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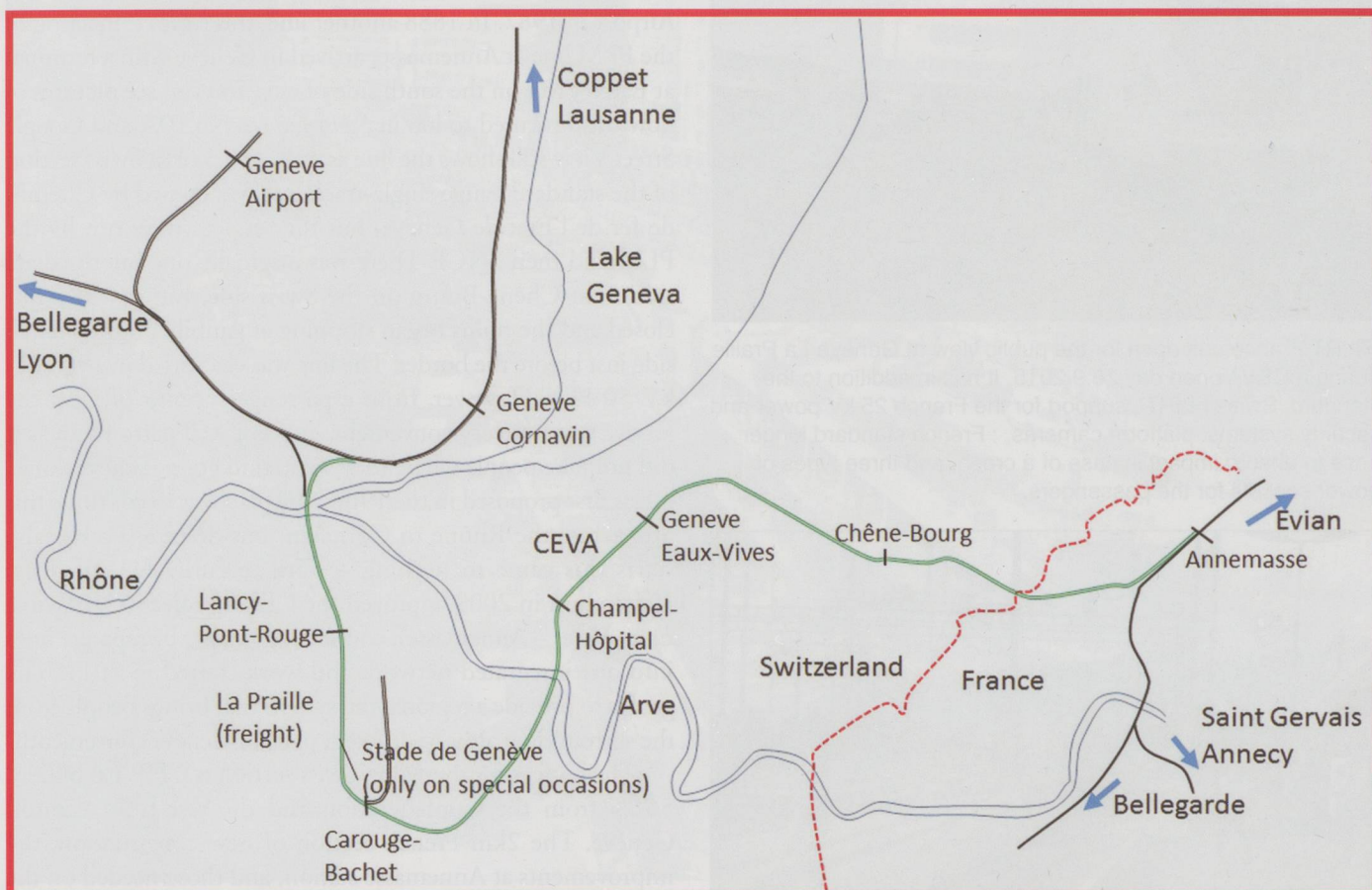
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# Genève Rail Projects - CEVA Update

Ilkka Huotelin



Geneva rail network from 2019 once CEVA is complete.

