# THE RURAL MUNICIPALITY OF MACDONALD

## BY-LAW NO. 40/90

BEING A BY-LAW OF THE RURAL MUNICIPALITY OF MACDONALD to provide for the regulating and controlling of the number and kinds of pipes, fixtures and appliances that may be connected to Municipal Water and Sewer Systems.

WHEREAS the provisions of The Municipal Act RSM 1988, c. M225 provides in part as follows:

**By-laws and regulations.**

**697(1)** The council of any municipality may, subject The Public Utilities Board Act,

(a) by by-law

(a) . . . . .

(b) (ii) for preventing the pollution of any water in the waterworks system of the municipality or any source of supply thereof, or any unauthorized interference with any such system or source of supply;

(v) for preventing the making of any unauthorized connection with any pipe, wire, or apparatus belonging to any such utility, and for preventing any person from fraudulently obtaining any energy, commodity, or service therefrom;

(vi) for controlling the number and kind of pipes, wires, fixtures, and appliances that may be connected with any utility operated by the municipality, and the method of connection;

(vii) . . . . . .

(c) by by-law make any other regulations that the council deems necessary or expedient with regard to the use or consumption of any electricity, gas, water, steam, or other energy, matter, or thing produced or distributed by the municipality in operating any of its utilities, or with regard to the installation of meters, the laying or placing of service pipes or wires in the consumer's premises and the collection of the cost thereof, or any other matter connected with the carrying on of any such utility.

AND WHEREAS the Council of The Rural Municipality of Macdonald deems it expedient and in the public interest to establish regulations to control the number and kind of pipes, fixtures and appliances that may be connected to a municipal water and sewer system;

Now THEREFORE, the Council of The Rural Municipality of Macdonald, in Council assembled, enacts as a by-law as follows:

Amended by BL 34/94 BL 1/95 BL 32/99 BL 2/05 BL 6/07 BL 9/09

1. That Schedule "A" attached hereto be and is hereby adopted to regulate and control the number and kinds of pipes, fixtures and appliances that may be connected to a Low Pressure Sewer System;

2. That Schedule "B" attached hereto be and is hereby adopted to regulate and control the number and kinds of pipes, fixtures, and appliances that may be connected to a water system within Local Improvement Districts;

Amended by BL 4/98 & BL 2/05 BL 6/07

3. That Schedule "C" attached hereto be and is hereby adopted to regulate and control the number and kinds of pipes, fixtures, and appliances that may be connected to a Gravity Sewer System;

4. That Schedule "D" attached hereto be and is hereby adopted to regulate and control the number and kinds of pipes, fixtures, and appliances that may be connected to a rural water connection;

5. That drainage from the sump pit shall be directed to the outside of the building towards the natural surface drainage. The subsoil drainage shall not drain into the sanitary sewer system. Inter-connection between the floor drain and the sump pit shall not be permitted.

6. That By-Law No. 23/88 is hereby repealed.

Amended by BL 4/08

7. The disposal of septage, defined as the sludge produced in individual on-site wastewater disposal systems such as septic tanks located within the limits of the Rural Municipality of Macdonald, is permitted at designated municipal lagoon facilities by authorized sewage haulers only during the period commencing on the 1st day of June and ending on the 15th day of October of any year.

Amended by BL 4/08

8. An authorized hauler to designated municipal lagoon facilities must be approved by the Rural Municipality of Macdonald must be registered with Manitoba Conservation with a valid Sewage Hauler Registration Number and must provide a monthly log of volumes delivered to designated municipal lagoon facilities in a form prescribed by the municipality.

DONE AND PASSED by the Council of The Rural Municipality of Macdonald assembled at Sanford, Manitoba this 12th day of February A.D. 1991.

THE RURAL MUNICIPALITY OF MACDONALD

*Original Signed by*

*"V. Baleja"*
Reeve

*"L. F. Erb"*
Municipal Administrative

Read a First time this 11th day of September, A.D., 1990

Read a Second time this 8th day of January, A.D., 1991

Read a Third time this 12th day of February, A.D., 1991

**RURAL MUNICIPALITY OF MACDONALD**

**BY-LAW NO. 40/90**

**SCHEDULE "A"**

## 1. PIPE

Amended by B.L. 34/94

1.1 All discharge and suction piping shall be polyethylene, shall be CSA approved for 690 kPa (100 psi) cold water service, and shall be stamped with the CSA symbol. Pipe shall be 32mm (1.25 in.) diameter unless express written authorization is obtained from the Municipality.

1.2 Pipe connections shall be made by socket fusion welding or by "clamp-and-insert" method. Clamps shall be made entirely of stainless steel. Under no circumstances shall any iron or steel products be used underground, except stainless steel.

1.3 The service pipe shall be installed with a minimum cover of 2.5 meters (8 feet), except under roads and driveways where cover shall be not less than 3.0 metres (10 feet).

## 2. SADDLE

2.1 The service saddle shall be double strap or wide band type, with all metal parts to be stainless steel or bronze, with a rubber compression gasket, and a threaded outlet.

