standards.
 - 4. The Developer/Consulting Engineer must ensure that the exterior MAP is installed in the approved location, and depth.
 - 5. The Developer/Consulting Engineer must submit a traffic interruption permit application (TIP) if work will interfere with roadway(s) during installation.
- 6. Please note that all work performed on existing sewer systems or on the installation of new sewer mains, manholes, services, and other sewer-related appurtenances must be done in accordance with:
 - i. Town of Sylvan Lake (TOSL) General Construction Specifications (latest edition)
 - ii. Town of Sylvan Lake (TOSL) Development Process and Design Guidelines (latest edition)
 - iii. Approved construction drawings, and
 - iv. Manufacturer's Specifications
 - » All material found during the progress of the work with cracks, flaws or other defects must be rejected by the Developer/Consulting Engineer. All rejected materials must be promptly removed from the work site or rehabilitated to Manufacturer's Specifications by the Contractor.
 - » Prior to commencement of any approved work, notification must be given to the Environmental Services Manager a minimum of 48 hours in advance of the proposed work. Environmental Services 403-887-2800.
 - » All excavation must be in accordance with the provisions of the Province of Alberta's Occupational Health and Safety Act, Regulation and Code.

Disclaimer

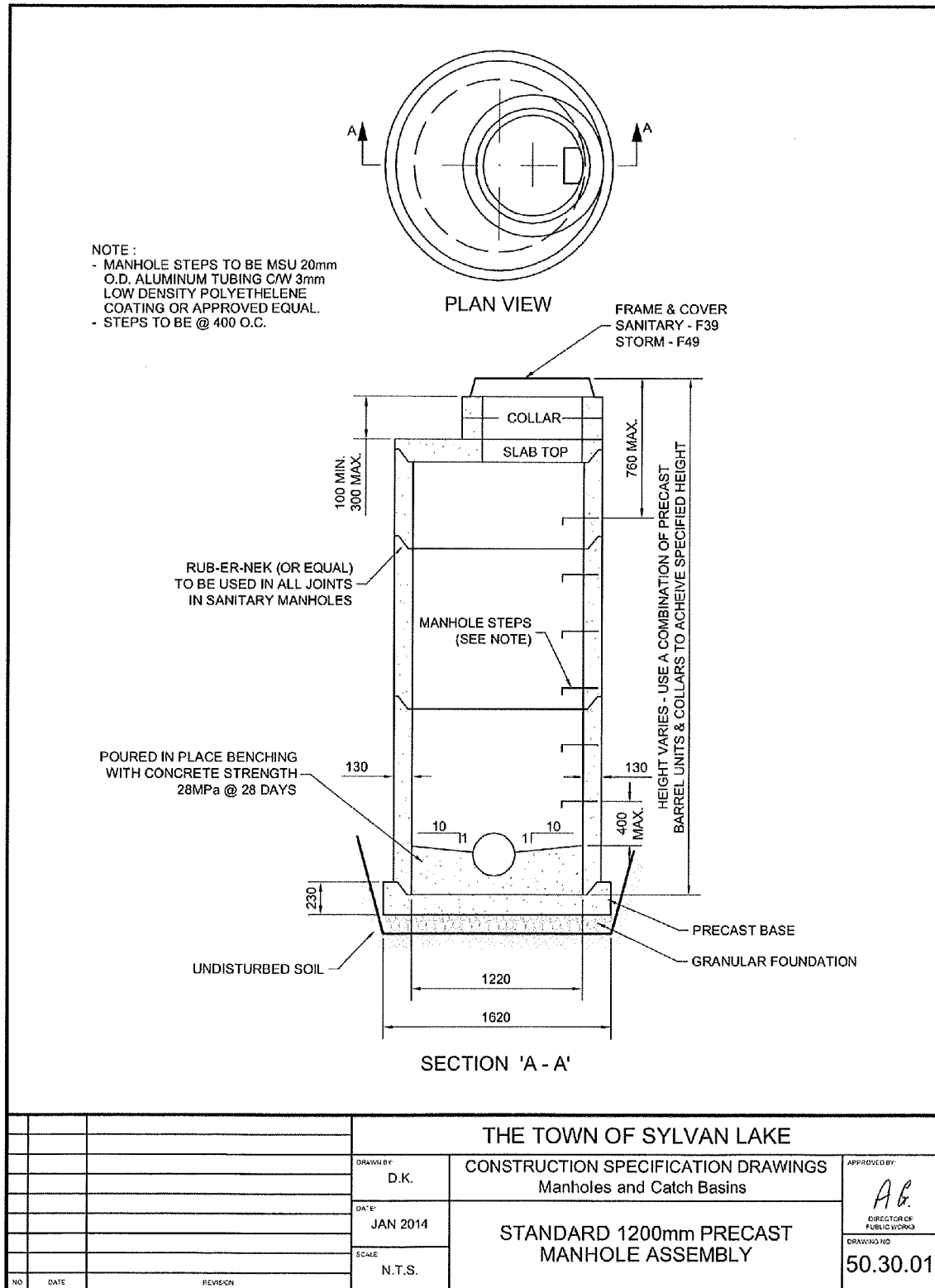
The "Town of Sylvan Lake Sanitary Sewer-Monitoring Access Point Guide", henceforth known as "this guide", is made available for use in the Town of Sylvan Lake effective as of September 2025.

