

Design Standards for Public Bike Share (PBS) Rezoning and Development Application Requirements

Authority - General Manager of Engineering Services (GMES)

Guiding Principles for Station Siting:

The integration of Public Bike Share (PBS) stations into the public of right of way and statutory rights-of-ways secured on private zoned land provides residents and commuters with a convenient active transportation option. Opportunities for station siting include providing connections to transit, high pedestrian areas such as proximity to commercial/shopping districts, parks, community facilities and amenities, higher education institutions and within residential neighbourhoods. Stations should be on or near comfortable cycling facilities to encourage the use of the near bike network. As well, stations need to be located for maximum visibility with unrestricted public access 24 hours a day, 365 days a year.

PBS stations will be located on both public right-of-way and on statutory rights-of-way secured on private zoned lands. Based on best practices, stations will be located at a minimum every 200-300m, or approximately every 2-3 blocks. The size of each PBS station is based on the relative demand expected taking into consideration adjacent land uses, population, transit nodes, recreational destinations, and other trip generating sources.

PBS Requirements for rezoning and development applications:

“Arrangements shall be made, to the satisfaction of the General Manager of Engineering Services and Director of Legal Services, for a Right of Way for the provision of space to accommodate a Public Bike Share (PBS) Station.”

1. **Size:** At a minimum^[1] a [*site specific station size*] sized station shall be accommodated. The full length of the PBS space is to be continuous. The physical station footprint with docked bicycles is 2m wide and has a required bicycle maneuvering zone of 2m for a total width of 4m^[2].

[1] Minimum length for stations on private sites is 16m. Specific size of station is subject to demand and determined by GMES.

[2] There is also the option for bi-directional stations which require a total width of 8m

Sample scenario illustrated below. Layout may vary depending on site conditions.



2. **Location:** The station must be fully located on private property while still clearly visible to the public with 24/7 public access. The preferred location is near the intersection ^[3] of *[site specific intersection]* to allow easy and safe access to the street.

[3] Stations are typically located on site close to an intersection rather than mid-block to avoid cycling on sidewalks. For sites adjacent to an existing or future cycling facility, the station is typically located to provide easy access to the bikeway.

3. **Access:** Consideration for placement of building elements (e.g fire department connections, HVAC vents, hose bibs, etc.) and landscaping that require frequent access and maintenance directly adjacent to the PBS space. These elements shall not be in conflict or cause frequent disruption to the PBS station.
4. **Surface treatment:** A hard surface, with minimum 100mm thick reinforced CIP concrete (saw cut or broom finished) is required with no utility access points (including vents, drains, etc.) within the PBS station footprint (except as noted below for power). Any utility access point within 1.0m of the PBS space is to be identified and shown in a detailed drawing submitted.
5. **Grades:** The surface must be leveled and flush with the adjacent sidewalk or plaza space. The space must have a consistent grade (i.e. no grade transitions) with a maximum cross slope of 3% and a maximum slope of 5% along the length. At minimum, spot elevations at the four corners of the PBS space must be provided.
6. **Vertical clearance:** There must be a minimum of 5.0m vertical clearance from ground level to the top of the station to accommodate the PBS station equipment.
7. **Power:** Provision of an electrical service is to be available in close proximity to the PBS station. Show the location of the electrical power connection on the landscape and site plans.

Developers must adhere to and follow the latest PBS electrical design standards. Details as per Schedule A. Provision of documentation that includes location of the building's interior electrical panel, panel number and breaker for PBS is required prior to occupancy at final inspection.

SCHEDULE A

The development is required to provide continuous, uninterrupted electrical power to the Public Bike Share station located within the agreed SRW footprint. The development electrical panel must have clearly labeled circuit(s) dedicated for the PBS station and must provide the following:

- Three phase, 4 wire, 120/208V **OR** single phase, 3 wire, 120/240V.
- 3 branch circuits protected by a 20a, 3p circuit breaker for three phase power supply **OR** 30a, 2p breaker for 120/240V single phase power supply.
- Red, black, blue, white, for 3 phase and red, black, white for single phase RWU 90, the conductor size to be adequate for voltage drop less than 3%. Single Conductor with a no. 10 AWG RWU90 green bond is required. Electrical engineer or contractor to specify conductor size and install as per Canadian Electrical Code.

