Route E: Edsa Carousel	
Route 1: Monumento - Balagtas	['Monumento', 'Victoneta Ave', 'Marulas', 'SM City Valenzuela', 'Karuhatan', 'Valenzuela City Hall', 'Dalandanan', 'Governor Santiago', 'T Santiago', 'Malanday']
Route 2: Monumento - PITX	['Monumento', '5th Ave 1', 'A Mabini', 'Lapu-lapu', 'Dagat-dagatan', 'Navotas', '5th Ave 2', 'Bonifacio', 'Capulong', 'Pacheco', 'Moriones', 'Lakandula', 'Recto', 'Intramuros', 'Padre Faura', 'Quintos', 'Ospital ng Maynila', 'Gil Puyat', 'Antonio Arnaiz', 'Mall of Asia', 'PITX']
Route 3: Monumento - VGC	['Monumento', 'Bagong Barrio', 'VGC']
Route 4: North EDSA - Fairview	['North EDSA', 'Shorthorn', 'Senatorial Drive', 'Mindanao Ave', 'Tandang Sora', 'Sauyo', 'Bernardino General H', 'Novaliches General H', 'Nitang Ave', 'Novaliches Market', 'Novaliches Terminal', 'Zabarte', 'Fairview']

Route 5: Quezon Avenue - Angat	['Quezon Ave', 'GMA Kamuning', 'V. Luna', 'EAMC', 'NKTI', 'LCP', 'Philcoa', 'Technohub', 'Central Ave', 'Tandang Sora', 'Diliman Doctors', 'Ever Gotesco', 'Batasan', 'COA', 'Manggahan', 'Litex', 'Pearl Drive', 'FCM', 'Atherton', 'Mindanao Ave', 'Lagro', 'Amparo', 'Pangarap', 'Malaria']
Route 6: Quezon Avenue - EDSA Taft	['Quezon Ave', 'Sct. Borromeo', 'Timog Ave', 'Fisher Mall', 'Araneta', 'Banawe', 'D. Tuazon', 'Blumentritt', 'Lacson', 'Morayta', 'Quiapo', 'Lawton', 'UN Ave', 'Pedro Gil', 'Quirino', 'P. Ocampo', 'Buendia', 'Libertad', 'Taft']
Route 7: Quezon Avenue - Montalban	['Quezon Ave', 'GMA Kamuning', 'V. Luna', 'EAMC', 'NKTI', 'LCP', 'Philcoa', 'Technohub', 'Central Ave', 'Tandang Sora', 'Diliman Doctors', 'Ever Gotesco', 'Batasan', 'Kasiyahan', 'Filinvest 2', 'Northview']
Route 8: Cubao - Montalban	['Cubao', '15th Ave', 'Anonas', 'J.P. Rizal', 'Katipunan', 'Riverbanks', 'Tanong', 'Marikina Bayan', 'Home Owners', 'Golden Valley', 'Bayan Bayanan', 'Tumana', 'Fairlane', 'Nangka']

Route 9: Cubao - Antipolo	['Cubao', '15th Ave', 'Anonas', 'J.P. Rizal', 'Katipunan', 'SM Marikina', 'Ligaya', 'Sta. Lucia Grandmall']
Route 10: Cubao - Doroteo Jose	['Cubao', 'BGB / Betty Go-Belmo', 'Gilmore', 'J. Ruiz', 'Araneta', 'V. Mapa', 'Pureza', 'Legarda', 'Loyola', 'Recto', 'D. Jose']
Route 11: Gilmore - Taytay	['Gilmore', 'Bonny Serrano', 'Roosevelt', 'Greenhills', 'Columbia', 'EDSA Ortigas', 'Emerald', 'Medical City', 'C-5 Ortigas', 'Rosario', 'Lucky Gold', 'SM City East Ortigas']
Route 12: Kalentong - Pasig	['Kalentong', 'Shaw Center Mall', 'A. Mabini-Shaw', 'EDSA Shaw', 'Sheridan', 'RMC', 'Pasig Rotonda', 'Pasig']