This guide is presented as accurate and complete as of the effective date. Use of this guide shall not absolve any user from the obligation to exercise their professional judgement and follow good practice.

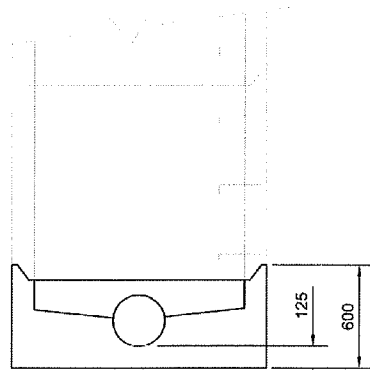
Should any user have question as to the intent or accuracy of any specification or drawing herein, or concern that conflict may exist between the manufacturers' or suppliers' recommended installation procedures and this guide, the user is advised to seek clarification by sending an email to publicworks@sylvanlake.ca.

Nothing in this guide exempts a person from the requirements, penalties and/or liabilities within all applicable municipal, provincial, or federal legislation or standards.

Standard 1200mm Precast Manhole Assembly

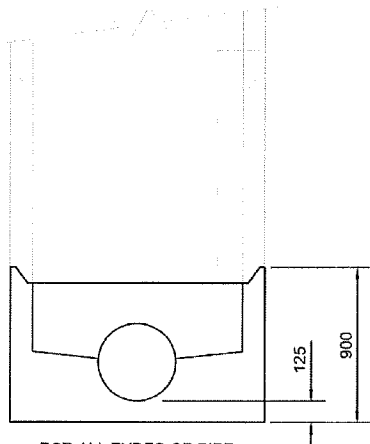


Precast Pre-benched Bases



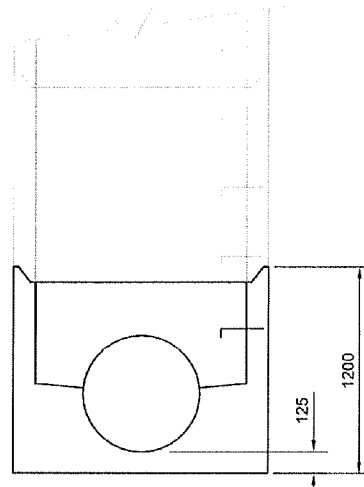
FOR ALL TYPES OF P.V.C. PIPE
SIZES 150mm to 300mm

