**Metadata format: ISO 19139**

**Express Bus Routes, New York NY, January 2017**

**ISO 19139 metadata content**
- Resource Identification Information
- Spatial Representation Information
- Reference System Information
- Data Quality Information
- Distribution Information
- Metadata Information

### Resource Identification Information

<table>
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<tr>
<th>CITATION</th>
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<tbody>
<tr>
<td><strong>TITLE</strong> Express Bus Routes, New York NY, January 2017</td>
</tr>
<tr>
<td><strong>PUBLICATION DATE</strong> 2017-01-31</td>
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<tr>
<td><strong>EDITION</strong> jan2017</td>
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<td><strong>PRESENTATION FORMAT</strong> mapDigital</td>
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<th>SERIES</th>
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<tr>
<td><strong>NAME</strong> NYC Mass Transit Spatial Layers</td>
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</table>

**RESPONSIBLE PARTY - POINTOFCONTACT**
- **ORGANIZATION'S NAME** Newman Library, Baruch CUNY
- **CONTACT'S POSITION** Geospatial Data Librarian

**CONTACT INFORMATION**
- **ADDRESS**
  - DELIVERY POINT 151 E 25th St Box H-0520
  - DELIVERY POINT Newman Library, Baruch CUNY
  - CITY New York
  - ADMINISTRATIVE AREA NY
  - POSTAL CODE 10010
  - COUNTRY UNITED STATES

**THEMES OR CATEGORIES OF THE RESOURCE** structure, transportation

**PLACE KEYWORDS**
- KEYWORDS City of New York, 2395220, Borough of Bronx, 978756, Borough of Brooklyn, 978759, Borough of Manhattan, 979190, Borough of Queens, 979404, Borough of Staten Island, 979522

**THESAURUS**
- **TITLE** Geographic Names Information Service (GNIS)
- **ALTERNATE TITLES** ANSI INCITS 446:2008
- **PUBLICATION DATE** 2008-01-01

**PLACE KEYWORDS**
- KEYWORDS Bronx County, 36005, Kings County, 36047, New York County, 36061, Queens County, 36081, Richmond County, 36085
This line layer was created from the GTFS data feeds from the Metropolitan Transportation Authority (MTA) to represent New York City express bus routes. Express busses are long-distance coaches that take passengers from areas of the outer boroughs to midtown and downtown Manhattan and back, with limited stops. A python script was written to take the data files as input, process them and save them as a spatial layer in the local state plane coordinate reference system. Lines in this layer represent individual bus routes over a roadway for a specific direction; they were generalized from the GTFS format where lines depicted individual services. The unique ID is route_dir, which is a combination of the bus route id and its direction. This layer was created as part of the NYC Mass Transit Spatial Layers series, and is updated biannually to account for changes in the transit system.

This dataset is intended for researchers, policy makers, students, and educators for basic geographic analysis and mapping purposes. It was created by the GIS Lab at the Newman Library at Baruch College CUNY as part of the NYC Mass Transit Spatial Layers series, so that members of the public could have access to well-documented and readily-usable GIS layers of NYC mass transit features.

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RESOURCE CONSTRAINTS
LEGAL CONSTRAINTS
ACCESS CONSTRAINTS licenseUnrestricted

USE CONSTRAINTS license

SPATIAL REPRESENTATION TYPE vector

PROCESSING ENVIRONMENT Microsoft Windows 7 Version 6.1 (Build 7601) Service Pack 1; Esri ArcGIS 10.3.1.4959

EXTENT
EXTENT DESCRIPTION
City of New York
GEOGRAPHIC EXTENT
BOUNDING RECTANGLE
EXTENT CONTAINS THE RESOURCE true
WEST LONGITUDE -74.040963
EAST LONGITUDE -73.779182
NORTH LATITUDE 40.762565
SOUTH LATITUDE 40.572425

TEMPORAL EXTENT
BEGINNING DATE 2017-01-09 00:00:00
ENDING DATE INDETERMINATE TIME unknown

EXTENT
GEOGRAPHIC EXTENT
BOUNDING RECTANGLE
EXTENT CONTAINS THE RESOURCE true
WEST LONGITUDE -74.253965
EAST LONGITUDE -73.70054
NORTH LATITUDE 40.933765
SOUTH LATITUDE 40.502767

SUPPLEMENTAL INFORMATION
The direction of a bus route is indicated with a 0 (which means that the bus runs either northbound or eastbound) or a 1 (the bus runs either southbound or westbound). Express busses are long-distance express services that make minimal stops. For buses bound for midtown or downtown Manhattan, riders can only board the bus at the outer borough stops (no one may disembark) and may only disembark at Manhattan stops (no one may board). The inverse is true for outer borough-bound buses. The mid-section of each route is express, and no stops are made.