2.2 The saddle shall be secured to a length of low pressure sewer main which has been exposed and suitably cleaned. The bolts shall be tightened snugly, but not over tightened so as to cause pipe wall deflection or kinking. A tapping tool shall drill a 19 mm (3/4 in.) diameter hole through the saddle into the pipe. A 25 mm nipple with a 25 x 32 mm (1 x 1.25 in.) adaptor shall be used to connect to the 32 mm polyethylene pipe.

## 3. PUMP

3.1 Unless express written authorization is obtained from the municipality, all pumps shall be ½ horsepower, end suction centrifugal or submersible sewage pump units designed expressly for septic tank effluent. Pumps shall be capable of pumping to within 10% of the following performance characteristics:

**Amended by BL 9/09**

**Amended by BL 2/05**

0 litres/sec. (0 imp. gal per min.) @ 150 kilopascals (50 ft. head) (21.5 psi) pressure or head
1.5 L/s (20 ig.p.m./24 usgpm) @ 104 kPa (35 ft.) (15 psi.)
2.9 L/s (38 ig.p.m./45 usgpm) @ 54 kPa (18 ft.) (8 psi)

3.2 Each pump discharge and suction shall be equipped with an external ball check valve and a shut off brass ball valve (to provide positive shut off) to allow for maintenance or replacement of the check valve or pump. Brass ball valves shall be of a type suitable for septic tank effluent and for 300 kPa (45 psi.) service.

**Amended by BL 9/09**

**Amended by BL 32/99**

3.3 All electrical equipment (motor, cable, controls, liquid level electrodes or "Pil" float switches, etc.) shall be approved by CSA and Manitoba Hydro, and installation shall conform to the Canadian Electrical Code and Manitoba Hydro.

## 4. SEPTIC TANK

4.1 All septic tanks and installation of tanks shall conform to The Clean Environment Act (C130) and Regulation 95/88R associated therewith and to CSA Standard B66. Tanks shall bear a CSA stamp.

4.2 Tanks for individual homes shall have a primary (sedimentation) chamber capacity of no less the 2250 litre (500 i.g.) and a control (suction line) chamber capacity of no less than 340 litres (75 i.g.). A baffle shall separate the compartments and shall be designed as to prevent sludge or scum from entering the control chamber. Tanks shall be either concrete, 100% pure virgin white polyethylene or fibreglass, with an access manhole (with child proof cover), shall be water tight, and shall be suitable for deep bury with 1.5 meter (5 ft.) soil cover. Access manhole risers shall be water tight by using a suitable sealant material between each riser ring and shall be wrapped with a minimum six (6) mil poly from the top of the tank and extended a minimum of 300mm (1 ft.) above the access manhole cover.

**Amended by BL 1/95**
**BL 32/99**

4.3 Fibreglass tanks shall be bedded on a minimum 100mm (4 in.) of sand or dry, loose fill and installed in accordance with the manufacturers recommended installation instructions. Backfill immediately around the tank shall also be of similar material.

**Amended by BL 1/95**

4.4 Tanks shall be installed in front of the building such that they are not within the minimum distances below:

**Amended by BL 6/07**

| | Metres | Feet |
|---|---|---|
| Building | 1.0 | 3.3 |
| Property Line | 3.0 | 10.0 |
| Water Supply Well | 8.0 | 26.0 |
| Surface Water (dugout, creek, river, lake, etc.) | 15.0 | 50.0 |
| Cut or embankment | 8.0 | 26.0 |
| Swimming Pool | 3.0 | 10.0 |
| Cistern | 3.0 | 10.0 |
| Walkways or Driveways | 2.0 | 6.6 |

4.5 Tanks shall be installed with the base level and the manhole plumb.

## 5. SUBSOIL DRAINAGE

5.1 The sump pit shall be designed with a minimum floor are of 0.2m$^2$ (2.25 sq.ft.) a minimum depth of 0.75 m. (2.5 ft.) and shall be provided with a cover capable of accepting the occupancy floor load.

5.2 The pumping units shall be of the column type, the submersible type of the self-priming surface mounted type with a minimum 0.25 KW (1/3 HP) motor capable of discharging a minimum flow of 0.75 L/s (12 gpm) at 4.6m of head and shall be automatically controlled to maintain the water level below the lowest level of the weeping tile at the pit.

5.3 The discharge piping shall have a minimum diameter of 32mm (1.25 in.), shall be installed without check valves to prevent freezing during the winter and shall discharge to a splash pad within the limits of the property to maintain a minimum 2 meter (6.6 ft.) setback from any property line to direct water to the natural surface drainage. Direct discharge into a drainage ditch, swale, sanitary sewer, beyond the property lines or onto a municipal roadway shall not be permitted.

**Amended by BL 34/94 BL 6/07**

## 6. PLUMBING

6.1 All plumbing fixtures, including the soil pipe conveying household waste water to the septic tank, shall conform to the requirements of the Manitoba Building Code.

6.2 A CSA approved back water check valve(s) shall be installed to protect all basement fixtures.

6.3 All newly constructed single family dwellings or other buildings connected to a municipal sewer collection system including bathroom renovations in existing buildings shall install water efficient toilets designed with a flush volume at waterline that does not exceed a volume of six (6) litres per flush and showerheads designed to deliver a volume that does not exceed a total of 9.5 litres per minute per showerhead..

