

**CORPORATION OF THE VILLAGE OF BARNWELL
IN THE
PROVINCE OF ALBERTA**

**WATER & SEWER SYSTEM MAINTENANCE
POLICY NO. 2-99**

Purpose:

To establish an inspection and maintenance program for the water and sewer system within the Village of Barnwell.

Policy Statement and Guidelines:

A. Fire Hydrants Inspections and Recording

To ensure that all Fire hydrants are in proper working order the following maintenance schedule will be followed:

Visual Inspection - All hydrants will be checked for condition of paint, vertical status, accessibility and possible plant overgrowth, semi-annually.

Static Pressure Test - The following procedure will be performed annually:

1. Locate and note location of the hydrant isolation valve. Close the valve "FULLY"
2. Remove hydrant cap from side port and connect pressure gauge. Check other available ports for corroded or missing gaskets.
3. Place valve key onto operating nut. Open bleeder valve on pressure gauge.
4. Ensure all caps are tightened. Open the hydrant "FULLY". Open the valve "FULLY". Allow air to escape through bleed off valve until water appears. Turn off bleed valve.
5. Check hydrant completely for leaks. Record pressures and notes of any leaks in maintenance book.
6. Return bleed valve to the "OPEN" position. Close hydrant "SLOWLY" and "FULLY". DO NOT OVER TIGHTEN.
7. Remove pressure gauge. Allow hydrant barrel to drain. Place palm of hand over side port to verify for suction. The hydrant cap should not be fully tightened until the hydrant has drained down (5-10 minutes)
8. Exercise main hydrant valve. Record procedures and results on Hydrant Inspection Record.

Flushing - The following procedure will be performed semi-annually:

1. Remove one of the hose nozzle caps, and ensure the other(s) is/are tight. Take necessary precautions to ensure that pedestrian and vehicular traffic are not endangered.

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2. Open the hydrant SLOWLY and FULLY until the water runs clear. Close the hydrant, making sure that when the hydrant is nearing the closed position, that the final few turns are done SLOWLY, reducing the possibility of water hammer being created.
3. The water pressure will close the main valve, at the near closed position. DO NOT OVER TIGHTEN. The operating nut should be snug cranked. Confirm barrel drain down. The nozzle cap should not be fully tightened until the hydrant has drained down. (5-10 Minutes)

Winter Hydrant Check

All hydrants will be checked beginning in late fall and throughout winter months for water levels that may be present in hydrant barrels. As necessary, hydrants will be drained as follows:

1. Open hydrant port. Lower manual pump rubber hose through the port and down the hydrant barrel.
2. Evacuate water from hydrant barrel if necessary. Take necessary precautions to ensure that pedestrian and vehicular traffic are not endangered due to evacuated water freezing on road or sidewalk.
3. Replace main port cap and record all information on Schedule "D"

Records - All hydrants will be identified as per number on Schedule "A-1". Records of INSPECTION, PRESSURE TESTS, and FLUSHING shall be kept and maintained as per Schedule "C". Other records shall include, but are not limited to: Hydrant location, Hydrant Identification Number, Make, Model, Isolation Valve location, notable necessary repairs as per Schedule "B". Winter Hydrant Checks will be as per Schedule "D".

B. Sanitary Sewer Inspections and Recording

To ensure that all sewer mains, manholes and the lift station are in proper working order the following maintenance schedule will be followed:

SEWER MAINS AND MANHOLES

Visual Inspection - The following procedure will be performed at least monthly, but may be more frequent if needed:

1. Remove manhole cover and remove all dirt and debris from cover base for proper reseating of cover.
2. Inspect manhole for debris or loose concrete or brick.
3. Inspect water level and ease of flow in manhole.

Flushing - Sewer mains will be flushed with high pressure water bi-annually or more frequent if needed. This service may be contracted to any company equipped to do so. (e.g. Roto Rooter).

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Video Inspection - Main lines will be inspected by video only in recurring problem areas as identified by Village Foreman and upon approval of the Administrator.