Route 13: Buendia - BGC	['Buendia', 'Chino Roces', 'Osmena Highway', 'Makati Ave', 'Guadalupe Nuevo', 'Cembo', 'Cavalry Drive', 'BGC']
Route 14: Ayala - Alabang	['Ayala', 'Chino Roces', 'Osmena Highway', 'Magallanes', 'Bicutan Exit', 'Sucat', 'Alabang']
Route 15: Ayala - Binan	['Ayala', 'Chino Roces', 'Osmena Highway', 'Magallanes', 'Bicutan Exit', 'Sucat', 'Alabang', 'Soldier Hills', 'MMC', 'Katihan Rd', 'Susana Heights', 'SM Center Muntinlupa']
Route 16: Ayala - FTI Complex	['Ayala', 'Chino Roces', 'Osmena Highway', 'Magallanes', 'Nichols', 'FTI-Taguig']
Route 17: Monumento - EDSA Taft	['Monumento', '5th Ave 1', 'R. Papa', 'Abad Santos', 'Blumentritt', 'Tayuman', 'Bambang', 'D. Jose', 'Lawton', 'UN Ave', 'Pedro Gil', 'Quirino', 'P. Ocampo', 'Buendia', 'Libertad', 'Taft']

Route 18: PITX - NAIA Loop	Will not be included in the analysis ['PITX', 'NAIA T1', 'NAIA T2', 'NAIA T4', 'NAIA T3', 'Taft', 'Mall of Asia']
Route 19: North EDSA - BGC	['North EDSA', 'Shorthorn', 'Senatorial Drive', 'Mindanao Ave', 'Visayas Ave', 'Tandang Sora', 'Luzon Ave', 'Matandang Balara', 'Magsaysay Ave', 'UP Town Center', 'Gonzales', 'Rosa Alvero', 'QMMC', 'Eastwood', 'Green Meadows', 'Julia Vargas', 'Lanuza Ave', 'Pasig Blvd', 'BGC']
Route 20: Monumento - Meycauayan	Will not be included in the analysis
Route 21: Monumento - SJDM	Will not be included in the analysis
Route 22: Monumento - Angat	Will not be included in the analysis

Route 23: PITX - Sucat	['PITX', 'Sto. Nino', 'Olivares Plaza', 'A. Bonifacio', 'SM City Sucat', 'Olivares General Hos', 'Waltermart Sucat', 'Unihealth Paranaque', 'SM City BF Paranaque', 'Sucat']
Route 24: PITX - Alabang	['PITX', 'Christ The King', 'Tramo', 'Starmall Las Pinas', 'Perpetual Help', 'Robinsons Las Pinas', 'Marcos Alvarez', 'SM Southmall', 'Almanza', 'ATC', 'Alabang']
Route 25: BGC - Alabang	['BGC', 'Upper McKinley Rd', 'Diego Silang', 'Pinagsama', 'Bicutan Exit', 'Sucat', 'Alabang']

Route 26: PITX - Naic	Will not be included in the analysis
Route 27: PITX - Trece Martires	Will not be included in the analysis
Route 28: PITX - Dasmarinas	Will not be included in the analysis
Route 29: PITX - General Mariano Alvarez	Will not be included in the analysis
Route 30: PITX - Cavite City	Will not be included in the analysis