Photos: Ilkka Huotelin

I had my first experience of cross-border commuting in the Genève region in 1991 when I worked for a few months at CERN as a student, and cycled daily from the French town of Saint-Genis-Pouilly a few hundred meters across the French-Swiss border to work and back. Thousands of people queued daily at different border crossings, mostly in cars, as public transport across the border was not good. There was a bus from CERN to the centre of Genève, and maybe four times a day it continued into France. Tram 12 was the only surviving line in the city and it terminated at Moillesulaz, where you had to walk to a French bus to continue to Annemasse. There was of course the SNCF-operated rail line from Annemasse to Eaux-Vives, but it did not run very often and you typically had to change trains in Annemasse if you wanted to travel anywhere further in Haute-Savoie, meaning that the service thus remained unloved and unpopular. When I moved once again to the City of Calvin last year, I noticed that while many things have improved, certain things have remained the same. Even more people now commute daily from France as the economy has grown in Genève, whilst the queues at the border crossings are even longer, even though passport controls have been abolished. On the positive side, since 2004 there has been a unified public

transport tariff system, Unireso, covering the Genève Canton and the neighbouring areas in both countries, and more cross border bus lines have been introduced. The market share of public transport into the Canton varies between 33% from Canton Vaud, with 15% from Annemasse, down to a mere 3% from the Chablais area of France, and this is what is being addressed by the different rail projects around Genève.

Westward view from Geneva Cornavin platform 5. Of the 4 tracks leaving the station the two left hand ones will have access to the CEVA line at the St. Jean junction inside the tunnel of the same name 1.5 km west. (18.9.2015).







'FLIRT France unit open for the public view at Genève La Praille during a CEVA open day 26.9.2015. It has in addition to the standard 'Swiss FLIRT', support for the French 25 kV power and security systems: platform cameras, : French standard longer nose to absorb impact in case of a crash, and three types of power sockets for the passengers.



A 'Domino' unit to Coppet approaching Lancy-Pont-Rouge's single platform from the rail yard, where it is moved between services to allow freight trains to pass through. The new station is being built 200 m south where the right hand tracks now terminate. (10.9.2015)



SNCF TER unit at Annemasse Station. This will be much busier once the line is opened in 2019. A new island platform will be built to the left of the picture with switchable overhead power (15/25 kV). (19.9.2015)

## CEVA Background

When the railway reached Genève in 1858, both from Lausanne in the east and from Lyon in the west, the station was built in Cornavin, north of the city. Branches were subsequently built to La Praille freight yard in 1949, and to the Airport in 1987. In 1888 another line, this time connecting to the PLM line at Annemasse, arrived in Genève with a terminal at Eaux-Vives on the south side of city. You can see pictures of how this line used to look in *Swiss Express* No.107, and Google Street View still shows the line as well. The 3.6km Swiss section of the standard gauge single-track line was owned by Chemin de fer de l'État de Genève, but the services were run by the PLM and then SNCF. There was originally one intermediate station at Chêne-Bourg on the Swiss side, but in 1985 this closed and the trains began stopping at Ambilly on the French side just before the border. The line was electrified in 1986 (25 kV 50 Hz). However, from a passengers' point of view the service was not very convenient, and not well patronised, as it did not take people where they wanted to go in Genève. Since it was first proposed in the 19thC the plan was to continue this line across the Rhône to Cornavin, but despite several false starts this came to nothing – until recently. A local Swiss referendum in 2009 approved the CEVA project (Cornavin - Eaux-Vives - Annemasse), connecting finally the separate lines into one integrated network and work started in 2011. The goal is to provide a regional rail system that brings people from the surrounding areas to different parts of Genève conveniently.

The budget for the 14km Swiss section is CHF 1.6 billion, 56 % from the Confederation and the rest from Canton Genève. The 2km French section of new construction, the improvements at Annemasse station, and those needed on the line to Évian-les-Bains, have a budget of €230m. To aid funding of the project former railway land is being redeveloped for new offices and apartments. Also, because in Switzerland, apart from at stations and airports, shop opening times are still highly regulated, retail outlets at railway stations are highly lucrative and rental income from these is used to partly finance projects like this.



Future 'Voie Vert' near Chêne-Bourg. The old line used to run above ground through the suburbs of Geneva, but the new one is being dug underground and pedestrians and cyclists will roam above on the 'greenway'.