600 PREBENCH



FOR ALL TYPES OF PIPE
SIZES 375mm to 450mm

900 PREBENCH

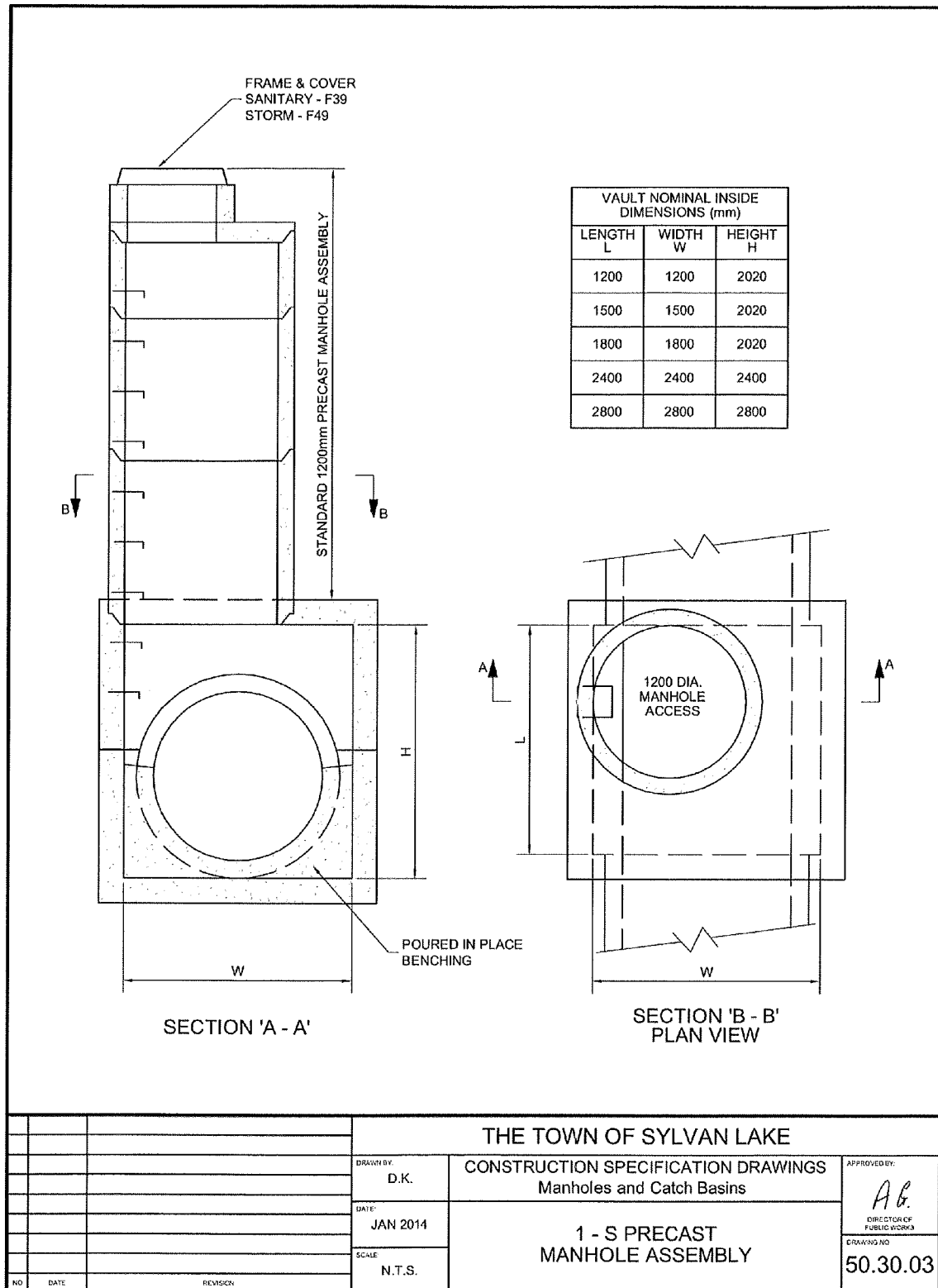


FOR ALL TYPES OF PIPE
SIZES 525mm to 675mm

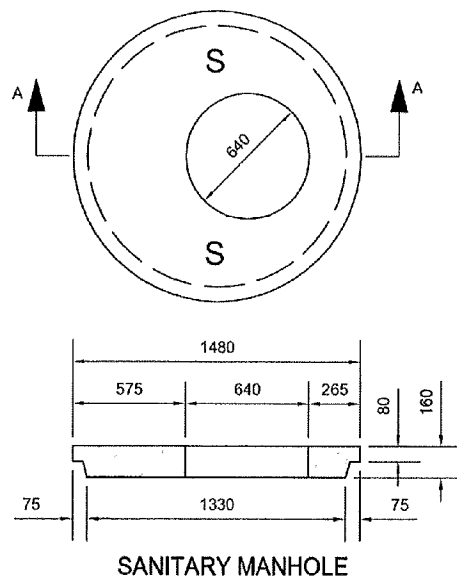
1200 PREBENCH

			THE TOWN OF SYLVAN LAKE		
			DRAWN BY	CONSTRUCTION SPECIFICATION DRAWINGS Manholes and Catch Basins	APPROVED BY  DIRECTOR OF PUBLIC WORKS
			D.K.		
			DATE:	PRECAST PREBENCHED BASES FOR 1200mm MANHOLE ASSEMBLY	DRAWING NO. 50.30.02
			JAN 2014		
			SCALE:	N.T.S.	
NO.	DATE	REVISION			