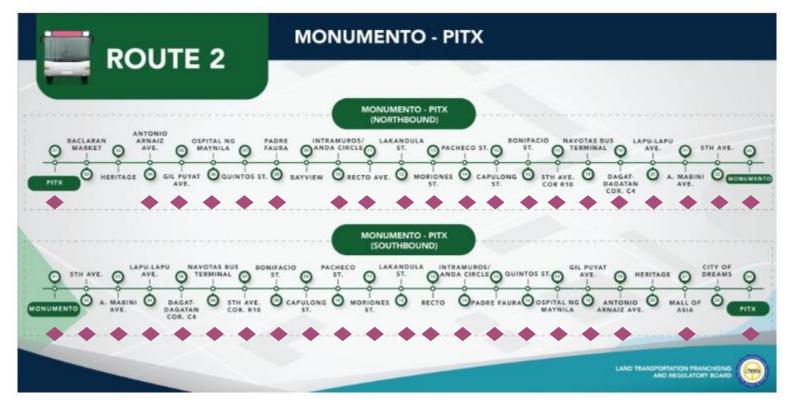
Route 1: Monumento - Balagtas

['Monumento', 'Victoneta Ave', 'Marulas', 'SM City Valenzuela', 'Karuhatan', 'Valenzuela City Hall', 'Dalandanan', 'Governor Santiago', 'T Santiago', 'Malanday']



Route 2: Monumento - PITX

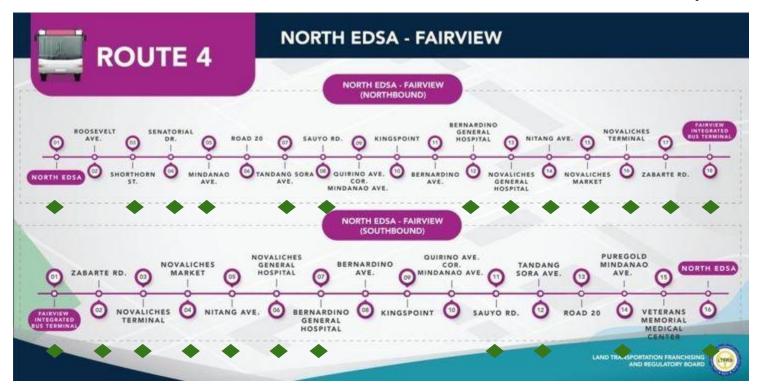
['Monumento', '5th Ave 1', 'A Mabini', 'Lapu-lapu', 'Dagat-dagatan', 'Navotas', '5th Ave 2', 'Bonifacio', 'Capulong', 'Pacheco', 'Moriones', 'Lakandula', 'Recto', 'Intramuros', 'Padre Faura', 'Quintos', 'Ospital ng Maynila', 'Gil Puyat', 'Antonio Arnaiz', 'Mall of Asia', 'PITX']





Route 4: North EDSA - Fairview

['North EDSA', 'Shorthorn', 'Senatorial Drive', 'Mindanao Ave', 'Tandang Sora', 'Sauyo', 'Bernardino General H', 'Novaliches General H', 'Nitang Ave', 'Novaliches Market', 'Novaliches Terminal', 'Zabarte', 'Fairview']



Route 5: Quezon Avenue - Angat

['Quezon Ave', 'GMA Kamuning', 'V. Luna', 'EAMC', 'NKTI', 'LCP', 'Philcoa', 'Technohub', 'Central Ave', 'Tandang Sora', 'Diliman Doctors', 'Ever Gotesco', 'Batasan', 'COA', 'Manggahan', 'Litex', 'Pearl Drive', 'FCM', 'Atherton', 'Mindanao Ave', 'Lagro', 'Amparo', 'Pangarap', 'Malaria']



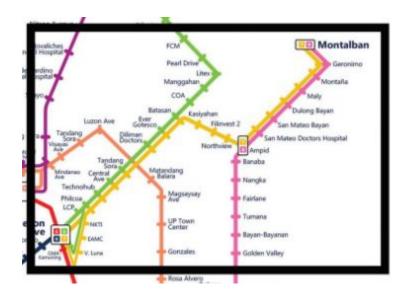
Route 6: Quezon Avenue - EDSA Taft

['Quezon Ave', 'Sct. Borromeo', 'Timog Ave', 'Fisher Mall', 'Araneta', 'Banawe', 'D. Tuazon', 'Blumentritt', 'Lacson', 'Morayta', 'Quiapo', 'Lawton', 'UN Ave', 'Pedro Gil', 'Quirino', 'P. Ocampo', 'Buendia', 'Libertad', 'Taft']