**Amended by BL 2/05**

[see: http://www.cwwa.ca/pdf_files/freepub_6Ltoiletreport04.pdf]

## 7. STRUCTURAL

7.1 All holes cut through walls to permit passage of pipe, cables or other conduits, shall be sealed with "Quick Plug" of other watertight sealing agent.

## 8. PERMIT

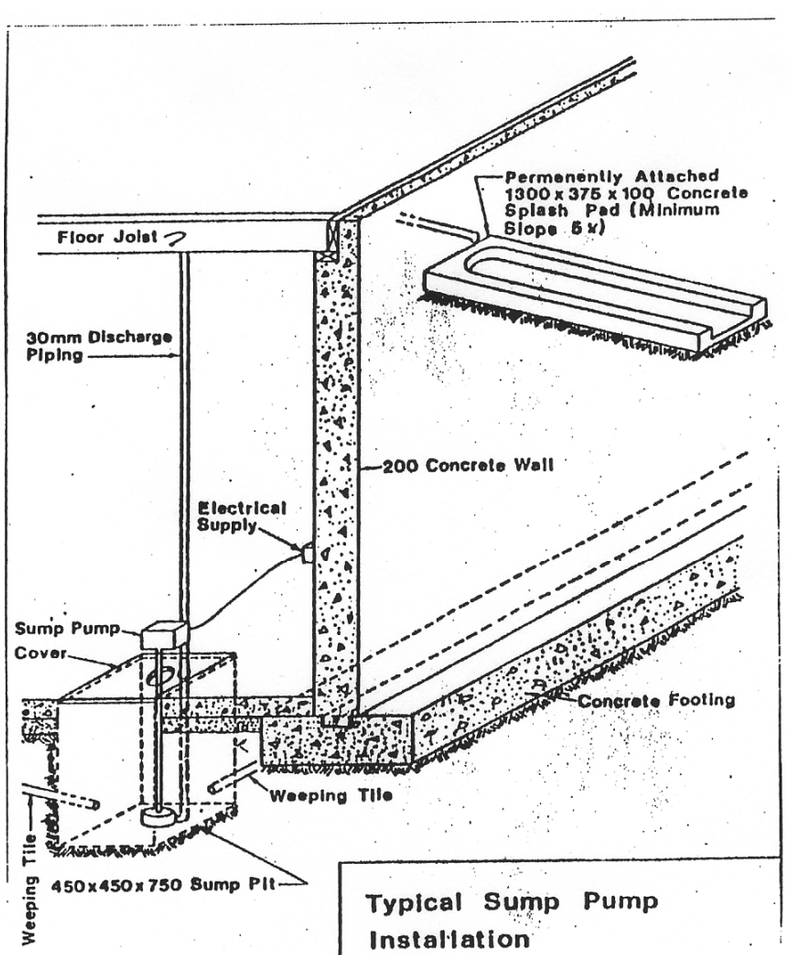
8.1 Prior to making a connection to a low pressure sewer main or to an existing service line at a property line, the property owner shall apply for a permit at the municipal office.

8.2 Such permit shall identify the property owner, the location of the property, the name of the contractor or plumber making the connection, the date on which the connection is to be made, and such other information as the municipality may require.

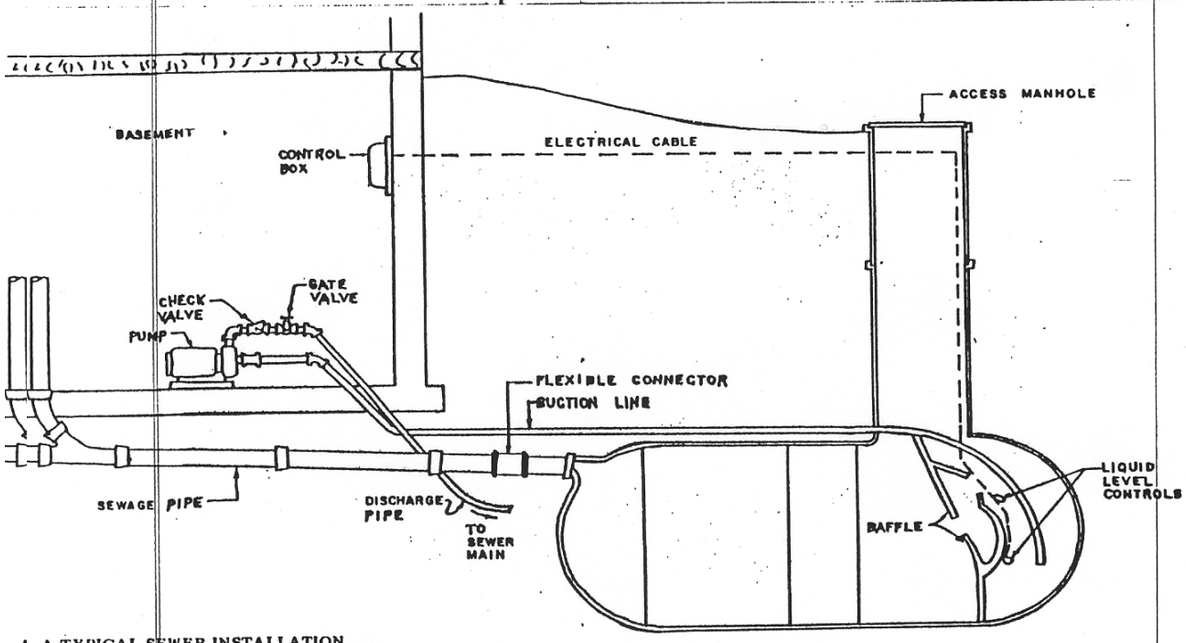
8.3 Permit applications or connection fees shall be established from time to time by Council.

## 9. PUBLIC RIGHT-OF-WAY

9.1 Where construction operations extend beyond the owner's private property onto the public road or lane right-of-way, all damage to said right-of-way shall be restored to its original condition. All construction operations shall be subject to all applicable Provincial laws and regulations and Municipal By-Laws and regulations.

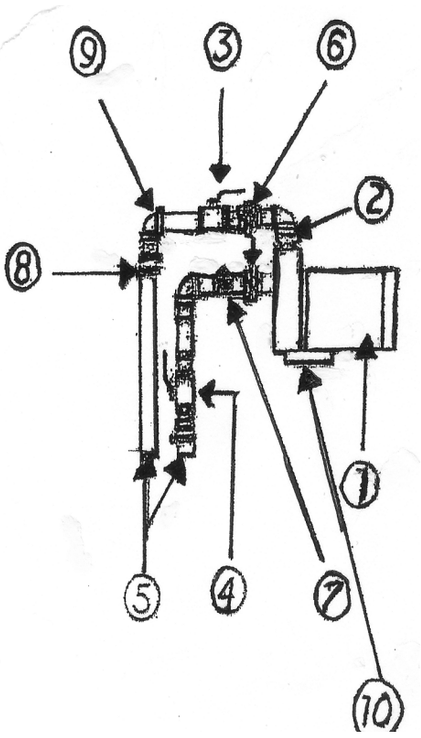



Typical Sump Pump Installation




A A TYPICAL SEWER INSTALLATION

**By-Law No. 32/99**
**Schedule "A"**




Amended by B.L. 2/05

Pump and Connection Requirements to Schedule "A" of By-Law No. 40/90

1. ½ h.p. above ground semi-open impeller centrifugal pump. Designed expressly for septic tank effluent.
2. 32 mm cast iron ball check valve, installed vertically. Standard of acceptance "SOCLA"
3. 32 mm brass ball valve discharge side
4. 32 mm brass ball valve suction side
5. 32 mm 100 P.S.I. polyethylene discharge and suction lines
6. Galvanized unions c/w galvanized nipples. Unions to be installed with anti-seize compound
7. 32 brass swing check valve. Internal check valve on suction side of pump to be removed.
8. Hose clamps shall be all stainless steel and all connections double clamped.
9. All fittings i.e. elbows, nipples and adapters to be galvanized steel
10. Pump to be bolted to steel support or wall bracket - securely fastened to the wall or floor. Rubber gasket to be installed between pump and support.

*NOTE:*

Float control line shall be installed in a 32 mm poly conduit line that extends to within 300 mm of the top of the manhole to facilitate removal for tank cleaning or replacement.

**RURAL MUNICIPALITY OF MACDONALD**

**BY-LAW NO. 40/90**

**SCHEDULE "B"**

## 1. PIPE

1.1 Piping for water service connections, 38 mm (1½ inch) nominal inside diameter and smaller, shall be either:

(a) Copper Type K tubing and fittings conforming generally to AWWA Standard 800 (Appendix)

(b) Polyethylene (PE) tubing and fittings, conforming generally to AWWA Standard C901, fabricated of high density Type III resin, and possessing CTS dimensions; only to be used with the approval of the Municipality's Engineer or Public Works Superintendent.

(c) Polyethylene tubing shall not be used within 100 meters of any petroleum outlet.

1.2 Piping connections shall be made by flaring the copper tubing and joining with brass couplers, or by using compression type couplers (PE or Copper). Appropriate brass or stainless steel inserts shall be provided on joints between PE tubing and brass/bronze fittings to prevent stress or deformation upon tightening compression nuts. PE pipe lengths shall be joined by compression couplings (with inserts) or by fusion welding to manufacturer's specifications.

1.3 Piping shall be provided with a minimum earth cover of 2.5 metres (8 feet), except under roads or driveways where cover shall be not less than 3.0 metres (10 feet).

1.4 Service pipe shall have a nominal inside diameter of not less than 19 mm (3/4 in.). Larger sizes shall be used where water requirements exceed normal single family residential requirements, or where services are long, as determined by the Municipality's Engineer.

1.5 Water service piping shall be separated from sewer service pipe by a clear horizontal separation of 300 mm (1 ft) in open cut trenches. Where this separation is not available in tunnel holes, the water service piping (and low pressure sewer service piping, if in the same hole) must be a continuous uncut unbroken length, without joints or couplings.

## 2. SADDLE

2.1 Saddles shall be double strap or wide band type, with all metal parts to be bronze or passivated type 304 or 316 stainless steel. They shall be suitable for 1000 kPa (150 psi) service. Restraining bolts shall be not less than 10 mm ($^2/_5$ in.) diameter. Saddles shall have a rubber compression gasket and a standard corporation threaded outlet.

2.2 Approved saddles include:

Cambridge Brass 302

Robar 2706

Rockwell 323

Any other make as may be approved in writing by the Municipality's Engineer.

2.3 The saddle shall be fitted to a thoroughly cleaned section of the water main. The restraining bolt(s) shall be tightened to provide a watertight seal but not so much as to cause pipe deformation. The saddle outlet shall be 45 off horizontal.

## 3. CORPORATION STOPS

3.1 Corporation (main) stops shall be fabricated of all brass/bronze parts, suitable for 1000 kPa (150 psi) service. The inlet shall be "corporation" type tapered thread, and the outlet shall be copper-to-copper (flared coupling) or compression type.

3.2 Approved corporation stops include:

Emco 15970 and 22970

Ford F600 and F1000

Mueller A220 and H15008

Cambridge Brass 102(7-007 and 7-014)

Any other make as may be approved in writing by the Municipality's Engineer.

3.3 The inlet shall be wrapped in teflon type, inserted in the saddle, and threaded to a tight fit. A Mueller "B" tapping machine shall be employed to tap the main, following the manufacture's recommended procedures. A watertight joint shall be made with all the copper pipe, using a flared or compression joint.

**4. CURB STOP**

4.1 Curb stops shall be fabricated of brass/bronze with copper-to-copper (flared) or compression inlets and outlets. Stops shall be non-draining type. Boxes shall be PVC Schedule 40, with arch type base, height adjustable riser with set screw, ribbed cast iron lid with 25 mm (1 in.) brass plug with acme thread and pentagon nut 22 mm ($^{7}/_{8}$ in.) flat-to-point. The extension spindle shall be 16 mm (5/8 in.) diameter, stainless steel, end forged to fit the operating key, and shaped to position the spindle in the centre of the box.

4.2 Approved curb stops include:

Emco 15790 and 17058

Ford B 22, B44, Z22 and Z44

Mueller H-15214 and H-15219

Canron VB-11

Cambridge Brass 129 (7-051 and 7-053)

W.D. VB-24 and VB-25

Any other make as may be approved in writing by the Municipality's Engineer.

Approved curb boxes include:

W. D. VB-24 and VB-25

4.3 The stops shall be joined to the pipe with flared or compression couplings. The base of the stop shall be supported on a precast concrete or creosote-preserved wood block, resting on undisturbed soil or clean crushed rock (19 mm or ¾ in. down). The box height shall be adjusted to suit depth. Spindles shall be securely connected to keys with stainless steel or brass 5 mm (1/8 in.) cotter pins. The box shall be set vertically, and excavations shall be backfilled upon determination that there is no leakage. A wood stake shall be driven into the ground to mark curb stop location if the service connection line is located at a vacant lot.

**5. BUILDING INSTALLATION**

5.1 Within 300 mm (1 ft) of where the service line enters the building, a gate (or globe or ball) valve shall be installed. The meter shall be installed by means of threaded couplings no less than 150 mm (6 in.) and no more than 300 mm (12 in.) above basement or crawl space floor level. In the event that the water service line is not copper pipe, the meter shall be suitably supported on a wood or metal stand which is securely anchored to a floor or wall. The meter shall be located so as to be accessible for servicing. Meters shall be of a type supplied by the Municipality.

5.2 Where a connected building has an alternative water source or a second water system (i.e. rainwater cistern or river intake), the alternative system shall be disconnected or in the event that the owner wishes to retain the alternative system, an approved backflow preventer shall be installed by means of threaded couplings downstream of the meter. Backflow preventers shall also be installed on rural connections where the water is repressurized, and where livestock operations are maintained, and wherever there are swimming pools.

Approved backflow preventers include:

Claval D-2

Febco 805 and 805Y

Any other make as may be approved in writing by the Municipality's Engineer.

5.3 Where water service pipe enters through a foundation wall or floor, an appropriate sized hole shall be cored through. The annular space between the pipe and hole shall be filled with "Quick Plug" or other fast curing watertight sealing agents.

**6. PRESSURE REQUIREMENTS**

6.1 All service connection products shall be suitable for 1000 kPa (150 psi) working pressure cold water service.

6.2 All home plumbing installations shall be suitable for system static pressures of 550 kPa (80 psi) and surge pressures of 825 kPa (120 psi). Hot water tanks shall have appropriate pressure protection devices against surges.

**7. PERMIT**

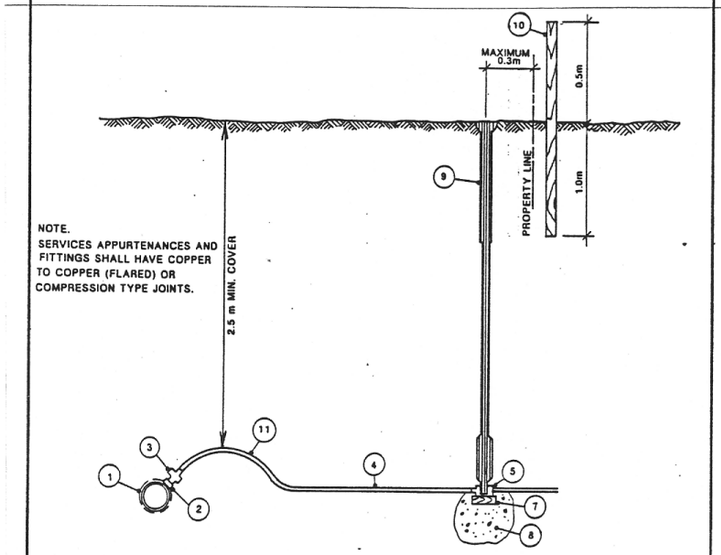
7.1 Prior to making a connection to a main or to an existing service line at a property line, the property owner shall apply for a permit at the municipal office.

7.2 Such permit shall identify the property owner, the location of the property, the name of the contractor or plumber making the connection, the date on which the connection is to be made, such other information as the Municipality may require.

7.3 Permit applications or connection fees shall be established from time to time by council.

**8. PUBLIC RIGHT-OF-WAY**

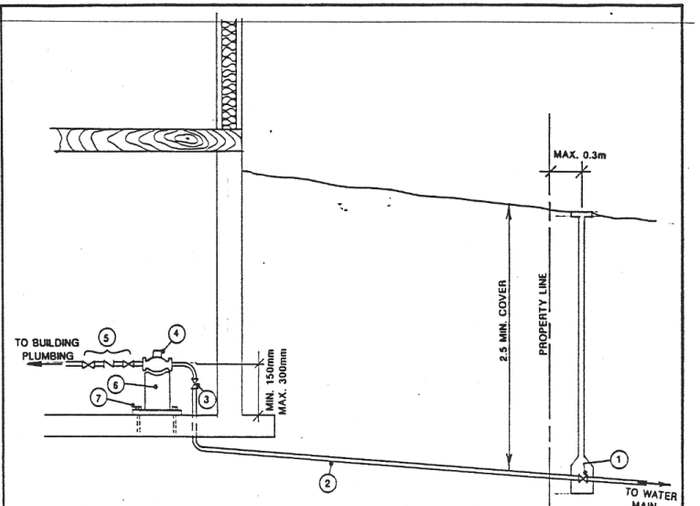
8.1 Where construction operations extend beyond the owner's private property onto the public road or lane right-of-way, all damage to said right-of-way shall be restored to its original condition. All construction operations shall be subject to all applicable Provincial laws and regulations and Municipal by-laws and regulations.




NOTE.
SERVICES APPURTENANCES AND FITTINGS SHALL HAVE COPPER TO COPPER (FLARED) OR COMPRESSION TYPE JOINTS.

1. WATERMAIN (2.5 TO 3.0 METRES DEEP)
2. SERVICE SADDLE WITH THREADED OUTLET
3. MAIN (CORPORATION) STOP (THREADED INLET)
4. TUBING
5. CURB STOP WITH DRAIN
6. ALL THREADED JOINTS SHALL BE WRAPPED WITH "TEFLON" TAPE. ALL JOINTS SHALL BE SECURELY JOINTED TO PREVENT LEAKAGE.
7. 50mm X 150mm (2" X 6") WOOD PLANK BASE
8. 0.1 CUBIC METRE CRUSHED ROCK SUMP
9. CURB STOP BOX, ADJUSTABLE FOR 2 TO 3 METRES (7-9FT.) BURY.
10. WOOD MARKER 50 X 50mm TO INDICATE LOCATION OF END OF SERVICE LINE (TO VACANT LOTS ONLY)
11. PIPE "GOOSENECK" SHALL BE HORIZONTAL IF REQUIRED TO MAINTAIN ADEQUATE COVER

| A.J. POETKER & ASSOCIATES LTD. ENGINEERING CONSULTANTS | | CLIENT: | RURAL MUNICIPALITY OF MACDONALD | | |
|---|---|---|---|---|---|
| DESIGNED BY: | W. H. B. | PROJECT: | COMMUNITY WATER SERVICE CONNECTIONS | | |
| DRAWN BY: | L. H. | DESCRIPTION: | CONNECTION FROM MAIN TO PROPERTY LINE | | |
| CHECKED BY: | | DATE: JULY, 1988 | SHEET OF | DWG. No. | A041-01-03-X3 |
| APPROVED BY: | W. H. B. | | | | |




1. CURB STOP & BOX
2. SERVICE PIPING
3. GATE / GLOBE / BALL VALVE
4. METER (WITH REDUCING COUPLINGS AS MAY BE REQUIRED)
5. BACKFLOW PREVENTER (AS MAY BE REQUIRED)
6. METER SUPPORT STAND (AS MAY BE REQUIRED)
7. ANCHOR BOLTS

| A.J. POETKER & ASSOCIATES LTD. ENGINEERING CONSULTANTS | | CLIENT: | RURAL MUNICIPALITY OF MACDONALD | | |
|---|---|---|---|---|---|
| DESIGNED BY: | W. H. B. | PROJECT: | COMMUNITY WATER SERVICE CONNECTION | | |
| DRAWN BY: | L. H | DESCRIPTION: | CONNECTION FROM PROPERTY LINE TO BUILDING | | |
| CHECKED BY: | | DATE: JULY, 1988 | SHEET OF | DWG. No. | A041-01-03-X4 |
| APPROVED BY: | W. H B | | | | |

**RURAL MUNICIPALITY OF MACDONALD**

**BY-LAW NO. 40/90**

**SCHEDULE "C"**

## 1. PIPE

1.1 Gravity sewer service pipe shall be PVC, conforming to ASTM D2241, SDR 28. The minimum size shall be 100 mm (4 in.) diameter for single family residences. Minimum sizing for multi-family residences, institutions, commercial and industrial establishments shall be approved on a case by case basis by the Municipality's Engineer.