Enzymes - Enzymes will be added to the beginning of line manholes, providing water flow is there, on a six month rotating basis with at least one manhole treated per month. Amounts will be as per recommendation by supplier for distance covered.

SEWER LIFT STATION

Visual Inspection - The following visual inspection will be performed weekly by lifting cover and looking down manhole:

1. Listen and ensure that pumps are operating and cycling properly.
2. Check for pressure leaks.
3. Check for any floating foreign matter that could be detrimental to pump.
4. Check for warning lights inside lift station.

Cleaning - The following cleaning procedure will be performed bi-monthly:

1. Foreman must arrange for an assistant. Person entering manhole must be equipped with proper safety rubber clothing, gloves and boots. Air exchange blower must be operating with air blowing into the manhole for at least 10 minutes prior to entering.
2. Clean all 4 floats with fresh water hose and verify operation of each by moving them around and upside down. When floats are turned over, verify that the alarm sounds above ground.
3. Hose down surrounding area of manhole and clean debris off pump motors.
4. Visually inspect for any deterioration or defects of electrical and piping system and manhole walls.

Recording - All manholes will be identified as per number on Schedule "A-2". Manhole inspections will be recorded as per Schedule "F". The Manhole Lift station inspections will be recorded as per Schedule "G". Other records shall include, but are not limited to: Manhole Identification number, Manhole Location, Depth, Main Size, notable necessary repairs as per Schedule "E".

C. Storm Sewer Inspections and Recording

To ensure the proper operation of the Storm sewers the following maintenance schedule will be followed:

Visual Inspection

1. Catch Basins will be inspected bi-monthly for excess sand, debris and overall condition.
2. Culverts and Open ditches will be inspected yearly for excess debris and

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flow restrictions.

Recording - All catch basins will be identified as per number on Schedule "A-4". All inspections will be recorded as per Schedule "F".

D. Water Main and Valve Inspections and Recording

To ensure adequate operation of Water main valves and all water mains the following maintenance schedule will be followed:

Water Main Valves - All main water valves will be exercised twice a year. Any non-functional valves will be scheduled for repair, according to need.

Water mains - Water mains will be opened at blow-off points (as identified in Schedule "H"), for a minimum of 10 minutes, twice a year or following any main line repairs. Any problem areas reported will be inspected, assessed for repair and recorded.

Records - All main valves including blow-offs will be identified as per number on Schedule "A-3". Records of inspection will be kept as per Schedule "H".

E. Complaints

All complaints will be noted as per Village of Barnwell Customer Inquiry Report. Inspection of complaints will be prioritized based on:

- a) Personal Safety and Liability
- b) Property damage risk
- c) Nuisance

F. Repairs

All repairs will be prioritized according to budget guidelines and limitations as set by council. Frequency of inspection and repairs may be over-ridden based on the Village's available resources as established by council.