Route 7: Quezon Avenue - Montalban

['Quezon Ave', 'GMA Kamuning', 'V. Luna', 'EAMC', 'NKTI', 'LCP', 'Philcoa', 'Technohub', 'Central Ave', 'Tandang Sora', 'Diliman Doctors', 'Ever Gotesco', 'Batasan', 'Kasiyahan', 'Filinvest 2', 'Northview']



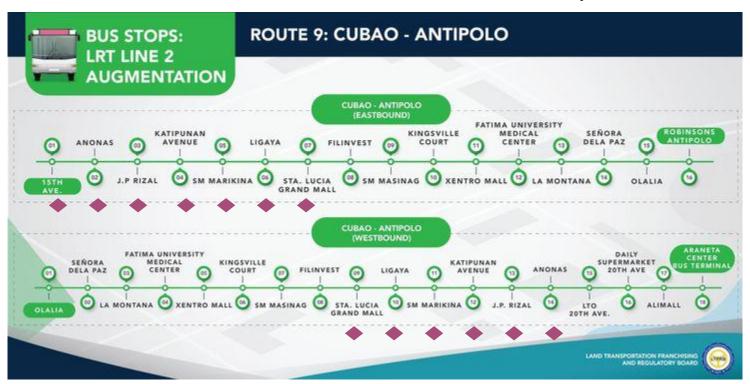
Route 8: Cubao - Montalban

['Cubao', '15th Ave', 'Anonas', 'J.P. Rizal', 'Katipunan', 'Riverbanks', 'Tanong', 'Marikina Bayan', 'Home Owners', 'Golden Valley', 'Bayan Bayanan', 'Tumana', 'Fairlane', 'Nangka']



Route 9: Cubao - Antipolo

['Cubao', '15th Ave', 'Anonas', 'J.P. Rizal', 'Katipunan', 'SM Marikina', 'Ligaya', 'Sta. Lucia Grandmall']



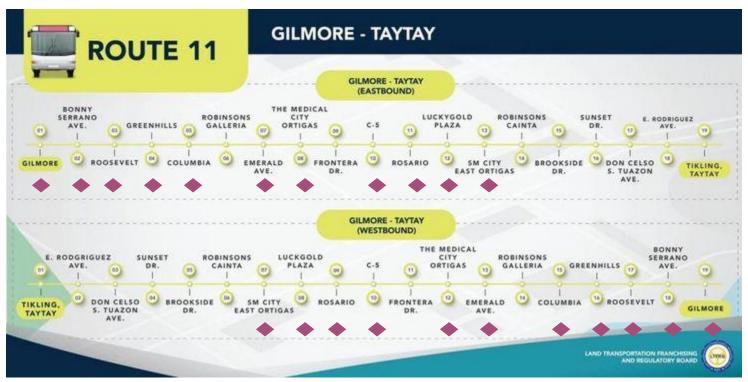
Route 10: Cubao - Doroteo Jose

['Cubao', 'BGB / Betty Go-Belmo', 'Gilmore', 'J. Ruiz', 'Araneta', 'V. Mapa', 'Pureza', 'Legarda', 'Loyola', 'Recto', 'D. Jose']



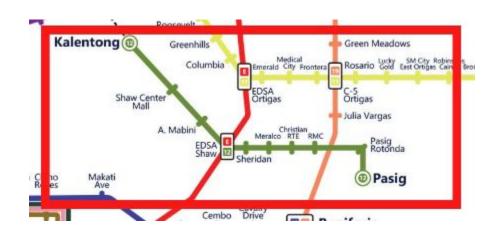
Route 11: Gilmore - Taytay

['Gilmore', 'Bonny Serrano', 'Roosevelt',
'Greenhills', 'Columbia', 'EDSA Ortigas', 'Emerald',
'Medical City', 'C-5 Ortigas', 'Rosario', 'Lucky
Gold', 'SM City East Ortigas']



