Vision 2028: Los Angeles’ Olympic Dream to Go Metro
An Assessment of LA’s Metro System in 2028

Background

On September 13th, 2017, Los Angeles was awarded the 2028 Olympics. Major sports events attract local residents and people from all over the world. As a result, cities go through urban development to make the city friendly.

One of the major efforts the LA Olympic Committee emphasized was public transit improvements. As a result, the city launched the 28 by 28 initiative, which is 28 transit, and street improvement projects.

This project aims to analyze the projected metro rail transit system in LA, which includes 7 transit rail projects. First, the project investigates whether the stops are in optimal areas. Second, the project aims to identify if the metro system is designed in a way where tourists and local residents can get to the venues by just using the metro rail system.

Methodology

Current metro routes were mapped from data on the LA Metro Developer Data Website. Other projected routes’ information were gathered from map documents and executive plans. They were either georeferenced or geocoded.

To analyze if stops are in ideal areas, the analysis was done based on employment to population ratio and ridership of public transit. Data used came from 2017 American Community Surveys. Using a field calculator, each tract was given two scores from one to five based on their values on the two variables. A field that added the two rankings created a social demographic index map.

According to available literature, transit oriented development and ridership are heavily influenced by land use and population density. Population density was calculated from information in the 2017 ACS estimates. The original polygon map was converted to raster. Next, a shapefile containing different types of land use purposes and a shapefile that represents the 2035 LA Land Use Plan were added. Zones that were used for commercial and mixed purpose were selected, converted to points, and then converted to raster. The two density raster layers were reclassified and added using the raster calculator, giving a density index map.

Lastly, the project investigated which stops were near Olympic venues. Using the network analyst tool, a service area analysis with a 15 minute walking distance around the stops was performed. The service areas that contained a venue was selected, and the stops close to these venues were derived.

Results

The social demographic index map shows the LA metro system will be serving in regions where demand for public transit is high during and after the Olympics. Second, majority of the stops are in ideal areas for transit oriented development because population density and commercial zoning density is high. But, the projected LA metro system needs some work in order to mobilize massive amounts of people during the Olympics. According to the table, only 35 stops are actually within 1/2 mile walking distance to the venues. In addition, most of the stops that are within 1/2 mile walking distance are all clustered in Downtown Los Angeles. This observation shows one area of the county is designed to give easy commute to 12 venues.

The investigation aimed to provide a detailed analysis. However two lines were omitted because routes were not finalized. In addition, four venues were omitted as current/future lines would not provide any service to those venues. Lastly, the investigation used zoning data to calculate commercial density. Building parcel data could have provided a more accurate calculation of commercial density because building parcels contain data on which buildings are used for commercial purposes over the parcel area.

Conclusion

Overall, the combination of current and new lines will benefit the Los Angeles residents and visitors during and after the Olympics. It will help the two groups get around the bustling scenes and attraction sites of the city. But the project shows that the projected metro rail system would do a mediocre job in transporting people to venues outside of the downtown region of the city. As a result, the project recommends the city to reconsider routes of new lines or offer express bus services from the closest station near the venue to the venue itself. If not, it places more pressure on people to accommodate for their modes of transport.