	Date	Resolution #
Approved	Mar. 17/99	51/99
Amended		
Amended		

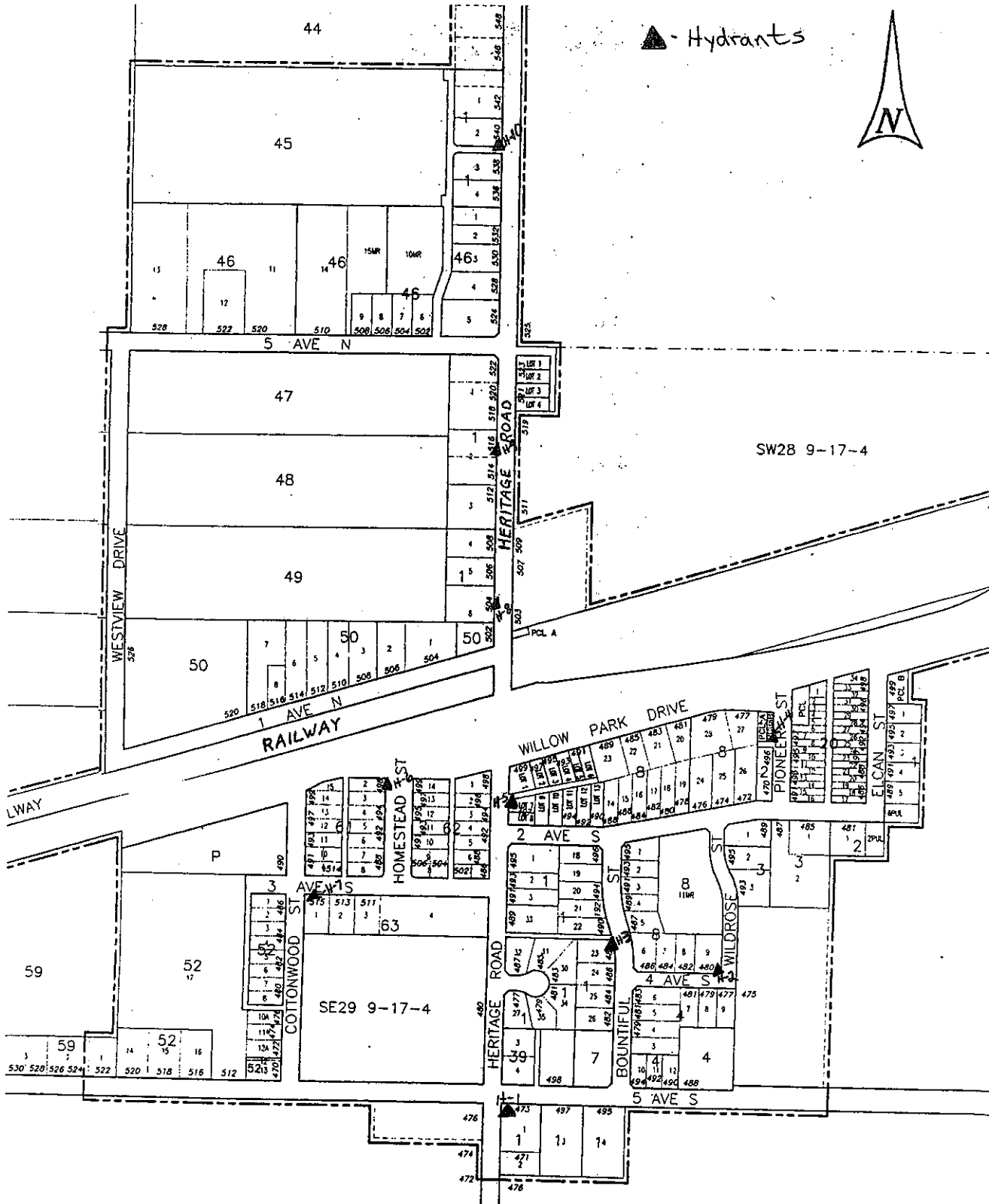

MAYOR


ADMINISTRATOR

STREET ADDRESS VILLAGE OF BARNWELL