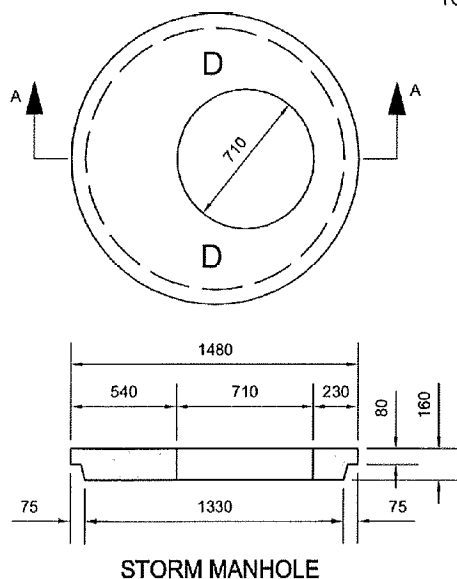
Precast Manhole Assembly



Precast Slab Tops For 1200mm Manholes

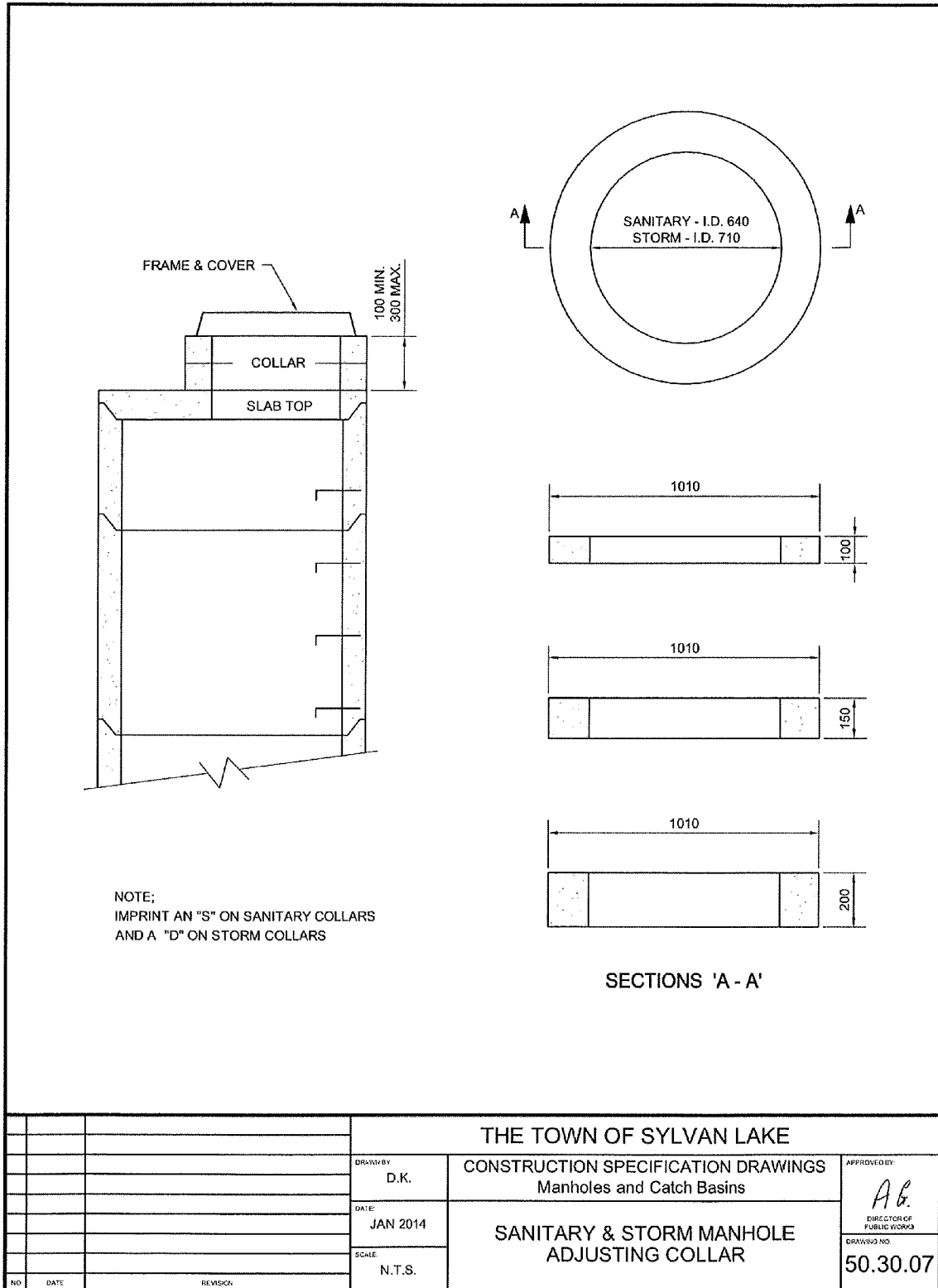


NOTE :
IMPRINT "S" ON SANITARY SLAB
TOP AND "D" ON STORM SLAB TOP.

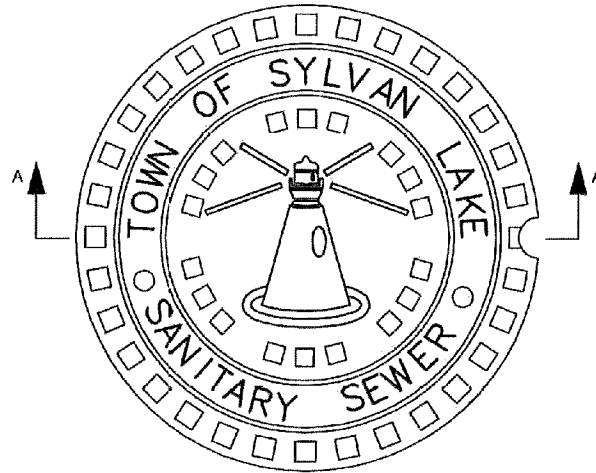


			THE TOWN OF SYLVAN LAKE		
			DRAWN BY: D.K.	CONSTRUCTION SPECIFICATION DRAWINGS Manholes and Catch Basins	APPROVED BY: <i>A.B.</i> DIRECTOR OF PUBLIC WORKS
			DATE: JAN 2014	PRECAST SLAB TOPS FOR 1200mm MANHOLES	DRAWING NO. 50.30.06
			SCALE: N.T.S.		
NO.	DATE	REVISION			

