The state has awarded a $1.5 million contract to Cambridge-based Arup USA Inc. to study a proposal to build a rail link between North and South stations.

The study, due to be completed by the spring of 2018, is being commissioned by the Massachusetts Department of Transportation’s Office of Transportation Planning. The goal is to study the costs as well as benefits of the so-called North South Rail Link project to “determine whether further technical and financial analysis is warranted,” according to Joe Pesaturo, spokesman for the Massachusetts Bay Transportation Authority. It follows a draft environmental impact report on the project undertaken in 1995 that was suspended in 2003 under then Gov. Mitt Romney.

According to a written scope of the study as of March, "much has changed since 2003 in construction technology, interest rates, land use, and transportation demand.... Among other issues, MassDOT must identify and cost right-of-way needs; confirm or amend engineering assumptions; update potential order of magnitude costs, based on a detailed review of comparable projects, the latest construction and railroad technology, and related best practices for design, procurement and project management; update ridership estimates to the extent possible using a limited design; examine potential service plans; and examine potential project benefits."

Arup USA Inc. is the local arm of London-based Arup Group Limited, a global engineering consulting firm that has worked on projects at Harvard and MIT as well as the building that houses the Institute of Contemporary Art building in the Seaport, according to its website.

The project would build a 2.7-mile tunnel deep underground between the two main rail stations in Boston, allowing trains to pass through the city and out the other side instead of stopping to turn around. Supporters argue such a tunnel would address the congestion from commuter rail trains, allow for more frequent trains and connect residents from north of the city to easily commute to businesses on the south side (including the South Boston Innovation District) and vice versa.
One of the main goals of the study will be to put a price tag on the project, which was a part of the original Central Artery project, but was cut in order to get federal funding in the 1980s. U.S. Rep. Seth Moulton, who has been a vocal supporter of the project, has thrown out a rough estimate in recent months of between $2 billion and $5 billion, but many supporters of the project contend that the cost would likely be recompensed by growth of the MBTA system overall as well as the resulting decline in automobile traffic.

The study also coincides with efforts on the part of Gov. Charlie Baker to move forward on a separate project to add several new rail lines and a rail yard to store trains during off hours at South Station. Many supporters of the North South Rail Link — which now includes five of the nine congressmen, Sen. Ed Markey and 28 of the state's mayors — say the $1.6 billion South Station Expansion project would be unnecessary and a waste of money if the rail link project were done instead.