MAP PROJECTION UTM-12 DATE:SEPTEMBER 22, 1997 FILE:\TAB\T09R17W4

Schedule A-1



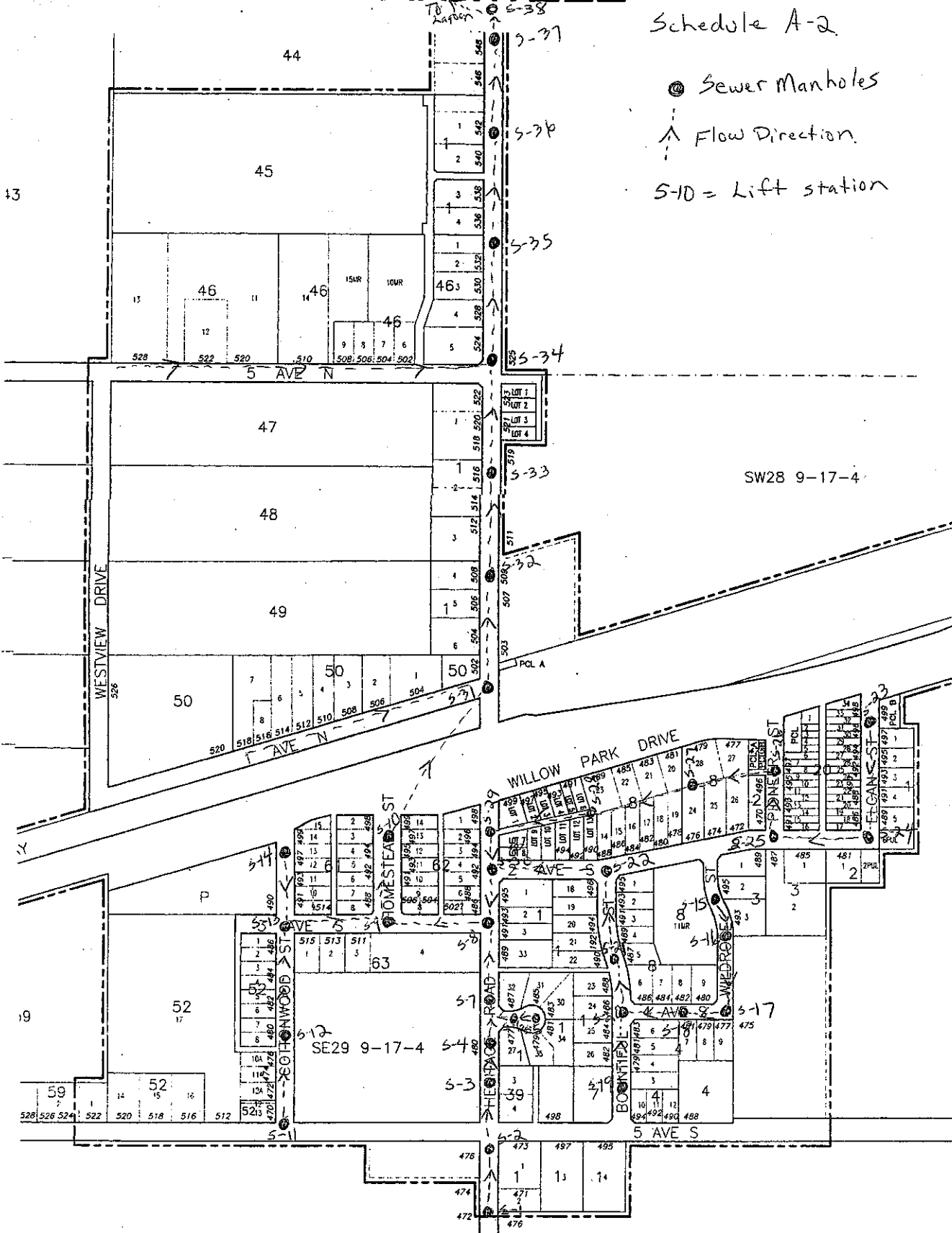
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Schedule A-2