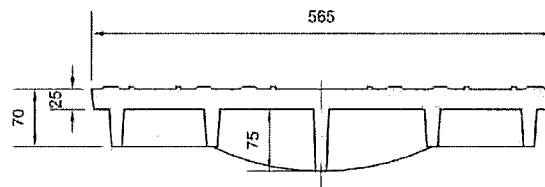
Sanitary & Storm Manhole Adjusting Collar



Standard Sanitary Sewer Manhole Cover



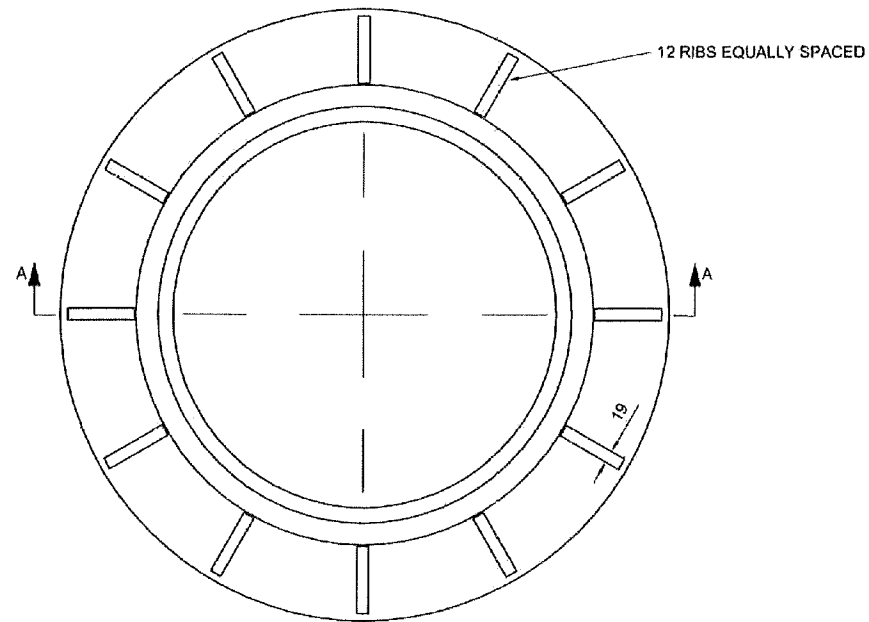
PLAN



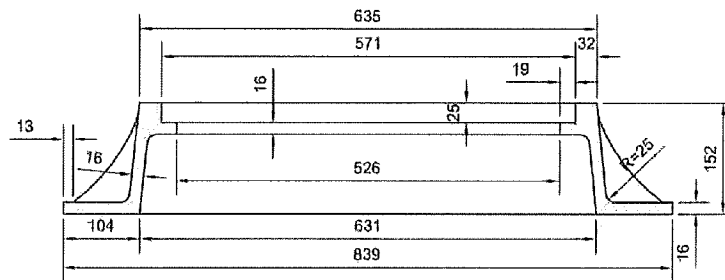
SECTION 'A - A'

			THE TOWN OF SYLVAN LAKE			
			DRAWN BY:	CONSTRUCTION SPECIFICATION DRAWINGS	APPROVED BY:	
			D.K.	Manholes and Catch Basins	 DIRECTOR OF PUBLIC WORKS	
			DATE:	F-39 STANDARD SANITARY SEWER MANHOLE COVER		DRAWING NO. 50.30.21
			JAN 2014			
			SCALE:			
			N.T.S.			
REP:	TRAC:	REVISION				

