Revisions to the Federal-Aid-Eligible Highway System  
UDOT 07-25

Effective:  August 15, 2001   Revised:  June 16, 2015

Purpose
To define the procedure used by the Utah Department of Transportation (Department) for making revisions to the functional classification of highways in the federal aid eligible system.

Policy
An adequate and integrated highway system with administrative responsibility based on functional classification has been declared to be in the public interest and is the goal of the Transportation Commission. The Transportation Commission will consider eligible for federal aid those portions of the highway system within the state that are classified within the functional groupings of Collector or higher in order to foster maintenance of such a system.

The Asset Management Director reviews all proposed revisions to the functional classification of highways in the state and forwards the recommended changes to the Federal Highway Administration (FHWA) for approval.

The Asset Management Director oversees a full system-wide review of the functional classification of the roadways within the state every ten years tied to a cycle starting once the U.S. Census Bureau defines the urban area boundaries (typically 18 to 24 months after the decennial census is taken) and again five years later. Each roadway in the Federal-Aid-Eligible Highway System along with those roadways proposed for inclusion in the system is reviewed in consultation with the local agencies, the Department Region Directors, and the metropolitan planning organizations (MPOs) to determine its proper classification in order to best match the actual function and usage of the roadway.

A part of this effort includes keeping the total percentage of centerline mileage and vehicle miles traveled (VMT) in each functional category within the ranges prescribed by FHWA. Online ArcGIS map is prepared for each county, each small urban area, and each urbanized area. The format of the maps conforms to guidelines set by FHWA and shows each roadway in the system, color-coded as to functional class. The map for each urban area shows the urban area boundary as defined by the Census and a boundary line for a ten-year urban growth projection.
Annual reviews are also performed that are intended to handle a small number of revisions for needs that were unforeseen during the regular system-wide review process and are of a time-sensitive nature that precludes waiting for the next regular review. Requests for proposed changes are accepted throughout the calendar year of these off years, due December 31. Any of these that are received by that time will then be processed by mid-February of the following year in order to have the changes entered into the HPMS database before March 1.

Background

FHWA has required the State to use functional highway classification to update the Federal-aid highway system beginning with the Federal-Aid Highway Act of 1973. The 2013 issue of FHWA Highway Functional Classification - Concepts, Criteria and Procedures defines functional classification:

“The concept of functional classification defines the role that a particular roadway segment plays in serving this flow of traffic through the network. Roadways are assigned to one of several possible functional classifications within a hierarchy according to the character of travel service each roadway provides. Planners and engineers use this hierarchy of roadways to properly channel transportation movements through a highway network efficiently and cost effectively.”

This process also provides one method of ranking the importance of any given roadway segment to the overall transportation system and to programming decisions and funding prioritizations. Roadway segments are classified in rural and urban areas as Local Roads, Minor Collectors, Major Collectors, Minor Arterials, Principal Arterials, Other Freeways & Expressways, and Interstates.

Definitions

Most definitions are covered in the FHWA manual, Highway Functional Classification - Concepts, Criteria and Procedures. The following are provided in addition to those.

Adjusted Urban Area Boundary – A Census-defined Urban Boundary that has been adjusted by a State DOT to include additional territory of future growth and to smooth irregularity in Raw Census Urban Boundaries. The Adjusted Urban Area Boundary will encompass at a minimum the entire urban area (of population 5,000 or greater) and should be one, single contiguous area encompassing areas outside of municipality; boundaries that have urban characteristics with residential, commercial, industrial, or national defense land uses that are consistent with or related to the development patterns with the boundary.
**Growth Area** – That area around the periphery of the census-defined urban boundary into that urbanizing growth is anticipated to spread within the next ten years.

**Highway Functional Classification Maps** – Online ArcGIS maps created and maintained by GIS Analyst showing each county, small urban area, and urbanized area and the roadways. Each of these is color-coded to indicate their functional classification according to an FHWA defined format.

**MPO/Metropolitan Planning Organization** – That organization tasked with coordinated planning of the various jurisdictions within the boundaries of each urbanized area as defined by the U.S. Census Bureau. The MPOs in Utah include Cache MPO, Wasatch Front Regional Council, Mountainland Association of Governments, and Dixie MPO. These MPO’s serve their respective metropolitan boundaries.

**Small Urban Area** – An area of a small city or town with population between 5,000 and 50,000, the boundaries of which are defined by the U.S. Census Bureau.