⊙ Sewer Manholes

↑ Flow Direction

S-10 = Lift station



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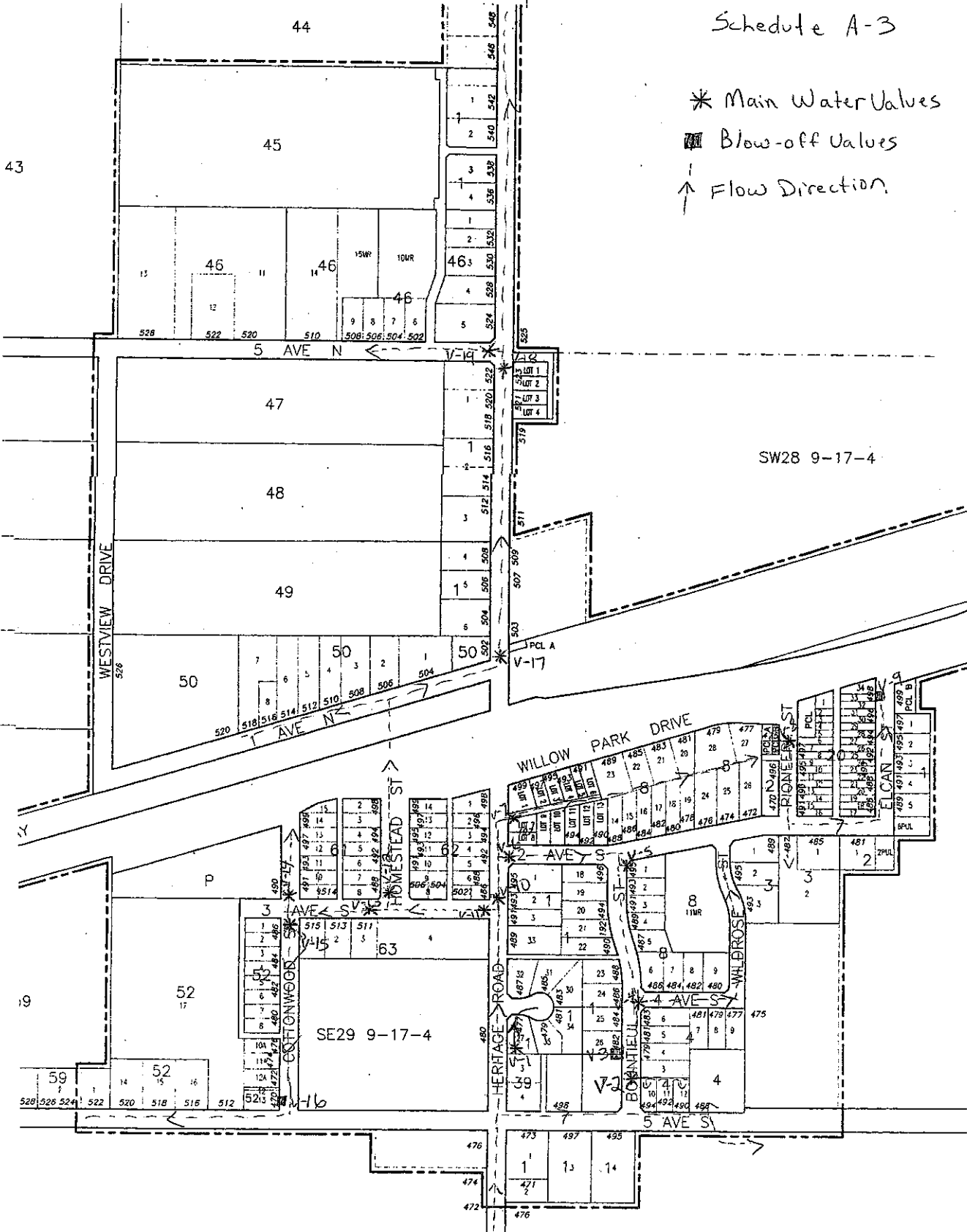
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V-20

Schedule A-3

- * Main Water Valves
- Blow-off Valves
- ↑ Flow Direction



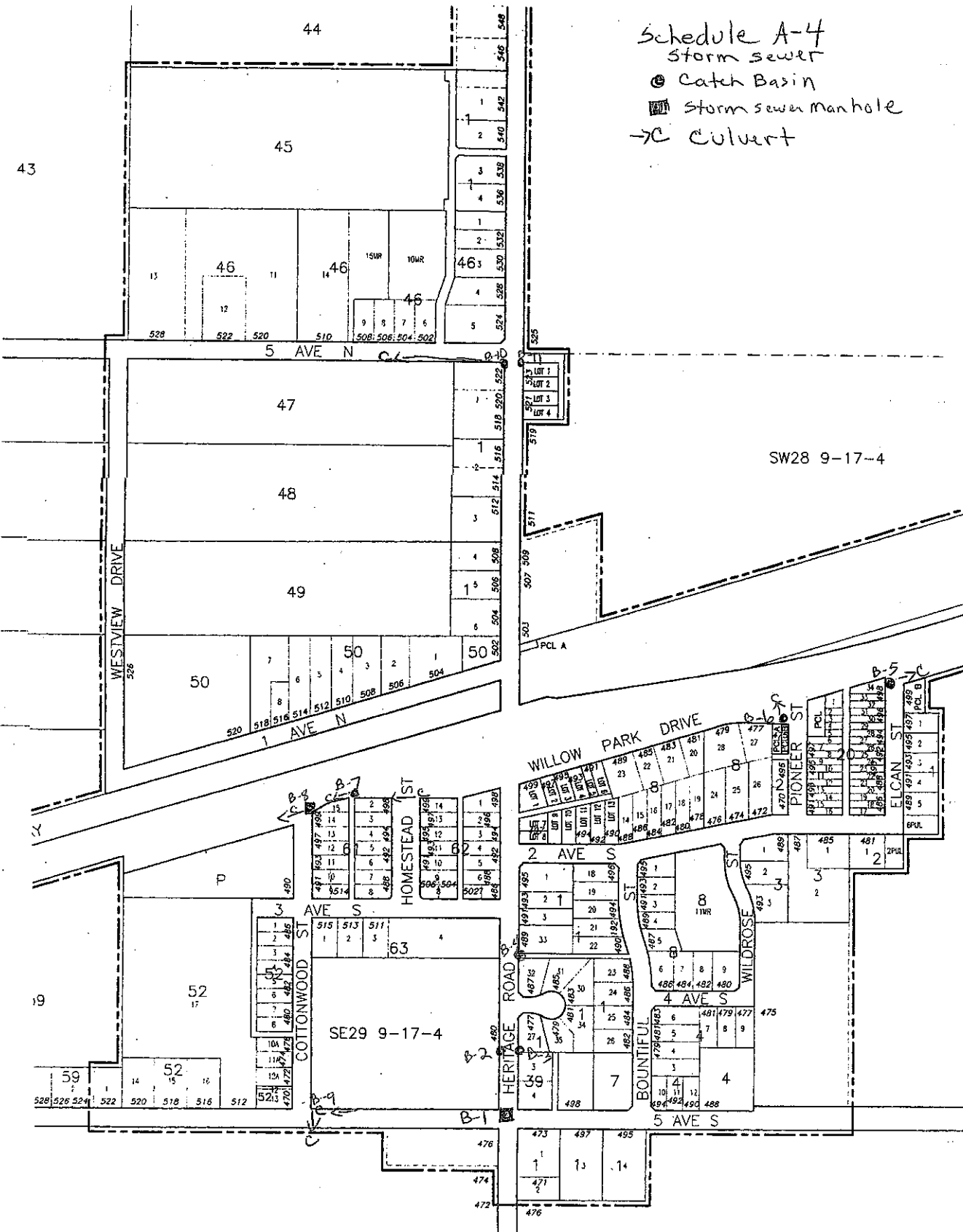
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Schedule A-4
Storm sewer

⊙ Catch Basin

⊠ Storm sewer manhole

→ C Culvert



**VILLAGE OF BARNWELL
WINTER HYDRANT CHECK
Policy 2-99, SCHEDULE "D"**

Hydrant No.	Date*	Litres**	Date*	Litres**	Date*	Litres**	Date*	Litres**
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

*Date of Evacuation **Approx. litres evacuated

Hydrant No.	Date*	Litres**	Date*	Litres**	Date*	Litres**	Date*	Litres**
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

*Date of Evacuation **Approx. litres evacuated

**VILLAGE OF BARNWELL
CUSTOMER INQUIRY REPORT**

Name of Complainant _____

Address _____

Telephone No. _____

Date Complaint Received _____

Time _____

Nature of Complaint:

Complaint Received By _____

Complaint Referred To _____

Date _____

Time _____

Report on Complaint:

Reported by _____

To Whom _____

Date _____

Time _____