Shaw)

FIBRE STRAIGHT TO YOUR DEVELOPMENT.

Shaw's Fibre to the Premises advantage.

With the launch of Fibre to the Premises (FTTP) for all eligible Greenfield builds, Shaw is leveraging the strength of our Fibre+ Network to offer our most advanced Internet technology for your new development.

FIBRE TO THE PREMISES

FTTP through Shaw will provide your build ultra fast internet through a dedicated, low touch, low maintenance fibre connection that is fed directly to your development from our hub site.

NETWORK ADVANTAGES

Shaw is the fastest and most consistent ISP in western Canada[1] and is capable of offering multi-Gigabit speeds to millions of customers.

LESS COST, MORE VALUE

With Shaw's Fibre+ Gateway, all of our services can operate seamlessly from one outlet in the home reducing costs on materials and labour in your development.

1. Based on analysis by Ookla® of Speedtest Intelligence® data on average download speeds and consistency thresholds in Western Canadian Provinces for Q1 2022. Ookla trademarks used under license and reprinted with permission.

FAQ

WHAT IS FIBRE TO THE PREMISES?

Fibre to the Premises (FTTP) is a method of service delivery that extends a Fibre connection from the hubsite directly to a customer's residence.

HOW DOES THIS IMPACT MY PROJECT?

A fibre drop would feed a single ethernet outlet to provide full wireless connectivity to the unit.

WHEN AND WHERE WILL FTTP BE AVAILABLE?

Effective May 4, FTTP will be standard for all eligible Greenfield projects received by Shaw with an anticipated occupancy date after November 1, 2022 within the following regions:

- Calgary
- Edmonton
- Vancouver
- Victoria
- Winnipeg
- Lethbridge
- Red Deer
- BC Interior
- Saskatoon

HOW CAN I FIND OUT MORE?

Contact your local New Development Executive or local Shaw Planning team.

Shaw

New Development Information Form

Project Information:

Project Name:
Civil Address:
Legal Address:
Master Planned Community **Phase** **of**

Project Type:

Single Family ☐ **Multi-Dwelling** ☐ **Commercial Only** ☐

Residential Units **Commercial Units** **Total Phases** **Total Buildings**

Additional Services:

In addition to Shaw services to the Residential and Commercial units, which of the following additional services would you like to install in common (or selected) areas?

Alarm Line Testing ☐ **Elevator** ☐ **Fire** ☐

Security Surveillance ☐ **WiFi** ☐ **Cellular Connectivity** ☐

Important Dates:

Offsite Telecom Relo. Completion: **Shallow Utilities Install Date:**
Prelim Design Due: **Base Building Services**
First Tenant Occupancy Date: **Activation Date:**

Contact Information:

	Company	Contact	Phone	Email
Developer:				
Engineering Consultant:				
Electrical Engineering:				
Civil Contractor:				
Site Supervisor Name:				
Site Electrician Name:				
Addressing Information:				

*** Developer must provide all civic addressing (including suites for MDU) to Shaw Planning a minimum of 30 days before activation of the project. Services cannot be provided until this is obtained**

Attached/Enclosed:

Site/Phase Plan ☐ **Civic Addressing Plan** ☐ **Utility Plan** ☐ **Electrical Plan** ☐

Floor Plan ☐ **Offsite Telecom Relo. Plan** ☐ **Statutory Right of Way Survey Plan** ☐

**Please note, a utility design is required in order for Shaw to begin a prelim design*

Please send completed form and any other related attachments to:

Vancouver	BC Interior	Vancouver Island	Northern Alberta
Southern Alberta	Saskatchewan	Manitoba	Ontario

WIRING STANDARDS AND GUIDELINES

SHAW'S ONE OUTLET SOLUTION

As a wireless broadband leader, Shaw is committed to providing the best wireless experience to our Developers and Customers. With our Gateway modem we are able to provide a true wireless option through a single outlet providing best in class connectivity, including television and home phone. Our one outlet solution provides a more efficient build experience, reducing costs and needless materials while ensuring premium connectivity.

SPACE AND CLEARANCE GUIDELINES

Shaw Equipment:

The service entrance and sub-distribution cable can be terminated or spliced in the combined equipment room of a building which is shared by electrical distribution, telephone terminations, fire alarms and security systems. The following are some guidelines and possible conditions:

The size of the area assigned for Shaw equipment installation is a minimum requirement. If the developer anticipates future expansion to a building, then provisions for adequate expansion space for Shaw service equipment should be allowed.