**Urban Clusters** – Statistical geographic entity designated by the Census Bureau consisting of a central core and adjacent densely settled territory that together contains between 2,500 and fewer than 50,000 people. A Census-defined Urban Cluster is an area consists of densely developed territory and is based on census block and block group density. FHWA has traditionally used this term to describe Urban Areas with a population greater than or equal to 5,000 and less than 50,000, derived from Urban Clusters.

**Urbanized Area** – An area of a large city and any contiguous cities and towns with total population exceeding 50,000, the boundaries of which are defined by the U.S. Census Bureau.
Responsibility:  Asset Management Director

Actions

1. Maintain a historical record of all changes to the functional classification system for the state.


3. Meet with representatives of each of the cities in the small urban areas after the U.S. Census Bureau provides the urban area boundaries defined by the decennial census and consult with them on establishing the projected ten-year growth area around each small urban area. Meet again five years later to update the roadway functional classification changes then repeat the remaining steps of the process.

Responsibility:  Asset Management Division

4. Coordinate with each MPO in determining the extent of the projected ten-year growth area for their urbanized area after the U.S. Census Bureau provides the urban area boundaries. Meet again five years later to update the roadway functional class changes and repeat the remaining steps of the process.

5. Review system conformity within the urbanized areas to federal guidelines and parameters as outlined in the FHWA manual *Highway Functional Classification - Concepts, Criteria and Procedures*, 2013 Edition in coordination with each MPO. Revise as necessary to meet the guidelines, add new roadways, and upgrade or downgrade existing classifications, based on the projected needs over the upcoming five years. Cooperate with the MPO to ensure consistency with the statewide system and particularly at the boundaries between the urbanized areas and the rural areas.

6. Conduct desktop and field reviews of roadways, as appropriate as part of the above review. If needed, include representatives of the counties, MPOs, Statewide Planning, and of the FHWA Division Office in the field visits.
7. Prepare a list of recommended classifications for each urbanized area, showing centerline mileage and vehicle miles traveled (VMT) for each roadway. List totals in each classification for each county along with percentages and VMT.

8. Advise Department Region Directors and MPO Technical Committees of recommended changes.

9. Forward recommendations to the Asset Management Director.

Responsibility: Asset Management Director

10. Conduct a statewide review of the functional classification system. Review statewide system conformity to federal guidelines and parameters, as outlined in the FHWA manual *Highway Functional Classification - Concepts, Criteria and Procedures*, 2013 Edition. Revise as necessary to meet the guidelines, add new roadways, and upgrade or downgrade existing classifications based on the projected needs over the upcoming five years. Perform the work for the rural and urban areas, ensuring consistency throughout the statewide system and particularly at the boundaries between the urbanized areas and the rural areas.

11. Conduct desktop and field reviews of roadways, as appropriate as part of the above review. If needed, include representatives of the counties, MPO, and of the FHWA Division Office in the field visits.

12. Prepare a list of recommended classifications for each county, small urban area, and urbanized area, showing centerline mileage and vehicle miles traveled (VMT) for each roadway. List totals in each classification for each county, along with percentages and VMT.

13. Provide the data on urban area boundaries, ten-year growth projections, and recommended functional classifications to the GIS personnel to prepare the Department Highway Functional Classification Maps.

14. Advise the Department Region Directors and the counties of the recommended functional classifications.

15. Present the list of recommended classifications and the Maps to the Asset Management Director for review and approval.

Responsibility: Asset Management Director

16. Review recommendations submitted by the Asset Management Division and approve for submission to the FHWA Division Office.
Responsibility: Asset Management Director

17. Forward the final list and ArcGIS Maps to the FHWA Division Office for concurrence on the proposed functional classifications of the system.

18. Update the Highway Functional Classification ArcGIS online Maps.
Responsibility: Metropolitan Planning Organization (MPO)

Actions

1. Coordinate local requests for revisions to the functional classification of segments of the highway system within the appropriate urbanized area and submit a written request to the Department Asset Management Director. Include with the request appropriate maps and information detailing the length, beginning and ending reference points, actual or projected AADT for any local roads proposed to be upgraded, and other related information. Requests for upgrades should include consideration of other routes that could be downgraded in the same area, as well in order to maintain a balance in the percentages of mileage and VMT in each classification, within each urbanized area.

Responsibility: Asset Management Division

2. Perform a desktop or field review of the requested revisions at the beginning of each calendar year when a full five-year statewide review is not to be performed, after all requests have been received from the MPOs. If needed, include representatives from the MPO, Statewide Planning, and the FHWA Division Office.

3. Review and evaluate the request for conformance with federal guidelines and parameters, as outlined in the FHWA manual Highway Functional Classification - Concepts, Criteria and Procedures, 2013 Edition. Consider the corresponding downgrades that have been proposed or the rationale presented for not including a downgrade proposal.

4. Prepare a list of recommended changes, percentages of mileage and VMT, along with revised ArcGIS Functional Classification Maps.

5. Advise the Department Region Director and the MPO Technical Committee of the recommended changes.

6. Recommend final changes to the Asset Management Director.
Responsibility: Asset Management Division

7. Review recommendations for the urbanized areas from the Asset Management Division. Compile these together with any rural and small urban recommendations that may have been prepared under 07-25.3 below and forward all these to the Asset Management Director for approval.

Responsibility: Asset Management Director

8. Review recommendations submitted by the Asset Management Division and approve for submission to the FHWA Division Office.

Responsibility: Asset Management Director

9. Forward the final list and ArcGIS Maps to the FHWA Division Office for concurrence on the proposed functional classifications of the system. Include letters of concurrence from the MPOs on the recommended changes.

10. Update the Highway Functional Classification ArcGIS online Maps.
Responsibility: County Commission and Department Region Director

**Actions**

1. Coordinate local requests for revisions to the functional classification of segments of the highway system within the County and submit a written request to the Department Asset Management Director. Include with the request appropriate maps and information detailing the length, beginning and ending reference points, actual or projected AADT for any local roads proposed to be upgraded, and other related information. Requests for upgrades should include consideration of other routes that could be downgraded in the same area as well in order to maintain a balance in the percentages of mileage and VMT in each classification within each county or small urban area.

Responsibility: Asset Management Division

2. Perform desktop or a field review of the requested revisions at the beginning of each calendar year when a full five-year statewide review is not to be performed, after all requests have been received from the counties or Department Region Directors. Include representatives from the County and the FHWA Division Office.

3. Review and evaluate the request for conformance with federal guidelines and parameters, as outlined in the FHWA manual *Highway Functional Classification - Concepts, Criteria and Procedures*, 2013 Edition. Consider the corresponding downgrades that have been proposed or the rationale presented for not including a downgrade proposal.

4. Prepare a list of recommended changes, percentages of mileage and VMT, along with revised pages of the Highway Functional Classification Maps. Advise the Department Region Director and the County Commission of the recommended changes. Compile these recommendations together with any urbanized recommendations that may have been prepared under 07-25.2 above and forward all these to the Asset Management Director for approval.

Responsibility: Asset Management Director

5. Review recommendations submitted by the Asset Management Division and approve for submission to the FHWA Division Office.
Responsibility: Asset Management Director

6. Forward the final list and ArcGIS maps to the FHWA Division Office for concurrence on the proposed functional classifications of the system. Include letters of concurrence from the MPOs on the recommended changes.

7. Update the Highway Functional Classification ArcGIS online Maps.
**Functional Classification Changes to Database and Mapping**  
**UDOT 07-25.4**

**Responsibility:** GIS Analyst

**Actions**

1. Create and maintain the Highway Functional Classification Maps following the general format specified by FHWA Headquarters.

2. Prepare draft changes to the Highway Functional Classification online ArcGIS Maps upon request from Asset Management Director as outlined in 07-25.1, 07-25.2, and 07-25.3.

**Responsibility:** Asset Management Director

3. Forward the FHWA letter and approved final information and documentation to the to the Highway Referencing Supervisor, the GIS Analyst, and the HPMS Database Manager upon notice of concurrence from the FHWA District office on proposed revisions.

**Responsibility:** Highway Referencing Supervisor

4. Assign appropriate route designation to new routes. Provide information to the GIS Analyst and the HPMS Database Manager.

5. Calibrate new routes and install reference posts as needed.

6. Update Reference System.

**Responsibility:** GIS Analyst

7. Prepare the revised Highway Functional Classification ArcGIS online Maps at five-year review or of the affected map at annual review.

**Responsibility:** HPMS Database Manager

8. Collect field inventory information as needed.

9. Update mileage and HPMS database.

**Responsibility:** Asset Management Division

10. Distribute the Highway Functional Classification online ArcGIS Maps to all the Map holders.