Standard Sanitary Sewer Manhole Frame



PLAN



SECTION 'A - A'

MATERIAL SPECIFICATION :

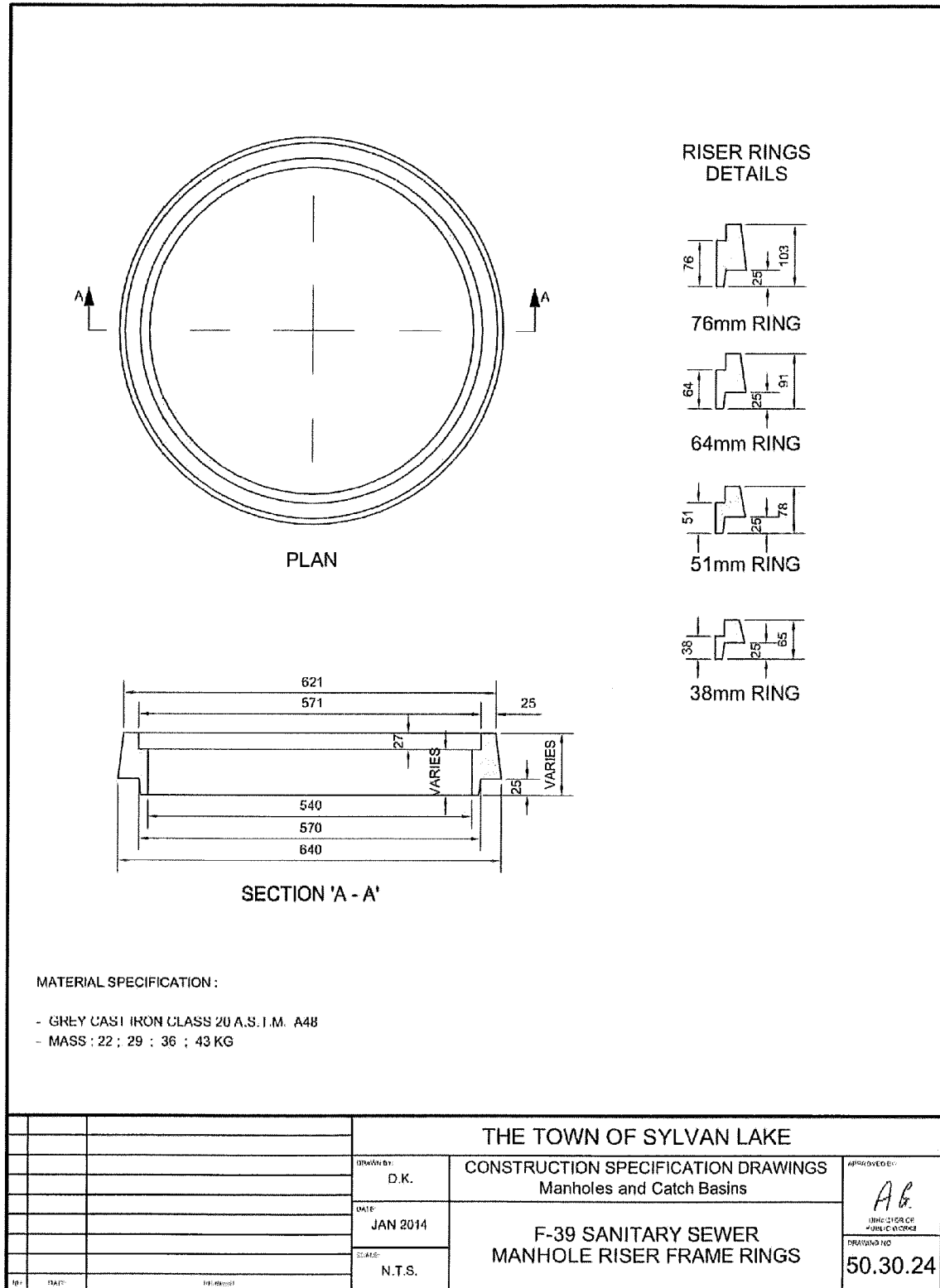
- GREY CAST IRON TP CONFORM TO CLASS 20 A.S.T.M. A48
- MASS = 80 KG
- DIMENSIONS IN MILLIMETERS