POINT OF CONTACT - POINTOFCONTACT
ORGANIZATION'S NAME Newman Library, Baruch CUNY
CONTACT'S POSITION Geospatial Data Librarian
Spatial Representation - Vector

LEVEL OF TOPOLOGY FOR THIS DATASET geometryOnly
GEOMETRIC OBJECTS
  OBJECT TYPE composite
  OBJECT COUNT 148

Reference System Information

REFERENCE SYSTEM IDENTIFIER
  VALUE 2263

CODESPACE EPSG
  VERSION 10.2

Data Quality Information

SCOPE OF QUALITY INFORMATION
  RESOURCE LEVEL dataset

LINEAGE
  LINEAGE STATEMENT
This line layer was created using the data feeds from the Metropolitan Transportation Authority (MTA). The MTA provides text files that contain route information in a General Transit Feed Specification (GTFS) format, and are geographically referenced so they are able to be plotted. Python scripts were written to take the text files for each New York City borough as input, process them and create a single spatial layer for the entire New York City. The text files used for geometry creation are 'shapes.txt' and they provide geographically referenced data for the routes in the form of points. The script creates geometry object out of the individual points provided for the route, and then creates a line geometry object out of the points grouped by the common id of the segment that they belong to. Then it joins created geometry object with data from text files, 'trips.txt' and 'routes.txt', which contain additional relevant information provided by the MTA. Based on common attribute, individual bus services for different times and days of the week, are dissolved to create lines that represented an individual bus route that travels in one direction. Local routes are separated from express routes based on the naming convention pattern of the route id. Attribute columns that are blank, redundant, or that
represents information that is only relevant to specific services and not to individual routes. The final layer is reprojected from NAD 83 to NY State Plane Long Island in feet and saved in a shapefile format. The unique ID is route_dir, which is a combination of the bus route id and its direction. This layer was created as part of the NYC Mass Transit Spatial Layers series, and is updated biannually to account for changes in the transit system.

Source Data
Level of the Source Data Metropolitan Transportation Authority

Source Citation
Title MTA NYC Transit Shapes, Trips and Routes Files
Publication Date 2017-01-09

Distribution Information

Distributor
Distributor Information - PointOfContact
Organization's Name Newman Library, Baruch CUNY
Contact's Position Geospatial Data Librarian

Contact Information
Address
Delivery Point Newman Library, Baruch CUNY
Delivery Point 151 E 25th St Box H-0520
City New York
Administrative Area NY
Postal Code 10010
Country UNITED STATES

Format
Name Shapefile
Version
Nil Reason missing

Transfer Options
Transfer Size 0.126

Metadata Information

Last Update 2017-02-10
Maintenance
Update Frequency biannually

Maintenance Notes This metadata record was updated by Anastasia Clark in January 2017.

Metadata Constraints
Constraints
Limitations of Use
Metadata for this layer is licensed under a Creative Commons Attribution-
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**METADATA CONSTRANTS**

**LEGAL CONSTRAINTS**

**ACCESS CONSTRAINTS** licenseUnrestricted

**USE CONSTRAINTS** license

**METADATA CONTACT - POINTOFCONTACT**

**ORGANIZATION'S NAME** Newman Library, Baruch CUNY

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**ADDRESS**

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**CITY** New York

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**POSTAL CODE** 10010

**COUNTRY** UNITED STATES

**SCOPE OF THE DATA DESCRIBED BY THE METADATA dataset**

**METADATA LANGUAGE** English

**METADATA CHARACTER SET** utf8

**NAME OF THE METADATA STANDARD USED** NAP - Metadata

**VERSION OF THE METADATA STANDARD** 1.2

**METADATA IDENTIFIER** 2D063420-515F-489E-A232-0DD9FA06EC4C

**URI OF THE DATA DESCRIBED BY THE METADATA**

https://www.baruch.cuny.edu/confluence/display/geoportal/NYC+Mass+Transit+Spatial+Layers

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