In the main electrical room, a 2400mm (96") x 2400mm (96") x 19mm (3/4") G1S plywood backboard shall be provided for Shaw service use only. Sub-distribution rooms should contain a 1200mm (48") x 1200mm (48") x 19mm (3/4") G1S plywood backboard for Shaw services.

One 15-amp, 120-volt AC duplex receptacle on a dedicated circuit is required for Shaw service equipment. The outlet is to be installed adjacent to Shaw service equipment at 1m (39") above the finished floor level in the centre of the plywood backboard. If available, this receptacle should be on a backup generator circuit.

Access must be made available to main building electrical panel grounding. If main electrical panel grounding is not available in the same room, then it is the responsibility of the developer to provide an approved ground as close to the entrance duct location as possible, as specified in the Canadian Electrical Code.

Adequate clearance shall be provided between the Shaw service equipment and the electrical panel to meet electrical code requirements. The Shaw service equipment area must be kept clear of all foreign objects to provide a minimum working space of 1m (39") in front of the entire length of the Shaw service equipment area. If the conditions are not met to provide the required space in the combined use room, then Shaw will require a separate and secure room for Shaw sole use. This location shall be accessible only to authorized personnel as specified in the Canadian Electrical Code.

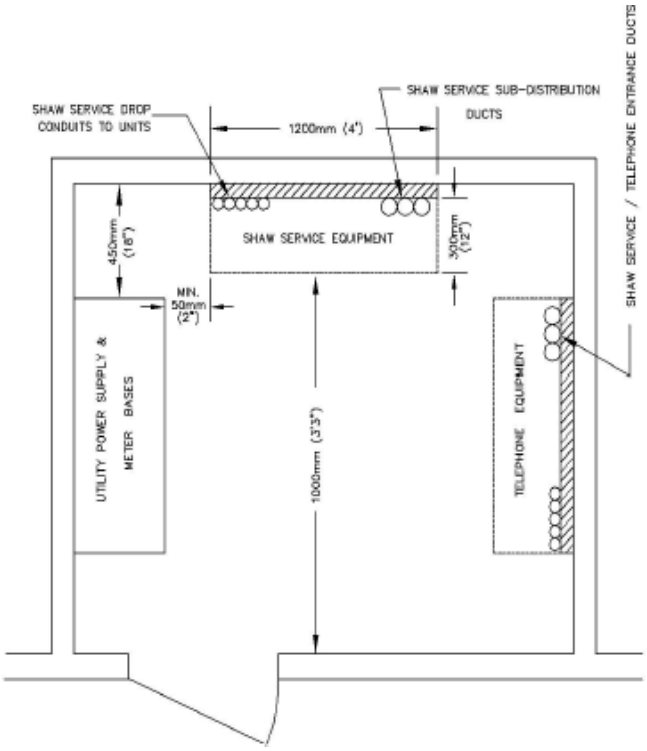

Figure 1 – Shaw Service Equipment – Common Room

For low-rise and high-rise buildings, Shaw will require ducts, of 75mm (3") in diameter, connecting from the first main electrical room to all dedicated sub-distribution rooms provided for Shaw's equipment.

ADDITIONAL NOTES

1. **All conduits connecting from sub-distribution rooms/closets to the last MDU box must not exceed the length of 45m (150'). If the length exceeds 45m (150'), additional sub-distribution space must be provided**

2. **Shaw requires 1- 3" or 4" entrance duct to reserve our conduit. If there are multiple ducts, please ensure that the duct is labelled for Shaw.**

3. **T-Drain (shown below) is required for all below grade entrances to reduce/eliminate the chance of water migration into building**

4. **Underground Raceway – Where communication conductors or cable assemblies are placed in underground raceway systems**

    a. **The raceway, including laterals, shall be separated from those used for electric power system by not less than 50mm of concrete or 300mm of well-tamped earth;**
    b. **The raceway shall be located to maintain a minimum depth of 600mm in areas subject to vehicular traffic and 450mm in all other areas, except that**

where rock bottom is encountered at a lesser depth the raceway shall be encased in concrete;

c. The raceway shall not terminate in the same maintenance hole, and the conductors or cable assembly shall not be placed in the same maintenance hole, used for the electric power system unless all requirements of Clause 6 of CAN/CSA-C22.3 No. 7 are adhered to;
d. The cables shall not be placed in the same raceway containing electric lighting or power supply cables;
e. The cables shall be suitable for wet locations; and
f. Raceways entering a building and forming part of an underground installation shall be sealed with a suitable compound in such a way that moisture and gas will not enter the building and shall
    i. Enter the building above ground where practicable; or
    ii. Be suitably drained

5. All conduits must not exceed two 90-degree sweep bends. If more than two 90-degree sweep bends, additional pull-box must be provided. The location of the pull-box must be accessible.

6. Bends in conduits shall be long sweep radius bends wherever it is possible and practical. Bending radius of the conduit shall be as follows:

    a. Six (6) times the internal diameter for 50mm (2") and smaller
    b. Ten (10) times the internal diameter for the larger than 50mm (2")

7. All conduits must be provided with a water-proof pull-cord.

COAXIAL SERVICE DROPS TO SUITE

Shaw requires one (1) RG6 coax cable to be installed from the demarcation point (closest riser/tap room) to the main outlet in the unit (usually LR). A dedicated wall plate (Shaw only) shall be installed adjacent to and independent of telco outlet unless dual (modular) plate is used (the RG6 may run through a pull box (if required) in suite depending on builder plans)

Ensure site superintendent contacts Shaw within 60 days of occupancy to ensure timely access to perform quality assurance checks that networks meet Shaw standards

FTTP STANDARDS AND GUIDELINES

Multi Dwelling Units (MDU):

Suite Feed (and amenity outlet) Conduits

- 1” home run conduit preferred

- **Minimum requirement is a 1" conduit in a riser configuration feeding up to a maximum of three suites.**

In-Suite (and amenity outlet if required) Recessed Wall Cabinet

- **30"H x 14"W x 3.5"D (Primex model P3000). The cabinet size will permit the ONT and other equipment as needed.**
- **Developer to supply and install one grounded non-switched 120VAC duplex outlet at the bottom of the wall cabinet to accommodate equipment electrical requirements.**
- **At service activation time, ONT will be installed by Shaw in the recessed in-suite wall cabinet.**
- **Fiber drop to be terminated in a Fiber Transition Case 2.0 (Primex model 125-1827)**

In-Suite (and amenity outlet if required) Conduit and Ethernet Wiring

- **Conduit with three Cat6 Ethernet cables run between in-suite cabinet and outlet at a convenient, Wi-Fi optimal coverage location, adjacent to a non-switched 120VAC duplex outlet for the Wi-Fi service gateway. Cat6 Ethernet cable run not to exceed a maximum distance of 50m.**
- **Two ethernet for data and one reserved for telephone. One ethernet cable to feed from ONT to Wi-Fi Gateway Input and second ethernet cable to run back to demarcation location from Wi-Fi Gateway if customer wants to provide run their own wired network.**
- **Should not exceed 55m in length.**

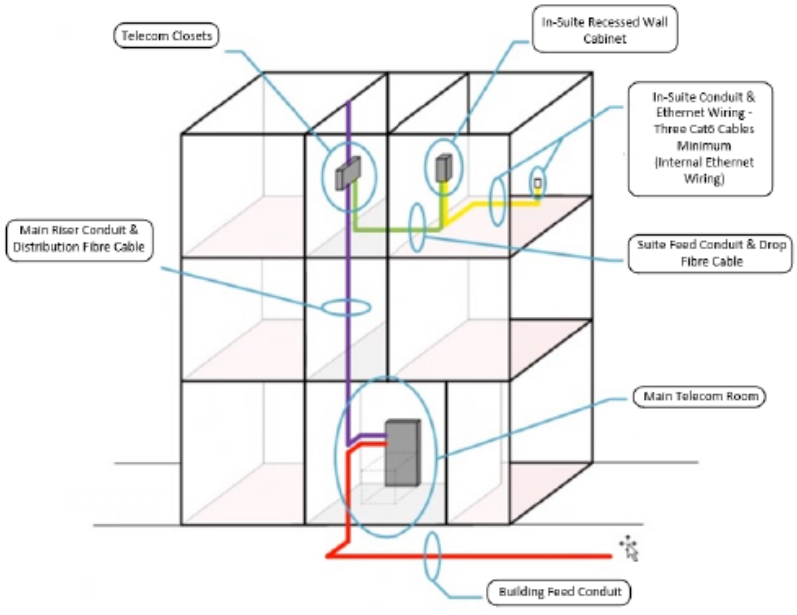

Figure 2 – MDU FTTP Wiring

SINGLE FAMILY UNITS (SFU):

Dwelling Feed Conduit

- **1" Conduit**

Outside Demarcation Enclosure (CSE)