Route 12: Kalentong - Pasig

['Kalentong', 'Shaw Center Mall', 'A. Mabini-Shaw', 'EDSA Shaw', 'Sheridan', 'RMC', 'Pasig Rotonda', 'Pasig']



Route 13: Buendia - BGC

['Buendia', 'Chino Roces', 'Osmena Highway', 'Makati Ave', 'Guadalupe Nuevo', 'Cembo', 'Cavalry Drive', 'BGC']



Route 14: Ayala - Alabang

['Ayala', 'Chino Roces', 'Osmena Highway', 'Magallanes', 'Bicutan Exit', 'Sucat', 'Alabang']



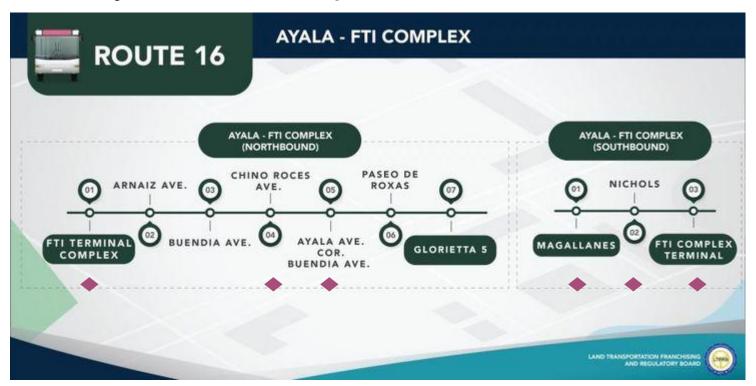
Route 15: Ayala - Binan

['Ayala', 'Chino Roces', 'Osmena Highway', 'Magallanes', 'Bicutan Exit', 'Sucat', 'Alabang', 'Soldier Hills', 'MMC', 'Katihan Rd', 'Susana Heights', 'SM Center Muntinlupa']



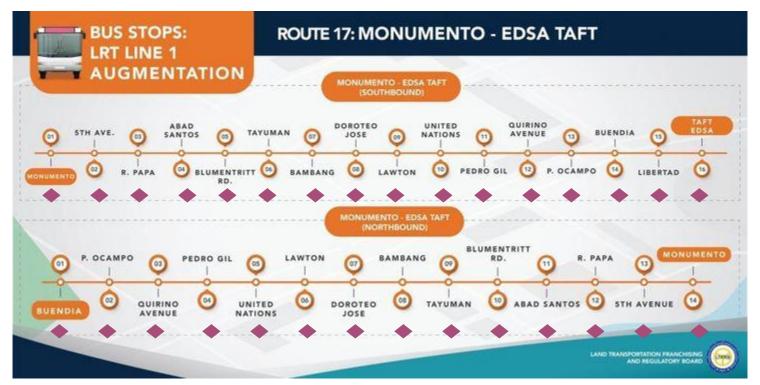
Route 16: Ayala - FTI Complex

['Ayala', 'Chino Roces', 'Osmena Highway', 'Magallanes', 'Nichols', 'FTI-Taguig']



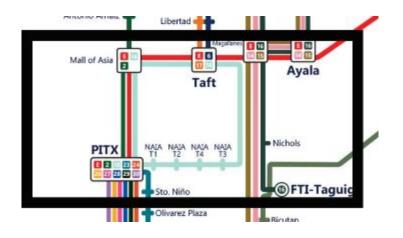
Route 17: Monumento - EDSA Taft

['Monumento', '5th Ave 1', 'R. Papa', 'Abad Santos', 'Blumentritt', 'Tayuman', 'Bambang', 'D. Jose', 'Lawton', 'UN Ave', 'Pedro Gil', 'Quirino', 'P. Ocampo', 'Buendia', 'Libertad', 'Taft']