Construction of the future Champel-Hôpital stop. The opposition to the CEVA project was the fiercest here as the station is being built on the site of a neighbourhood park. (19.9.2015)



Digging the Champel tunnel. (26.9.2015)

### The CEVA Route

From Cornavin the line will use the existing tracks for about 3km to Lancy-Pont-Rouge, where the current twice-hourly commuter train service from Coppet terminates. It was extended here from Cornavin in 2002, and now a new bigger

station will be built few a hundred metres south of the current simple single platform. The line will then pass the freight yard on its western edge, with a new double track to Carouge-Bachet, which will be a new station at the south end of the freight yard. Currently there is a platform next to the Genève stadium called Stade de Genève, which is used only occasionally when large sporting events and concerts are held at the stadium. This special stop will remain, even when the nearby Carouge-Bachet stop is opened. Then a completely new track is being built with the line entering two tunnels; Pinchat 2.1km long, and Champel 1.6km long, separated by a short surface section where the line crosses the Arve river. Champel-Hôpital will be a new station situated in the tunnel and it will also have a pedestrian underground passage to the hospital area close by. After the tunnels the line will follow the old alignment between Eaux-Vives and Annemasse, but will be relocated underground for over 5km. This is because the old line was single track, but the new double-track alignment requires more space. Also, this way some inconvenient level crossings will be removed, and most importantly the local opposition minimised. Above ground there will be a cycle path following the old route. There will be new underground stations located at Eaux-Vives and Chêne-Bourg, with several new buildings above the railway line. The old station building of Chêne-Bourg was moved about hundred meters to the other side of the line to make



space for them. Unfortunately the residents of Ambilly were not lucky enough to see their stop reinstated. In Annemasse an additional island platform is being built with switchable overhead power for both 15 kV and 25 kV.

### Planned service and rolling stock

The plan is to run six trains per hour in each direction through the central section from Cornavin to Annemasse once the line is opened in December 2019. These will comprise:

- 1 RegioExpress between Vevey and Annemasse;
- 1 RegioExpress between Romont and Annemasse;
- 1 Regio between Coppet and Annemasse;
- 1 Regio between Coppet and Evian-les-Bains;
- 1 Regio between Coppet and Saint-Gervais-les-Bains-Le Fayet;
- 1 Regio between Coppet and Annecy.

This will extend the Swiss regular clock-face timetabling further into France, which traditionally has had more irregular schedules. The Regios will stop at all the intermediate stops, but the RegioExpresses (REs) only at Lancy-Pont-Rouge and Eaux-Vives, which will have 400m long platforms instead of the 220m long ones at Carouge-Bachet, Champel-Hôpital and Chêne-Bourg. To choose a name for the new service there was a competition this June and the winner of the public vote was *Léman Express*, which will cover all the local rail services in the Genève area, both sides of the border. The service was planned to start in 2017, but the project is running currently about two years late, due to the more challenging terrain in the Champel tunnel. As an intermediate solution the current twice-hourly stopping service between Coppet and Lancy-Point-Rouge will be doubled from December 2017.

Both SBB/CFF and the Region Rhône-Alpes will own the rolling stock. The Region is responsible under the French system for the public transport within its area, with SNCF operating the service under contract. The original plan was to coordinate the purchases and use a single type at rolling stock for the cross-border service, but the Swiss went ahead last year and ordered from the Swiss manufacturer Stadler Rail, 23 'FLIRT France' (RABe Class 522)

dual voltage 4-car units. The French then decided this year to order 17 'Régiolis' dual voltage units from the French train builder Alstom, with whom there is already a nation-wide frame work contract. This will unfortunately lead to higher operational costs as the synergies and interoperability benefits are reduced.

The REs will continue using the same SBB/CFF double decker rolling stock as today (RABe 511), as the new line to Annemasse will be electrified with the Swiss standard (15 kV 16.67 Hz) hence no dual voltage trains are needed for this section. From Annemasse onwards to the French destinations the electrification is to the French standard 25 kV 50 Hz. It will be interesting to see if First Class accommodation will also return to the routes in France, where it was abolished at the end of 2014. The Rhône-Alpes Regional Government decided to have only a single class on most of its trains, except on a few longer routes like Lyon-Genève. The reason was not that the First Class was unpopular, but purely political! In Switzerland most trains have both classes of accommodation and SBB/CFF will provide it in their *Léman Express* trains as well.

The *Léman Express* system, once it is finally running, a century after it was first planned, will help to make the Genève area more integrated and will make travelling to the neighbouring towns much easier. ✠

The planned service pattern from 2019 onwards for *Léman Express* (Map, courtesy of SBB/CFF).