- **10"H x 7"W x 4"D (Primex model P700).**
- **Fibre drop ground to be attached to ground connection in CSE and ground wire run from CSE to Ground connection at electrical panel.**

Unit Entry Conduit

- **Developer to place a 1" conduit with pull string, properly sealed, between the outside demarcation enclosure (CSE) and the inside demarcation location (Electrical Panel/Hydro Panel). Only if required to reach demarcation location.**

Inside Demarcation Location

- **Preferred to be directly behind Outside Demarcation location**
- **Builder to ensure that no less than 12"H x 12"W is available on a ¾"D plywood backboard adjacent to a grounded non-switched 120VAC duplex outlet (Electrical panel/Hydro Panel).**
- **The backboard must be mounted such that it is accessible. The backboard space should have 4-6" clearance from doors or walls to avoid interference with the mounted equipment.**

Ethernet Wiring

- **Three Cat6 Ethernet cables run to an outlet at a convenient, Wi-Fi coverage optimal location (typically the main floor living/family room in residential units), adjacent to a grounded non switched 120VAC duplex outlet for the Wi-Fi service gateway. Cat6 Ethernet cable run not to exceed a maximum distance of 50m.**
- **Two ethernet for data and one reserved for telephone. One ethernet cable to feed from ONT to Wi-Fi Gateway Input and second ethernet cable to run back to demarcation location from Wi-Fi Gateway if customer wants to provide run their own wired network.**
- **No other outlets are required, or need be wired.**

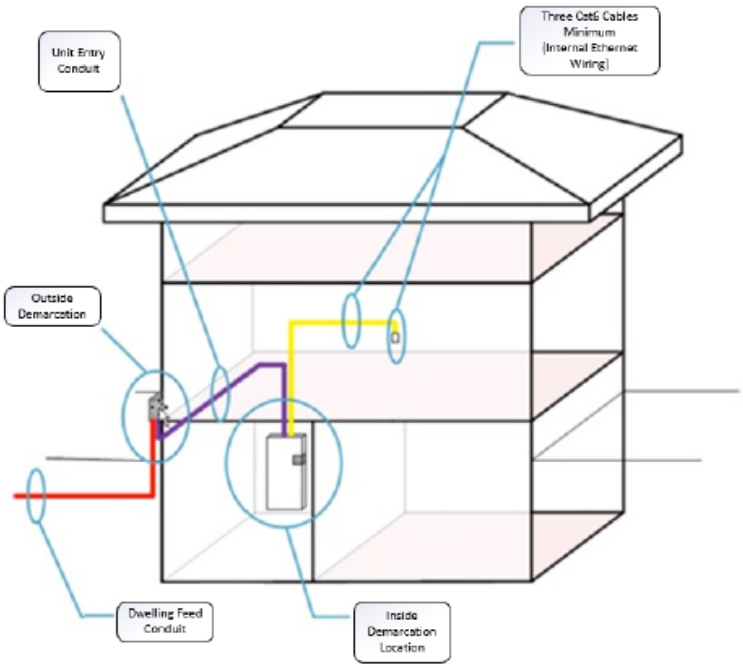

Figure 3 – SFU FTTP Wiring

COMMERCIAL UNITS

Multi-Unit:

Dwelling Feed Conduit

- **Developer to place a 2" conduit with pull string, properly sealed, with a stub outside the building to the inside demarcation location (Fibre Entrance Cabinet)**
- **Builder to ensure that no less than 18"H x 18"W is available on a ¾"D plywood backboard.**
- **The backboard must be mounted such that it is accessible. The backboard space should have 10-12" clearance from doors or walls to avoid interference with the mounted equipment.**

Unit Entry Conduit

- **Developer to place a 1" conduit with pull string, properly sealed, between the Fibre Entrance Cabinet (FEC) and the Unit Demarcation location (FEP) (Electrical Panel/Hydro Panel).**

Inside Demarcation Location

- **Builder to ensure that no less than 18”H x 18”W is available on a ¾”D plywood backboard adjacent to a grounded non-switched 120VAC duplex outlet (Electrical Panel/Hydro Panel).**
- **The backboard must be mounted such that it is accessible. The backboard space should have 10-12” clearance from doors or walls to avoid interference with the mounted equipment.**
- **Developer to place 1” conduit from demarcation location to customer preferred location (for W-Fi Gateway, Router, or Server location)**