1.2 Pipe shall be laid at grade (see Table under 1.3) on a minimum 100 mm (4 in.) thick sand bed, shall be joined with a rubber gasket push-on type bell and spigot joint to the manufacturer's recommended procedures, and covered with a minimum 200 mm (8 in.) thick sand layer. The balance of backfilling shall be completed in lifts not exceeding 300 mm (12 in.) with no lumps exceeding 150 mm (6 in.) being placed in the trench within one metre of the pipe.

1.3 The minimum grade for service line shall be as follows:

| | Standard Minimum Grade | Special Circumstances requires written consent of Municipality's Engineer |
|---|---|---|
| 100 mm pipe | 1.0% | 0.5% |
| 150 mm pipe | 0.5% | 0.3% |
| 200 mm pipe | 0.3% | 0.2% |

## 2. SADDLES

2.1 Sewer service pipe shall be connected to the mainline by means of an in-line PVC tee or by a saddle, which shall be of the same material as the pipe.

2.2 Tees may be installed only at the time of mainline construction. Later connections to the main shall be by means of saddles. The saddle shall be connected to the main with solvent weld cement (applied on both surfaces after cleaning and priming, to the recommended procedures of the manufacturer) at a 45° angle off horizontal (unless otherwise directed by the Municipality's Engineer). Two stainless steel gear clamps shall provide additional security to the installation of each saddle. A core hole of diameter equal to that of the service saddle, shall be drilled through the mainline pipe wall. The resulting pipe coupon shall be removed. Sharp or uneven edges shall be smoothed with a file to ensure that no solids snag on the opening into the mainline.

## 3. SUBSOIL DRAINAGE

3.1 The sump pit shall be designed with a minimum floor area of 0.2m$^2$ (2.25 sq.ft.) a minimum depth of 0.75 m (2.5 ft.) and shall be provided with a cover capable of accepting the occupancy floor load.

3.2 The pumping units shall be of the column type, the submersible type or the self-priming surface mounted type with a minimum 0.25 KW (1/3 HP) motor capable of discharging a minimum flow of 0.75 L/s (12 gpm) at 4.6m of head and shall be automatically controlled to maintain the water level below the lowest level of the weeping tile at the pit.

3.3 **Amended by BL 4/98 BL 6/07** The discharge piping shall have a minimum diameter of 32mm (1.25 in.), shall be installed without check valves to prevent freezing during the winter and shall discharge to a splash pad within the limits of the property to maintain a minimum 2 meter (6.6 ft.) setback from any property line to direct water to the natural surface drainage. Direct discharge into a drainage ditch, swale, sanitary sewer, beyond the property lines or onto a municipal roadway shall not be permitted.

## 4. PLUMBING

4.1 **Amended by BL 2/05** All plumbing fixtures, including the soil pipe conveying household waste water to the main line, shall conform to the requirements of the Manitoba Building Code.

4.2 A CSA approved backwater check valve(s) shall be installed to protect all basement fixtures.

4.3 **Amended by BL 2/05** All newly constructed single family dwellings or other buildings connected to a municipal sewer collection system including bathroom renovations in existing buildings shall install water efficient toilets designed with a flush volume at waterline that does not exceed a volume of six (6) litres per flush and showerheads designed to deliver a volume that does not exceed a total of 9.5 litres per minute per showerhead.

[see: http://www.cwwa.ca/pdf_files/freepub_6Ltoiletreport04.pdf]

**5. STRUCTURAL**

5.1 All holes cut through walls to permit passage of pipe, cables or other conduits, shall be sealed with “Quick Plug” or other watertight sealing agent.

**6. PERMIT**

6.1 Prior to making a connection to a low pressure sewer main or to an existing service line at a property line, the property owner shall apply for a permit at the municipal office.

6.2 Such permit shall identify the property owner, the location of the property, the name of the contractor or plumber making the connection, the date on which the connection is to be made, and such other information as the municipality may require.

6.3 Permit applications or connection fees shall be established from time to time by Council.

**7. PUBLIC RIGHT-OF-WAY**

7.1 Where construction operations extend beyond the owner’s private property onto the public road or lane right-of-way, all damage to said right-of-way shall be restored to its original condition. All construction operations shall be subject to all applicable Provincial laws and regulations and Municipal By-Laws and regulations.

**RURAL MUNICIPALITY OF MACDONALD**

**BY-LAW NO. 40/90**

**SCHEDULE "D"**

## Rural Water Connection – Main Line to Curb Box

### 1. SERVICE SADDLES

1.1 25 mm tapped Service Saddles shall be AWWA approved for standard corporation outlet. Saddles shall be double strap or wide band type with all metal parts to be bronze or passivated type 304 to 316 stainless steel. They shall be suitable for 1000 kPa (150 psi) service. Approved saddles include:

Robar 2606 or Robar 2706 or any other approved by the Municipality.