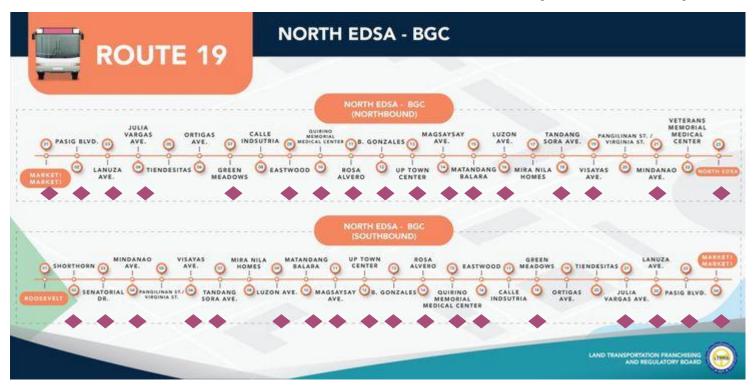
Route 18: PITX - NAIA Loop

['PITX', 'NAIA T1', 'NAIA T2', 'NAIA T4', 'NAIA T3', 'Taft', 'Mall of Asia']



Route 19: North EDSA - BGC

['North EDSA', 'Shorthorn', 'Senatorial Drive', 'Mindanao Ave', 'Visayas Ave', 'Tandang Sora', 'Luzon Ave', 'Matandang Balara', 'Magsaysay Ave', 'UP Town Center', 'Gonzales', 'Rosa Alvero', 'QMMC', 'Eastwood', 'Green Meadows', 'Julia Vargas', 'Lanuza Ave', 'Pasig Blvd', 'BGC']



Route 20: Monumento - Meycauayan Will not be included in the analysis



Will not be included in the analysis

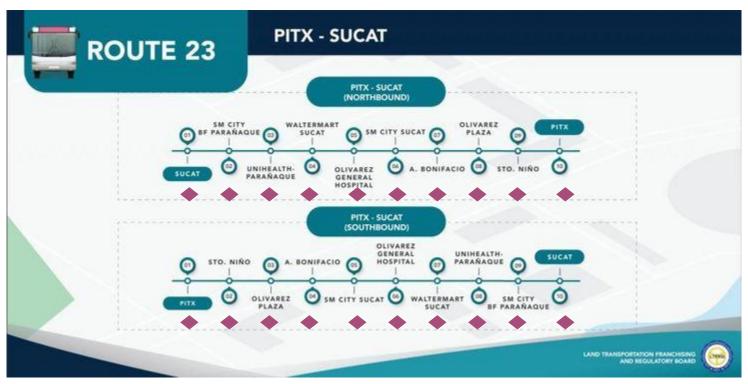


Will not be included in the analysis



Route 23: PITX - Sucat

['PITX', 'Sto. Nino', 'Olivares Plaza', 'A. Bonifacio', 'SM City Sucat', 'Olivares General Hos', 'Waltermart Sucat', 'Unihealth Paranaque', 'SM City BF Paranaque', 'Sucat']



Route 24: PITX - Alabang

['PITX', 'Christ The King', 'Tramo', 'Starmall Las Pinas', 'Perpetual Help', 'Robinsons Las Pinas', 'Marcos Alvarez', 'SM Southmall', 'Almanza', 'ATC', 'Alabang']



Route 25: BGC - Alabang

['BGC', 'Upper McKinley Rd', 'Diego Silang', 'Pinagsama', 'Bicutan Exit', 'Sucat', 'Alabang']



Simplified Road Network

Example 1: Same edges and nodes to be used - for comparison

Example 2: Additional edges and nodes - for connectivity (to be considered: roads passable for buses)