I will be covering the following topics in this presentation:

• Highway Functional Classification
• Reasons to Request a Functional Classification Change
• Participants of the Change Request Process
• Required information and the flow of the required information between participants for Functional Classification Change Requests
• I will also be covering required information for the NYSDOT Functional Classification Change Request Form (version 5/15) and where to find it.
• Sources for this presentation.
Highway Functional Classification

Taken directly from portions of the NYSDOT Functional Class Change request form (5/15):
-Highway Functional Classification is the process by which streets and highways are grouped into classes according to the character of service they are intended to provide. It is important to recognize that individual roads and streets do not serve travel independently. Rather, travel involves movement through a network of roads. It becomes necessary to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a highway network. Different functional classes require different highway design standards.


-Highway Functional Classification is also used for many other transportation planning and public policy purposes within the States, Metropolitan Planning Organizations, and local communities.
Currently, the Federal Highway Administration identifies seven Functional Classifications with corresponding Codes that do not account separately for the urban/rural distinction.
This table was modified from it’s original formatting in “Exhibit 2-1 Functional Classification of Highways - Various Sources” in Chapter 2. of NYSDOT’s Highway Design Manual to compare current FHWA Functional Classifications and Codes with NYSDOT’s. The box indicates the section of the table that pertains to the FHWA Classifications and Corresponding Codes.
An additional resource outside of the *Highway Functional Classification: Concepts, Criteria and Procedures* Manual for FHWA Functional Classification and Codes is the [FHWA’s 2008 Memorandum and Attachment on Updated Guidance for the Functional Classification of Highways](https://www.fhwa.dot.gov/publications/highway FUNCTIONAL CLASSIFICATION/2008memorandum). The attachment included in the 2008 FHWA memo provides “INTERIM GUIDANCE” on the revisions made to the FHWA Functional Classifications and Codes based on the results of a 2010 HPMS Reassessment Project. The 2008 HPMS-driven changes to functional classification reduced the number of categories from twelve (6 urban and 6 rural) to seven and dropped the urban/rural distinction. Rural Minor Collectors (NYSDOT Functional Class Code 08) or as FHWA refers to them: “Minor Collectors located in rural areas,” will remain excluded by the definition of Federal-Aid Highways unless on the National Highway System (NHS), while Urban Minor Collectors (NYSDOT Functional Class Code 18) or as FHWA refers to them: “Minor Collectors located in small urban or urbanized areas,” will be included in the definition of Federal-Aid Highways.
As mentioned, in a 2011 NYSDOT HDSB Memo to FHWA New York Division, on the “Implementation of New Functional Classification Codes and Mapping Procedures”:

- NYSDOT Functional Classifications and Codes build on the 2008 FHWA-revised Functional Classification system with the intention of allowing for an easier transition and to better serve data users in New York State. To do this, the State instead choose to retain the urban/rural distinction by adding two additional codes resulting in fourteen classifications (seven urban, seven rural).
As shown in this previously presented modified table containing NYSDOT and FHWA Functional Classifications and Codes, each of the urban and each of the rural classifications corresponds to one of the FHWA Functional Classifications allowing for direct translation for HPMS and other NYSDOT-related data submittals to the FHWA.

<table>
<thead>
<tr>
<th>NYSDOT/Highway Inventory &amp; Functional Classification Maps Description</th>
<th>NYSDOT FC Code</th>
<th>FHWA FC Code</th>
<th>FHWA Functional Classification</th>
<th>FHWA Functional Classification Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Principal Arterial – Interstate</td>
<td>11</td>
<td>1</td>
<td>Interstate</td>
<td>Arterials</td>
</tr>
<tr>
<td>Rural Minor arterial – Interstate</td>
<td>94</td>
<td>2</td>
<td>Other Freeway &amp; Expressway</td>
<td></td>
</tr>
<tr>
<td>Rural Principal Arterial – Other</td>
<td>12</td>
<td>3</td>
<td>Other Principal Arterial</td>
<td></td>
</tr>
<tr>
<td>Rural Minor Arterial – Other</td>
<td>14</td>
<td>4</td>
<td>Minor Arterial</td>
<td></td>
</tr>
<tr>
<td>Urban Collector/ Major Collector</td>
<td>17</td>
<td>5</td>
<td>Major Collector</td>
<td></td>
</tr>
<tr>
<td>Rural Major Collector</td>
<td>07</td>
<td>6</td>
<td>Minor Collector</td>
<td></td>
</tr>
<tr>
<td>Rural Minor Collector</td>
<td>18</td>
<td>7</td>
<td>Local</td>
<td></td>
</tr>
<tr>
<td>Urban Local</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural Local</td>
<td>09</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Highway Data Services Bureau maintains the official, most current record of Highway Functional Classifications.
2. Codes are assigned based on functional characteristics and criteria.
3. Classification that is typically not federal aid eligible.
4. Exhibit 2-1 Functional Classification of Highways - Various Sources

modified from source: Exhibit 2-1 Functional Classification of Highways - Various Sources 2,4
An additional resource outside of the 2011 HDSB Memo is the 2012 NYSDOT Engineering Bulletin (EB 12-002) Titled: “Revisions to the Functional Classification System.”

This 2012 NYSDOT Engineering Bulletin introduced the 2008 FHWA-revised Functional Classifications and Codes (and...)
- Implemented 2008 revisions to the FHWA Functional Classification System.
The 2012 NYSDOT Engineering Bulletin, also implemented the:

- NYSDOT HDSB Roadway Inventory System (RIS) as the “official map” record of functional classification designations and implemented the GIS-based Functional Class Viewer as the mapping tool to access the Functional Class data.
In regards to Urban and Rural Designations, the U.S. Census Bureau establishes criteria for Urban and Rural Areas that are, fundamentally, a delineation of geographical areas. The criteria provides yet another avenue for quantitative data collection and for the reporting of general conclusions drawn from the research.

-The Qualitative aspect of the Urban/Rural Designations is provided by, for purposes of this presentation, the 2013 Edition of FHWA's Highway Functional Classification: Concepts, Criteria and Procedures.
The U.S. Census Bureau updates the criteria for urban areas after each decennial census by applying specified criteria to decennial census and other data. The 2010 U.S. Census Bureau’s Urban Area Delineations are currently utilized by the Main Office with the 2000 U.S. Census Bureau’s Urban Area delineations still being useful for research purposes.
The U.S. Census Bureau’s 2010 Census “Rural Area” is comprised of:
- All population, housing, and territory not included within an urban area
Reasons to Request a Change:

- Some of the reasons to request an upgrade to the functional classification of a facility:
  - When a new parallel facility is built that better serves traffic through the region while the old facility now predominately serves local traffic.
  - If the regional significance of a roadway increases, the functional class should increase too. An example of this is a road being widened and traffic volumes significantly increase as result.
  - A road is extended and now connects to a road of a higher functional class, may indicate a need to upgrade the classification.

- Some of the reasons to request a downgrade to the functional classification of a facility:
  - A new parallel facility is built that better serves traffic though the region while the old facility now predominately serves local traffic.
  - If the regional significance of a roadway decreases, the functional class should decrease too. An example of this is the Closing of regional activity centers along a road that generated traffic.
  - If a road is disconnected from a roadway of a higher functional class, the disconnected road may need to be downgraded to a lower functional class.
Issues [or things to consider before submitting] supporting reasons for requesting a functional classification change:

• Upgrading to become eligible for federal aid is NOT a reason to change Functional Classification
• Upgrading to increase priority in receiving improvements is NOT a reason to change Functional Classification
• Downgrading to be eligible for traffic calming measures is NOT a reason to change Functional Classification

AND

• Downgrading to lessen design standards or access management is NOT a reason to change Functional Classification
Let’s review the participants of the Functional Classification Change Request Process.
Participants of the Functional Classification Change Request Process includes:

- Local Agencies (i.e. Village, Town, City, and/or County)
- Metropolitan Planning Organization (MPO)
• NYSDOT Regional Planning and Program Manager (RPPM)
• NYSDOT Highway Data Services Bureau (HDSB), Main Office
The FHWA - New York Division has approval authority for changes to the Statewide Functional Classification System with FHWA-Headquarters having approval authority for proposed changes to the National Highway System.
Required Data and flow of the Required Data pertaining to functional classification change requests is presented here
This data flow graphic for the Functional Classification Change Request Process was modified from “Figure 3: Case 1-Requests from Local Government in MPO Regions.” in Virginia’s Functional Classification Comprehensive Guide in order to:

- list the data and documentation that is required from each participant as part of the change request process
- And to Show the flow of required data and documentation between participants

-Please note that MPO’s, NYSDOT Regions and Main Office can also initiate the Functional Classification Change Request Process.

-Required data and documentation for a request, includes:
  - Letter(s) of Local Concurrence
  - MPO Resolution, completed FCC request form [to include: AADT of the network], with required localized FC map(s)
  - Signed memo from the Regional Planning and Program Manager in support of the change
  - The Regional Office should include copies of the current LHI listing for the affected roads and show proposed changes (however, this step is not applicable if only county...
or local highways are affected).

- The flow of the Data, at least in this case, is with the request originating from a Local party that is contained within the boundaries of a Metropolitan Planning Area:

- The change request is sent from the local party (such as a Village, Town, City or Region) to the appropriate Metropolitan Planning Organization for review. If approved, the MPO adds data and documentation to the local party’s request, as shown in the graphic, and forwards the approval and corresponding attachments to the Regional Planning and Program Manager that represents the NYSDOT Region where the change is being proposed.

- When the Regional Planning and Program Manager (and staff) reviews the request and required attachments and finds that additional information is needed, the RPPM and staff will work with the MPO to assemble the information. The Regional Planning and Program Manager may also deny a request. However, if the change request is approved, the RPPM will forward a signed memo in support of the functional classification change along with mentioned attachments to the Highway Data Services Bureau in the Main Office for review.

- As with the MPO and RPPM, the Main Office can deny a request or work with the RPPM to secure additional or missing information. If the change request is approved, the Main Office will forward a signed memo in support of the functional classification change along with mentioned attachments to the FHWA – New York Division Field Office for review. If the proposed change request affects the National Highway System, FHWA New York Division will forward on their support to Headquarters for review.

- Approval time for a Functional Classification change to a road not on the National Highway System is usually quick with Approvals being forwarded on from the Main Office to NYSDOT representatives for further dissemination.
Title 23 (Highways), Part 470 (Highway Systems) of the Code of Federal Regulations – applicable to Federal-aid Highway Systems

Presents the requirement that all invested parties should be represented in the change process and should officially provide their support for the change in the form of signed resolutions, memorandums or letters. This required documentation for the request is reviewed by the Federal Highway Administration to ensure that the State Transportation Agency:

- cooperated with responsible local officials, or the appropriate Federal agency in the case of areas under Federal jurisdiction, in developing and updating the functional classification to be proposed;
- consulted with responsible local officials
- And coordinated change activities with other State Transportation Agencies where the routes involved crosses a state boundary.
This section of the presentation reviews the information and data that is needed to complete the NYSDOT functional classification change request form (5/15).
The NYSDOT FC Change Request Form is available from the HDSB in the Main Office.
Required Route information for section(s) that are being requested for a FC change, includes:
Region, county, From description, To description., Length (in miles), Current and Proposed Functional classification, Route status (i.e. is it existing or future planned roads). Please note that “Conditional or future” functional class change requests are not covered in this presentation. For more information on the topic, please contact the HDSB.
Resources for this required information are available on the HDSB public webpage and include:

• the Roadway Inventory, which is a detailed listing of all of the public roads in the State by county and includes traffic data, where available.
• The Local Highway Inventory, which is a listing of the municipality and county-owned roadways from the Roadway Inventory

AND

• The Functional Class Viewer already mentioned in this presentation
The Annual Average of the Daily Traffic (AADT) of the Facility and Parallel and Connecting Facilities is required information for the request form. AADT can be used to determine the appropriate functional classification for a facility. Higher functional class roads tend to carry higher traffic volumes (relative to the surrounding area). For example, Arterials tend to have higher volumes of traffic than other functional classes. AADT is also beneficial to determine which of two, or more, similar roadways should be classified within a higher functional class.
Suggested Resources for this required data are available on the HDSB public webpage and includes:

- The Traffic Data Viewer. Like the Functional Class Viewer, the Traffic Data Viewer is a GIS-based web viewer for Traffic Count data.
- The previously mentioned Roadway Inventory
Looking at Issues [or things to consider before submitting], in regards to AADT, if traffic count data does not yet exist for the section(s) of a road being proposed for the functional class change, then counts will need to be taken first before submitting a change request to the Main Office. Please coordinate requests for traffic count data collection with the Main Office Traffic Monitoring Section.
Reasons for Functional Class change requests were touched on previously, however the Justification section of the Functional Class Change request form should be a cohesive narrative that ties all of the information that is required for the Functional Classification Change Request Form together into a complete picture of how the proposed change will fit into the existing Functional Classification System.
Issues [or things to consider before submitting]:
Although mentioned previously in this presentation as reasons not to change the Functional Class of a road, these reasons should also not be used in the Justification section of the Functional Class change Request Form, including:
• To become eligible for federal-aid funding;
• Or To increase priority in receiving improvements;
• To be eligible for traffic calming measures
• Or to lessen design standards or access management
Looking at the data requirement for providing the Physical Description of the Existing Facility, suggested Resources are available on the HDSB public webpage and includes the previously mentioned: Roadway Inventory and Local Highway Inventory (with both inventories available for download).

-In addition to the resources that are available on the HDSB webpage, the FHWA Guidance document, “Highway Functional Classification: Concepts, Criteria, and Procedures, 2013 Edition” provides ranges for these design elements, as shown in the table in the following slide.
The table shown in the slide lists the FHWA guidance on ranges for AADT and various design elements contained within “Table 3-5 VMT and Mileage Guidelines by Functional Classification for Arterials and Table 3-6 VMT and Mileage Guidelines by Functional Classification for Collectors and Locals. The tables were modified to distinguish the nature of the items listed as being either a design element or an influencing factor on a design element.
Also to be included in the Justification of the change request form is the Description of the road’s function that it plays in the roadway network, for example:

- funnelling traffic between local streets
- servicing businesses, and driveways
- And connecting population centers, and small communities
Information on the type of road served can be satisfied by supplying Heavy Vehicle Percentages that pertain to the road’s current functional class and urban or rural distinction.
Heavy Vehicle Percentages can be found under the Traffic Monitoring’s section of the HDSB public webpage.
The justification section of the Functional Classification Change Request Form also needs a description of the surrounding network of roads, including functional classes and traffic volumes. Among the possible resources to utilize for this requirement, the previously mentioned: GIS-based Functional Class Viewer and Traffic Count Viewer are the easiest to use.
The following additional questions, among others, should be considered while compiling the Justification section of the change request form:
- Does the pattern of principal arterials plus minor arterial streets provide adequate continuity for areawide movement?
- Are there sufficient limited access facilities to provide the proper channelization of trips?
Sources for the presentation are as follows
NYSDOT Functional Classification
Change Requests and Issues


NYSDOT Functional Classification
Change Requests and Issues


NYSDOT Functional Classification
Change Requests and Issues

New York State Department of Transportation. (2018, May 31). Exhibit 2-1
Functional Classification of Highways - Various Sources. Chapter 2 - Design
Transportation.

Urban and Rural Classification and Urban Area Criteria. Retrieved from United
States Census Bureau: https://www.census.gov/geo/reference/ua/urban-rural-
2010.html

Virginia Department of Transportation (VDOT). (2014, June 6). Figure 3: Case 1-
Requests from Local Government in MPO Regions. Functional Classification
NYSDOT Functional Classification
Change Requests and Issues

☑ Questions?
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