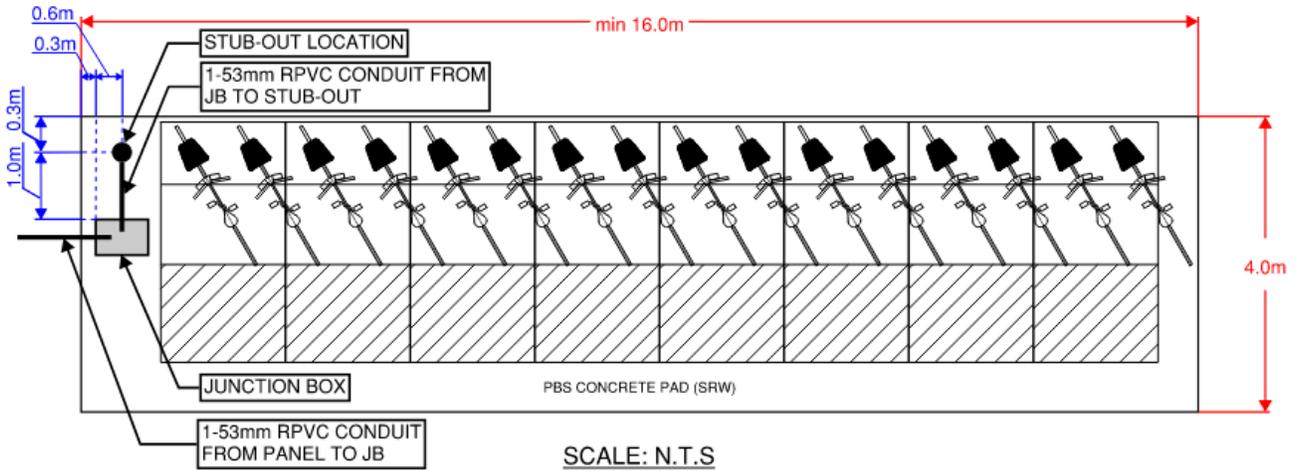
All electrical services are to be routed through 1-53mm RPVC conduit from the developments electrical panel to a dedicated junction box that is accessible, unobstructed and located within the SRW footprint^[1]. From the junction box, a second 1-53mm RPVC conduit is to be installed to the specified stub-out location as shown in Sketch A. All conduits shall be installed 600mm below surface grade, backfilled with bedding sand, and have a pull string installed within them. Electrical warning tape shall be placed 300mm below the surface, as detailed in Sketch B.

[1] If installation of a junction box is not feasible due to ground conditions and/or underground infrastructure clearance, direct conduit routing from electrical panel to stub-out location, or wall/surface mounted junction box may be approved.

The junction box should come with stainless steel penta head bolts and be selected from one of the approved products listed in the City of Vancouver's Electrical Design specified products or an equivalent approved by the City Engineer:

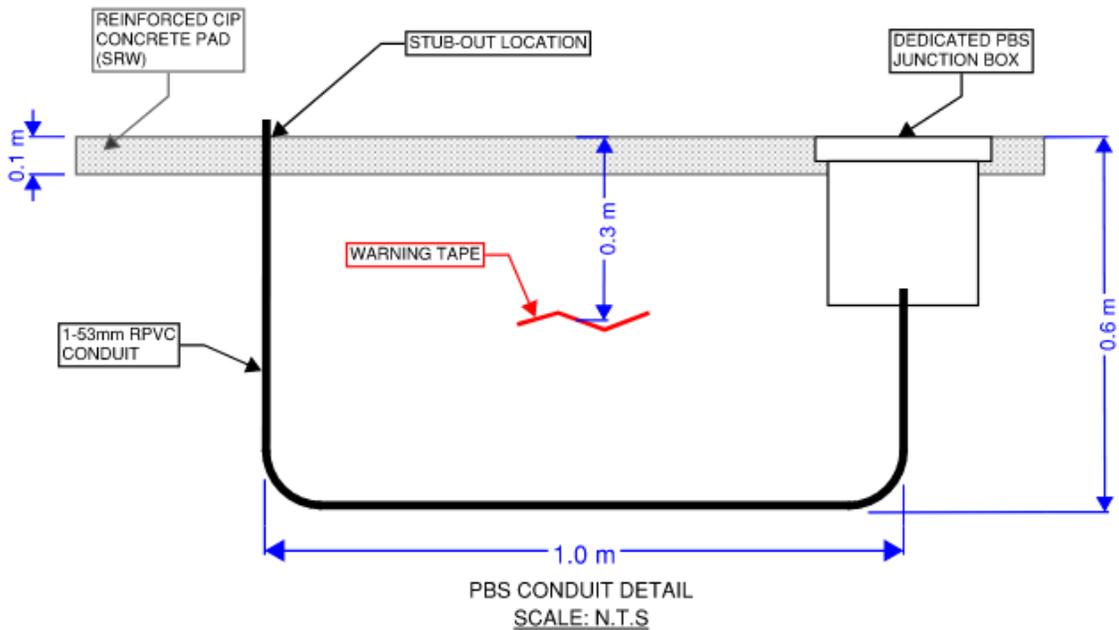
Electrical component installation must be in accordance with the latest Canadian Electrical Code. All products used in the installation must be CSA or cUL approved (or equivalent) and suitable for the application.

SKETCH A



- Junction box and stub-out can be located on either end of the PBS station
- Number of bicycle docking points may vary

SKETCH B



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