NOTE:

- MANHOLE COVER TO BE TO TOWN OF SYLVAN LAKE DESIGN

			THE TOWN OF SYLVAN LAKE		
			DESIGNED BY:	CONSTRUCTION SPECIFICATION DRAWINGS Manholes and Catch Basins	APPROVED BY: A.B. DIRECTOR OF PUBLIC WORKS
			D.K.		
			DATE:	F-39 STANDARD SANITARY SEWER MANHOLE FRAME	DRAWING NO. 50.30.22
			JAN 2014		
			SCALE:	N.T.S.	
APP.	DATE:	DESIGNED BY:			

Sanitary Sewer Manhole Riser Frame Rings





Definitions

Construction Drawings: Engineering plans and profiles, in hard copy or electronic form, prepared by the Consulting Engineer, showing the details of the installation of the various Municipal Improvements within the development using standard engineering symbols and forms, and conforming to the current Development Process and Design Guidelines and General Construction Specifications as amended from time to time.

Construction Specifications: The Town's minimum requirements as outlined in the current Development Process and Design Guidelines (DPDG) and General Construction Specifications (GCS). Variances from or additions to the DPDG and GCS must be prepared by the Consulting Engineer and specify the legal, administrative and technical aspects of the variation. Any variation must be approved by the Town.

Developer/Consulting Engineer: The registered and equitable owner(s) of the Development lands including, but not restricted to, the Consulting Engineer, contractors, and / or subcontractors acting for or on behalf of the owner.

Professional Engineer: A licensed member of The Association of Professional Engineers and Geoscientists of Alberta.

Pre-treatment equipment: Equipment that is used for the reduction, elimination or alternation of pollutants in the wastewater prior to discharge into the sanitary sewer. This reduction or alteration can be obtained by physical, chemical, or biological processes, through pollution prevention, or by other means, except by diluting the concentration of pollutants.

Non-domestic wastewater: Wastewater from industrial, commercial or institutional processes that does not include wastewater from washrooms, non-industrial washing machines and changing rooms.

Town: The municipal corporation of the Town of Sylvan Lake and its duly authorized employees, agents, contractors and other representatives or the geographic area contained within the boundaries thereof, as the context requires.



Monitoring Access Point Guide

sylvanlake.ca/sourcecontrol

Environmental Services Department | 403-887-2800 | publicworks@sylvanlake.ca

Land Acknowledgement:

The Town of Sylvan Lake acknowledges that we are located on Treaty 6 territory, the traditional and ancestral territory of the Cree, Dene, Blackfoot, Saulteaux, and Nakota Sioux. We acknowledge that this territory is home to the Métis Settlements and the Métis Nation of Alberta, Region 3.

We are grateful for the Traditional Knowledge Keepers and Elders who are still with us today and those who have gone before us. We make this acknowledgment as an act of reconciliation and gratitude to those whose territory we reside on or are visiting.



Helpful Links

Visit sylvanlake.ca/sourcecontrol for these helpful links and brochures.

- » Town of Sylvan Lake (TOSL) Development Process and Design Guidelines 2018 Edition Version 2.0
- » Town of Sylvan Lake (TOSL) General Construction Specifications 2014 Edition Version 2.0
- » Town of Sylvan Lake (TOSL) BYLAW
- No. 1805/2020 THE WATER AND SEWAGE BYLAW
- » Chapter 3 of the American Society of Plumbing Engineers Plumbing Engineering Design Handbook Volume Three Special Plumbing Systems
- » MAP TOSL request for install

References

1. ASPE Plumbing Engineering Design Handbook-Volume 3 2023