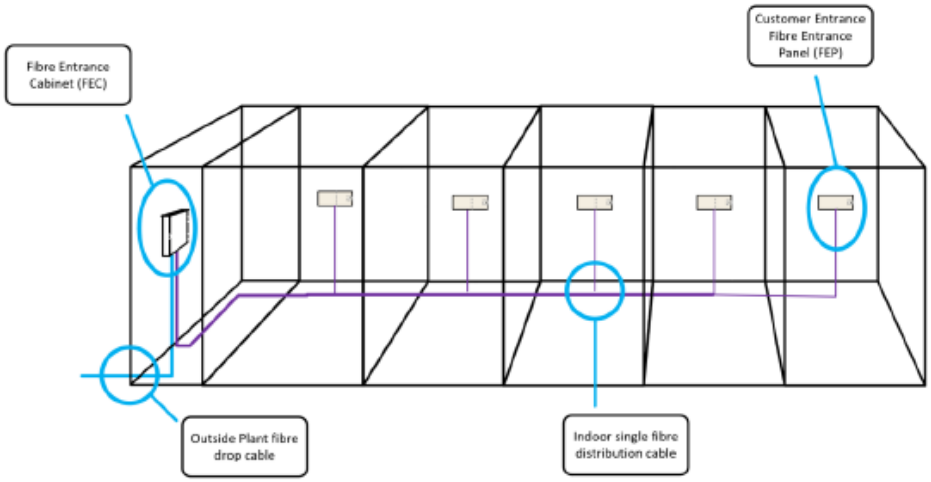

Figure 4 – Commercial Multi-Unit FTTP Wiring

Single Unit/Building

Dwelling Feed Conduit

- **Developer to place a 2” conduit with pull string, properly sealed, with a stub outside the building to the inside demarcation location (Electrical Panel/Hydro Panel).**

Inside Demarcation Location

- **Builder to ensure that no less than 18”H x 18”W is available on a ¾”D plywood backboard adjacent to a grounded non-switched 120VAC duplex outlet (Electrical panel/Hydro Panel).**
- **The backboard must be mounted such that it is accessible. The backboard space should have 10-12” clearance from doors or walls to avoid interference with the mounted equipment.**
- **Developer to place 1” conduit, with pull string, from demarcation location to customer preferred location (for W-Fi Gateway, Router, or Server location)**

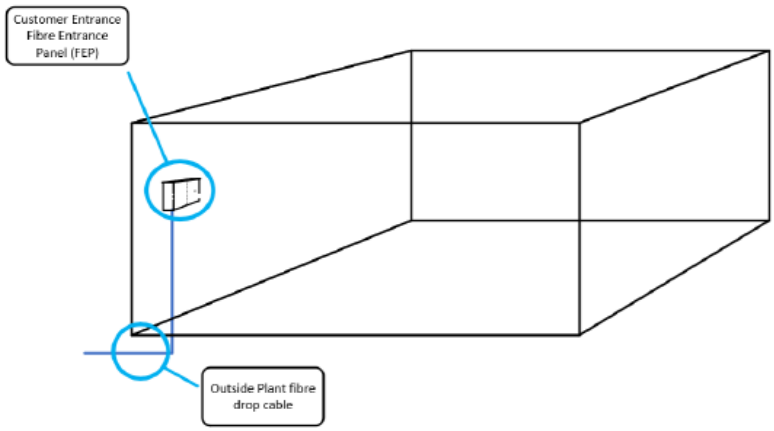

Figure 5 – Commercial Single Unit/Building FTTP Wiring

CELLULAR EQUIPMENT REQUIREMENTS (if applicable)

- **Power requirements - 100-amp, 3 PH or 200amp, 1 PH**
- **Area required for cabinets and ancillary equipment if wall mounted: 3.5m x 3m x 2m**
- **Area required for cabinets and ancillary equipment if in a room: 3m x 3m x 3m**
- **Area required for cabinets and ancillary equipment if on a platform: 3m x 3m x 3m**
- **Antenna dimensions: 0.6m x 2m for cellular panels, 0.6m to 1.2m for Micro**
- **Wave dish.**
- **Number of antennas per site: 3 – 12 depending on our requirements.**
- **Number of RRUs (Remote Radio Units): 8 per sectors.**

Note:

1. **All measurements above are approximate and could change based on the site and space availability**
2. **1-2 dedicated 4in conduit will be required to run cables from M/R to rooftop or, if equipment and antenna are collocated on rooftop, 12in wide cable trays**
3. **A grounding cable will be placed from equipment in the closet/rooftop to the main grounding for the building**
4. **A dedicated generator plug will be installed to plug in the backup generator**
5. **An additional 2.5 sqft. space might be required for a step-down transformer**