### 2. CORPORATION STOP

2.1 Corporation Stops shall be all brass/bronze parts for 100 kPa (150 psi) service. The inlet shall be corporation type tapered thread 25 mm. The outlet shall be female 25 mm IPS with an all brass or PVC schedule 80, 25 mm IPS thread by 32 mm insert MIP adapter.

Approved stops include:

Mueller
AY Macdonald
Ford

### 3. PIPE

3.1 All pipe and associated fittings shall conform to 32 mm service low density polyethylene CSA B-1370 series 100.

3.2 Piping shall be provided with a minimum of 2.5 meters (8 feet) cover, except under roads or driveways where cover shall not be less than 3.0 meters (10 feet).

### 4. CURB STOP AND BOX

4.1 Curb Stop shall be all brass/bronze with 32 mm female IPS threads. Stops shall be non-draining boxes, shall be PVC schedule 40 (C.S.A. B.137.3) 2 to 3 meters depth, with an iron ribbed lid with the works "Water" cast in five sided nut (7/8 inch) or 22 mm flat to point, 5/8 inch (16 mm) stainless steel rod and brass cotter pin.

Approved types of curb stops

Mueller
A Y Macdonald
Ford

Approved boxes

W D
VB-24
VB-25

### 5. LOW DENSITY POLYETHYLNEE FITTINGS

5.1 Pipe fittings shall be nylon glass filled insert type 32 mm or insert by 32 mm MIP Adapter, held with two all stainless steel worm drive clamps.

## Rural Water Connection – Curb Valve to House

### 6. PIPE

6.1 All pipe and associated fittings shall conform to the following schedule:

32 mm service line; low density polyethylene CSA B.1370 series 100

6.2 Piping shall be provided with a minimum earth cover of 2.5 meters (8 feet), except under roads or driveways where cover shall not be less than 3.0 meters (10 feet).

**7. LOW DENSITY POLYETHYLENE FITTINGS**

7.1 Pipe fittings shall be nylon glass filled insert type, held with two all stainless steel worm drive clamps and of the same diameter as the pipe(s) being connected.

**8. DOMESTIC WATER VALVES (GATE, GLOBE, BALL)**

8.1 Valves shall be 32 mm bronze threaded minimum pressure rating of 150 psi and suitable for use in potable water systems.

**9. CHECK VALVES**

9.1 check valves shall be 20 mm bronze female threaded, all position, inline check valves and rated for operating at all pressures up to a maximum of 150 psi.

9.2 Acceptable check valve is a flow-matic model or approved equal.

**10. FLOW CONTROL**

10.1 Flow control shall be a 20 mm Dole model 3G or approved equal.

**11. METER AND CONECTION PACKAGE**

11.1 The above items 8. through 11. shall be supplied by the Rural Municipality of Macdonald at time of connection and be billed as part of the connection cost.

11.2 The foregoing package shall be assembled with the following components listed in order of assembly

32 mm water valve
32 mm x 20 mm brass reduced bushing
20 mm brass close nipple
20 mm bronze inline check valve
20 mm x 16 mm tail piece
16 mm water meter
20 mm x 16 mm tail piece
20 mm flow restrictor

**12. BUILDING INSTALLATION**

12.1 Within 300 mm (1 feet) of where the service line enters the building, a gate (or globe or ball) valve shall be installed. The meter shall be installed by means of threaded couplings no less than 150 mm (6 in.) and no more than 300 mm (12 in.) above basement or crawl space floor level. The meter shall be suitably supported on a wood or metal stand which is securely anchored to a floor or wall. The meter shall be located so as to be accessible for servicing. Meters shall be of a type supplied by the municipality.

12.2 Where a connected building has an alternative water source or a second water system (i.e. rainwater cistern or river intake), the alternative system shall be disconnected or in the event that the owner wishes to retain the alternative system, an approved backflow preventer shall be installed by means of threaded couplings downstream of the meter.

Approved backflow preventers include:

Claval D-2
Febco 805 and 805Y
Any other make as may be approved in writing by the Municipality.

12.3 Where water service pipe enters through a foundation wall or floor, an appropriate sized hole shall be cored through. The annular space between the pipe and hole shall be filled with "Quick Plug" or other fast curing watertight sealing agents.

**13. PRESSURE REQUIREMENTS**

13.1 All service connection products shall be suitable for 1000 kPa (150 psi) working pressure cold water service.

13.2 All home plumbing installations shall be suitable for system static pressures of 550 kPa (80 psi) and surge pressures of 825 kPa (120 psi). Hot water tanks shall have appropriate pressure protection devices against surges.

**14. PERMIT**

14.1 Prior to making a connection to an existing service line at a property line, the property owner shall apply for a permit at the municipal office.

14.2 Such permit shall identify the property owner, the location of the property, the name of the contractor or plumber making the connection, the date on which the connection is to be made, such other information as the Municipality may require.

14.3 Permit applications or connections fees shall be established from time to time by council.

**15. PUBLIC RIGHT-OF-WAY**

15.1 Where construction operations extend beyond the owner's private property onto the public road or lane right-of-way, all damage to said right-of-way shall be restored to its original condition. All construction operations shall be subject to all applicable Provincial laws and regulations and Municipal by-laws and regulations.