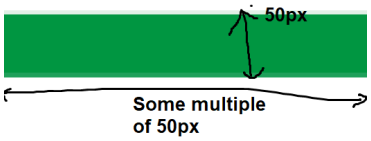
TrackPulse Vic Network Maps Style Guide

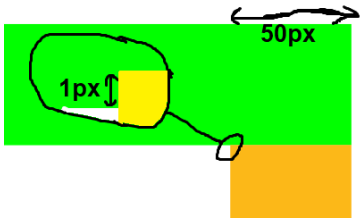
The TrackPulse Vic network maps not-to-scale maps of heavy or light rail networks in Australia. They are SVG files. They do not represent the physical track layouts but instead simplified service patterns and general routes. Whichever way of depicting the routes is simplest is preferable. The lines/routes (lines from now on) are depicted as lines the same colours as the ones on the official maps and are highly based off of them.

Lines

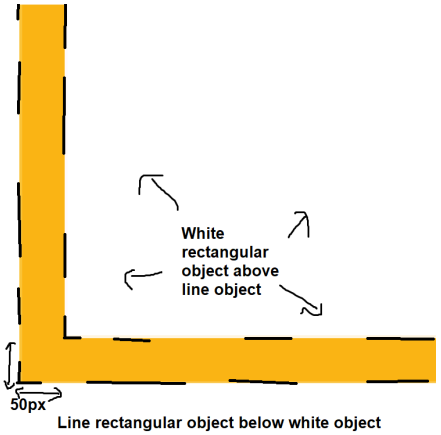
Each line is depicted as a set of straight lines 50 px wide and some multiple of 50 px long.



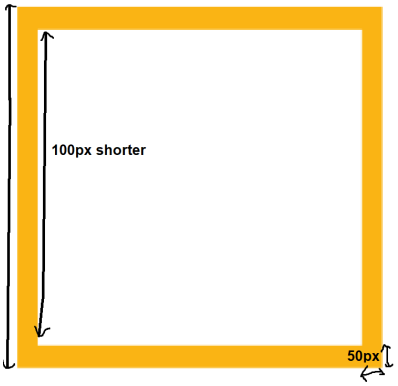
When they need to curve they will turn corners at 90 degrees. To construct this one line will go all 50 px into the corner, while the other goes only 1px in. Every time two separate line objects intersect one will go exactly 1 px into the other to create overlap. This even applies when 2 straight sections join



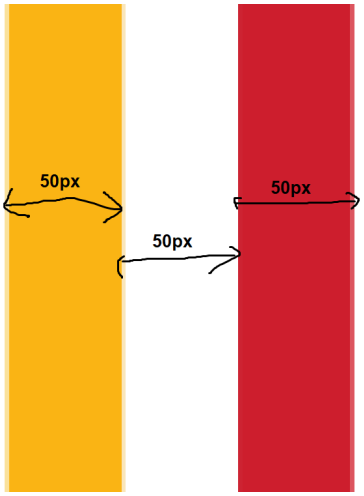
Another way to construct a corner, which is easier when making loops or when a group of lines curve, is to have a rectangular object of a large size in the line colour, then make a white object 50px smaller in both dimensions.



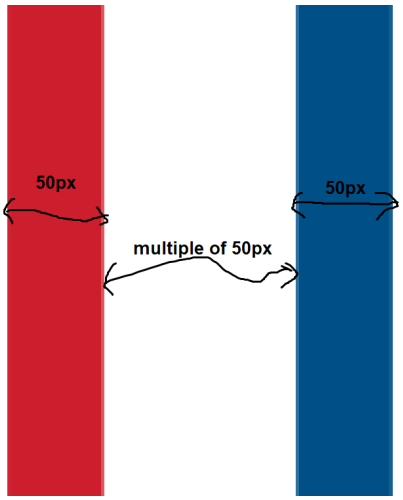
This is the preferred method of creating loops:



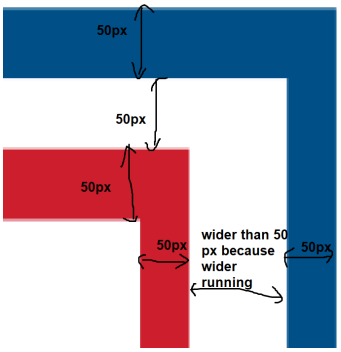
When lines run parallel they are preferred to be spaced at 50px apart at all times. They cannot be closer but they can be further if necessary. Here's the preferred running:



Here's an example of wider running:

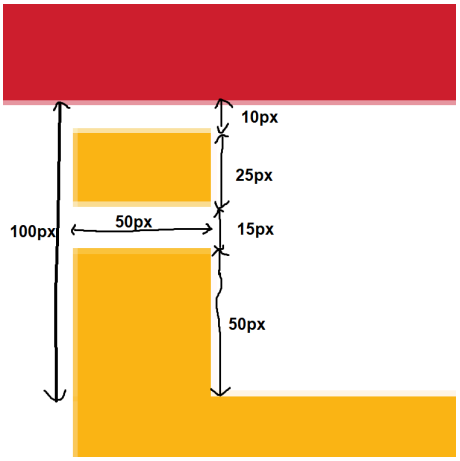


Here's an example of a parallel corner:

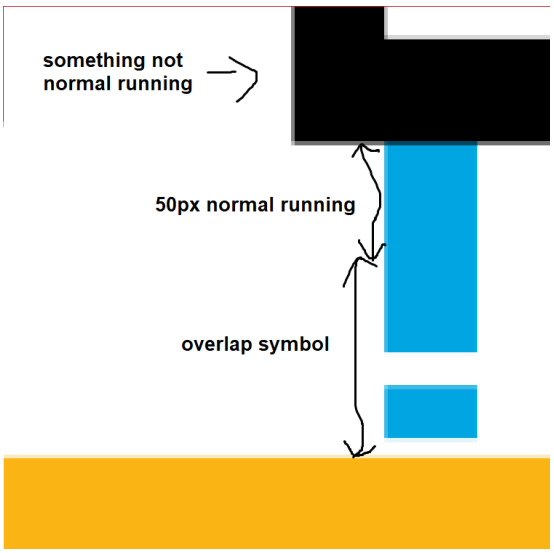


Finally, and most complexly, sometimes lines will have to overlap. One line will have to go under another. While this should be avoided when possible, it is inevitable sometimes. You should choose the arrangement which is the simplest, which is either the least lines going under or if that causes complex shapes, then the least complex arrangement. The lines do not go under one another however, instead we use this design:

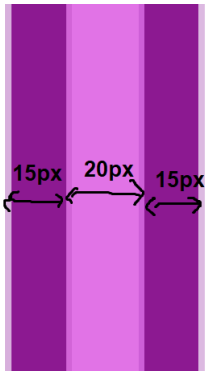
To construct it:



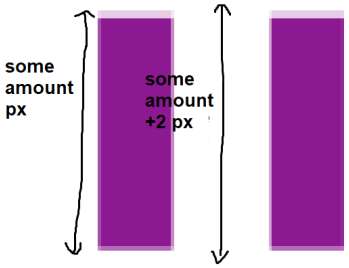
The whole structure is 100px long and 50 px wide. Starting at the closest line that it goes under, there's a 10px, followed by a 25px long line. Another 15px gap then a 50px long line. After that "normal running" can begin. There has to be at least 50px of normal running between something important and this visual indicator. Example:



You can also make a line with a different coloured middle. Here's how to construct it:



Also to make sure the inner colour covers the outer colour, only if it's white though, we add 2 to the inner colour:

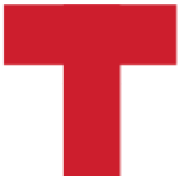


Station Symbols

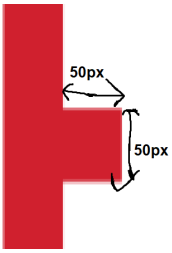
There are 3 types of stations, normal stations, interchange stations and terminus stations. Here's a normal station:

Here's an interchange station:

And here's a terminus station:



Normal stations are used for stations that aren't interchanges or the termini of a line. To construct a normal station symbol, make a 50px long piece of line come out of the line 50px (to make this you can make a rectangle 50px by 51px with a 1px overlap). They can come out any side that's convenient, although there has to be a lot of room for the label so take that into account:

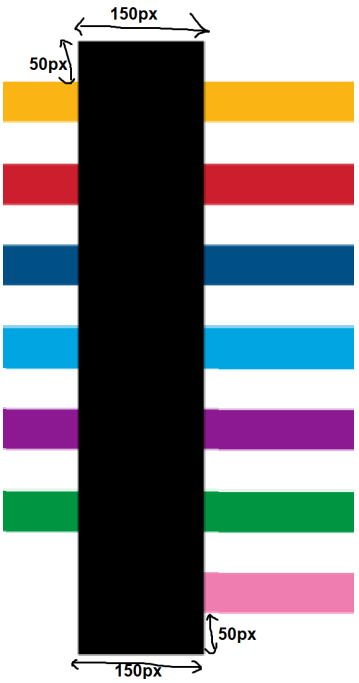


Interchange stations are when multiple lines interchange at one station. They can also be used as termini for lines that terminate at an interchange station. Note that it isn't necessarily 2 different coloured lines interchanging, it could be the same coloured line splitting into multiple lines. Here's an interchange station like the one I described:

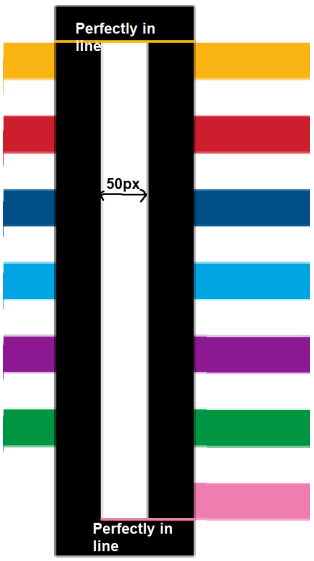
Whereas here's one with 6 lines going through it:

Here's one with 6 lines going through it and one line terminating:

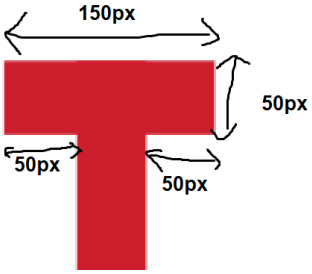
To construct one we first note that this station symbol has to be layered above the lines. For the lines that go through it, the symbol can just be placed over the lines. For the lines that terminate they should extend 1px into the symbol. First, create the black outline. It is 150px tall and juts out 50px for the furthest line on either end:



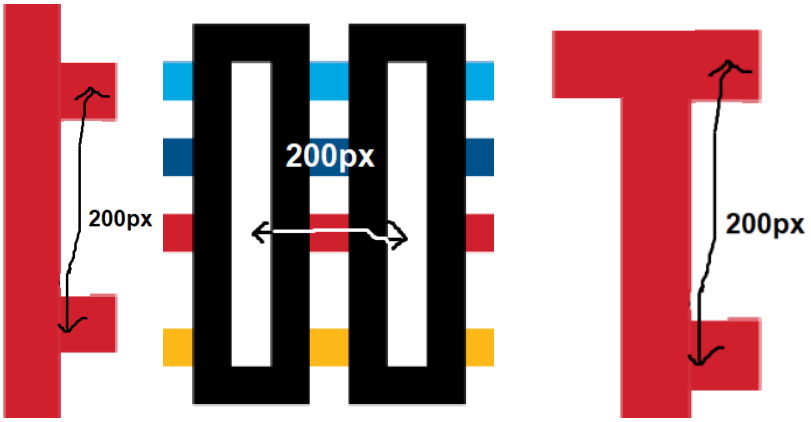
Next create the white centre. It is 50px wide and juts out exactly 0px:



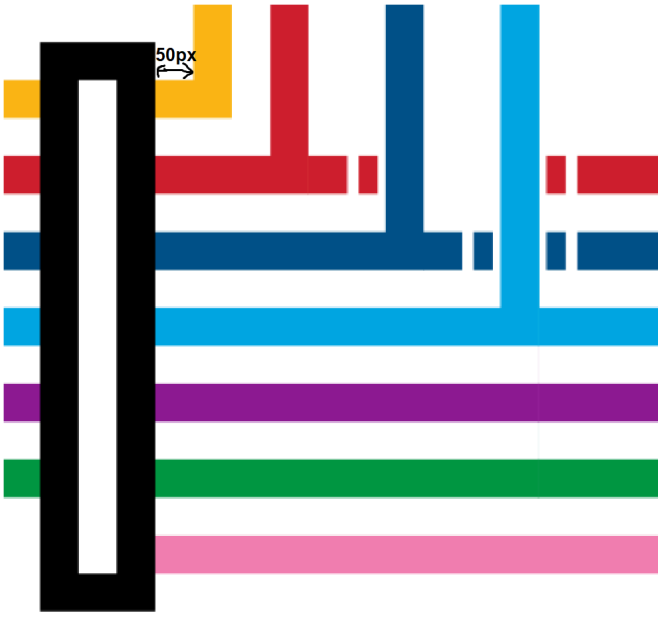
Terminus stations are used at the end of lines as the last station. To construct one, create a rectangle 150px by 50px and place it at the end on the line such that the line only has a 1px overlap. Centre it on the line. Here's what that looks like:



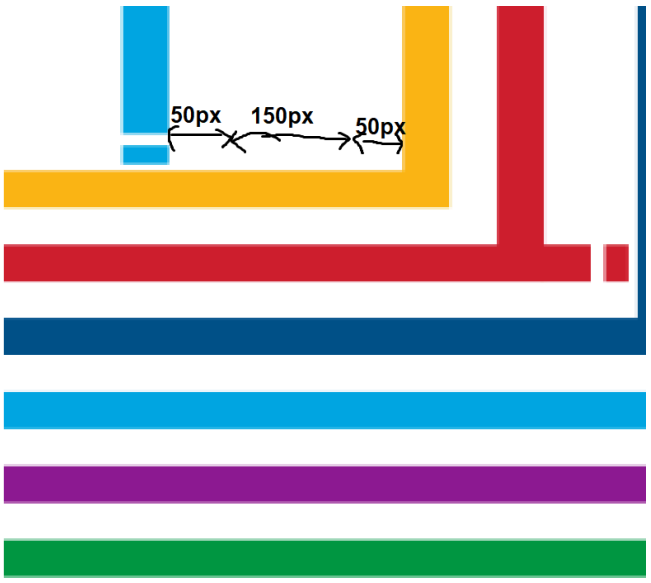
Station symbols should always be a minimum of 200px apart from their centres, although this is by no means a maximum and the distance can be as far as is needed:



Stations should also be 50 px away from anything that isn't normal running at minimum:



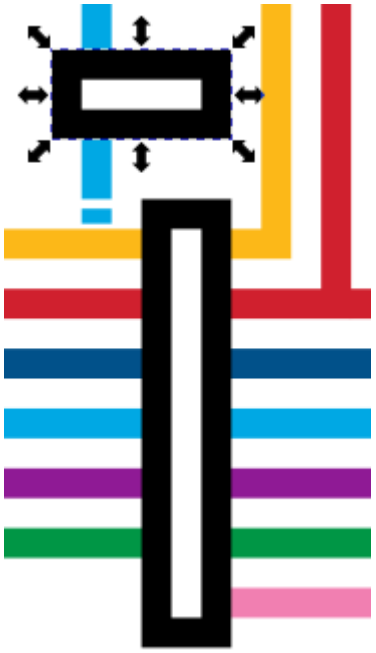
Finally, there are 2 special types of interchange stations that we haven't mentioned. The first is when one or more lines come up to the station from another angle. Here's the setup:



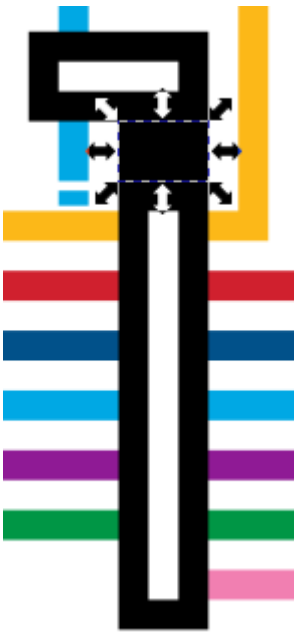
The leftmost 50px gap is for the gap between the blue line and the station symbol, the middle 150px gap is for the station symbol. Finally the rightmost 50px is to separate the station symbol from the yellow line's end of normal running.

First we add a normal interchange station for most of the lines:

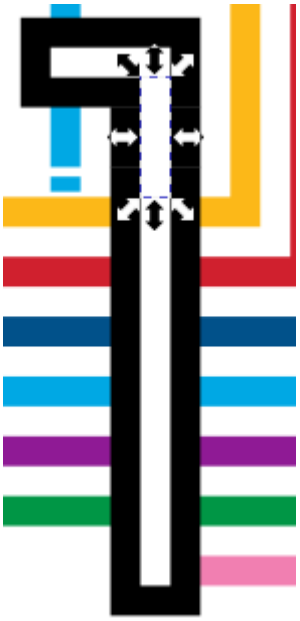
Then we add another symbol for the upper line, extended 150px so that it’s in line with the first station symbol:



Next we add a 150px by 101px black rectangle to close the gap:



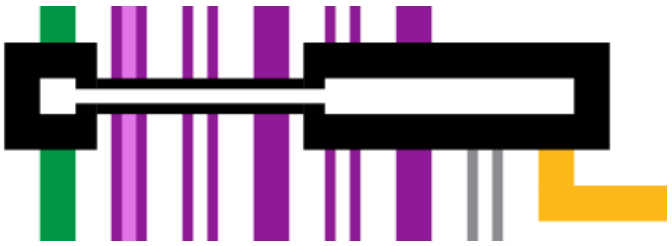
And finally we add a 50px by 202 px white rectangle to cover the black:



Note the 100px gap between the horizontal portion of the station and the other lines besides the blue one. This is 50 extra px long because of the overlap symbol being present.

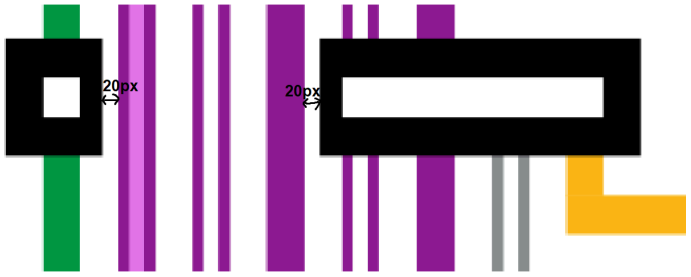
This design can easily be extended to having multiple lines running through the underpassing corridor.

The next type of special interchange station is an interchange station that not all lines stop at:



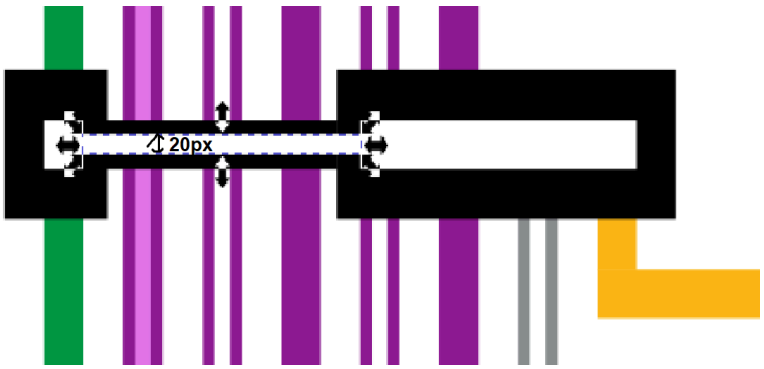
To construct it, start by creating a set of interchange station symbols over the sections that do stop there. It is preferable to limit the number of separate sections required here by rearranging the lines.

Next we shorten both of the black outlines by 20px away from the lines that skip it:



Next we add a black outline that is 50px wide and as long as the gap between the 2 other black outlines (plus 2px so there's overlap)

Finally we add a white inner line 20px wide and as long as the gap between the other 2 white inner lines (plus 2px so there's overlap):



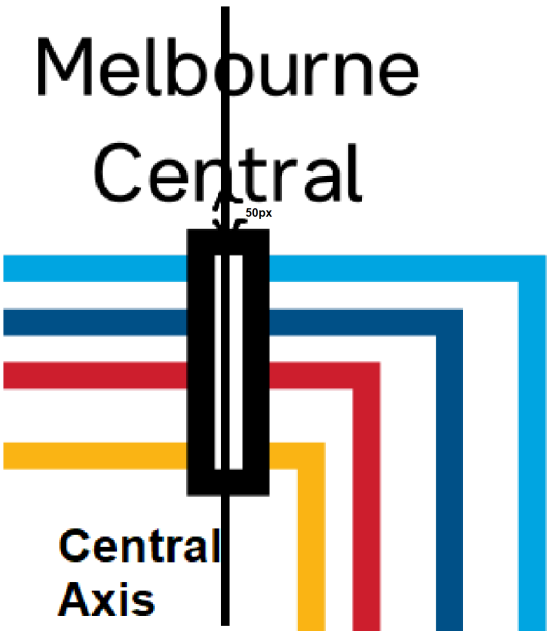
This method can be extended to any number of gaps in the interchange station. Note that this isn't used if there's a gap between lines going through a station greater than 50px, because there are still no lines that skip the station:

Station Labels

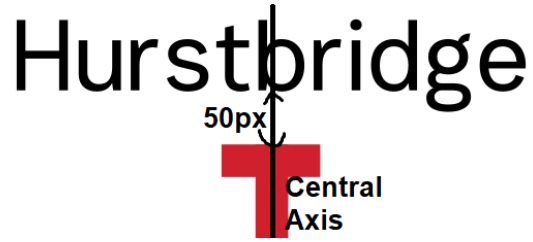
The labels for the stations are written in lowercase (with capital letters at the start of words) Network Sans 2019 font, with a font size of 100px. They are positioned 50px away from the station symbol coming out the direction of a normal station symbol, on either side of an interchange symbol (whichever side is easier), or from the end of the line if it's a terminus, and centred around the centre of the symbol on the other axis.

UPDATE: The station label font size is now 100px, not 150 px. All the following images depict the 150 px size font, but are otherwise accurate and nothing else has changed.

Here's one for an interchange station with the station oriented differently:

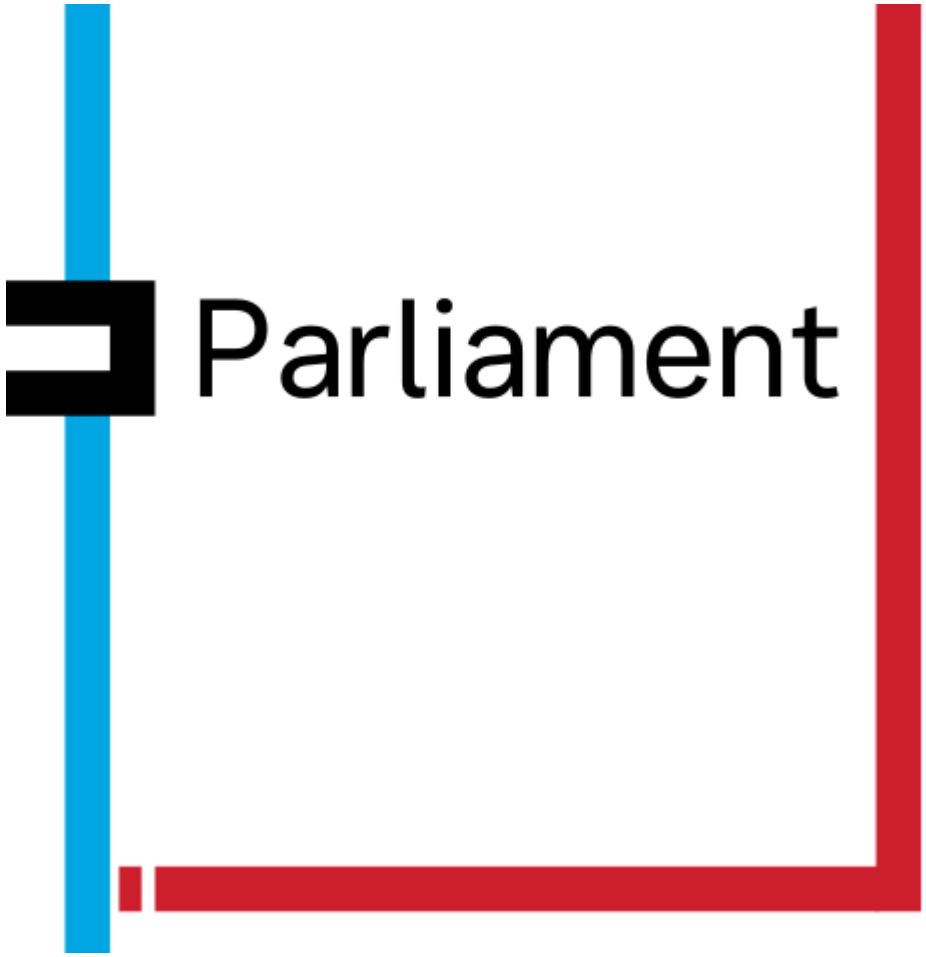


And here's one for a terminus station:



Now occasionally it will be necessary to have the station on its side. This should be avoided if possible but may be necessary:

Since the station labels are so large, you will often have to make space for them with other lines:



Example map

After applying this method to the inner city section of the Melbourne Rail Network I generated this result. Note that the lines that skip North Melbourne shouldn't actually not come out the other side, I only did this because the map doesn't currently depict anything

past North Melbourne. Otherwise every rule here is followed. Here's the map: