


Functional Classification - Overhaul

Transportation Planning Branch		Approved: October 3, 2007 Version 1
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Purpose

This procedure outlines the basic steps necessary to update the functional classification (FC) system to coincide with boundary changes that result from the decennial census from the U.S. Census Bureau. The U.S. Census Bureau releases the updated urbanized area and urban cluster boundaries following each census. Each MPO reviews their own urbanized area boundary. They may accept the boundary as is, or, in coordination with NCDOT, adjust and adopt a revised urbanized area boundary based on FHWA guidelines. Functionally classified roads that are impacted by the new boundaries must be reviewed and functionally reclassified, if necessary.

Background

Functional classification is a federally required process by which streets and highways are grouped into classes, according to the character of service they are intended to provide. The classes are as follows:

- **Principal Arterial** – The principal arterial system should serve the major centers of activity of a metropolitan area, the highest traffic volume corridors, and the longest trip desires; and should carry a high proportion of the total urban area travel on a minimum of mileage. Principal Arterials should be further divided into three subcategories: Interstates; Other Freeways and Expressways; and Other Principal Arterials. In rural areas, only Interstate and Other Principal Arterial classifications are used.
- **Minor Arterial** – The minor arterial street system should interconnect with and augment the urban principal arterial system and provide service to trips of moderate length at a somewhat lower level of travel mobility than principal arterials.
- **Collector** – The collector street system provides land access service and traffic circulation within residential neighborhoods, commercial and industrial areas. It differs from the arterial system in that facilities on the collector system may penetrate residential neighborhoods, distributing trips from the arterials through the area to the ultimate destination. In rural areas, the collectors are further divided into major and minor collectors.

- **Local** – The local street system consists of all roads not defined as arterials or collectors and primarily provides access to land with little or no through movement.

Responsibility

The Technical Services Unit of the Transportation Planning Branch (TPB) is responsible for managing this process. A Project Manager is selected at the beginning of the process.

Policy, Regulatory, and Legal Requirements

[Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users](#) (SAFETEA-LU)

[NC General Statutes Chapter 136, Section 136-200.2](#) - Decennial review of metropolitan planning organization boundaries, structure, and governance.

Scheduling and Time Constraints

Begin documentation after release of the urban area boundaries by the U.S. Census Bureau, and after any urbanized area adjustments are adopted by the MPO.

Procedures

The Project Manager is responsible for overseeing implementation of the following steps, which are performed every ten years. (The steps indicated are the basic steps taken for a functional classification overhaul based on the release of updated urbanized and urban area boundaries following the Decennial Census and the adoption of adjusted urbanized area boundaries by an MPO. The procedure steps are subject to change due to revised or new regulatory requirements and census data.)

Step	Action
1	<p>In order to have the correct boundaries for the FC overhaul, the Project Manager will verify the completion of the Boundary Revision Process (see procedure, “Administration of the Boundary Revision Program”).</p> <p>Note: Although not necessary, historically the Project Manager of the Boundary Revision Process and the Project Manager of the FC overhaul has been the same person.)</p> <p><i>Once the urbanized area boundaries are finalized, highways that are impacted by the new boundaries must be functionally reclassified. Additionally, other facilities are reviewed to assure that they have the correct classification and that the mileage percentage of each classification is within the target range.</i></p>
2	<p>Develop a project plan. The Project Manager prepares a project plan assigning specific tasks and setting target completion dates. The Project plan should include coordination with NCDOT’s GIS Product Development and Distribution Section (currently Mark Mintz) to ensure they are aware of upcoming FC revisions. As part of the project plan, the Project Manager, in conjunction with Branch Management will determine to what extent other Branch staff resources will be utilized in the process. The Branch Manager will notify the Supervisors of other affected parties and assure that the work tasks are reflected in the appropriate Work Programs.</p>
3	<p>The Project Manager will review the current FC System percentages and mileage information, and check where the percentages fall in the FHWA ranges to determine</p>

	where mileage can be added and where mileage needs to be removed from the system.												
	<table border="1"> <thead> <tr> <th></th> <th>Rural Miles</th> <th>Urban Miles</th> </tr> </thead> <tbody> <tr> <td>Arterial</td> <td>6-12</td> <td>15-25</td> </tr> <tr> <td>Collector</td> <td>20-25</td> <td>5-10</td> </tr> <tr> <td>Local Road</td> <td>65-75</td> <td>65-80</td> </tr> </tbody> </table>		Rural Miles	Urban Miles	Arterial	6-12	15-25	Collector	20-25	5-10	Local Road	65-75	65-80
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4	Once the Project Manager receives the preliminary FC maps from GIS after the Boundary Revisions are complete, the Project Manager and the Transportation Technician will use these maps to conduct the first review. The Project Manager and Transportation Technician will verify the preliminary maps against the official set of maps (currently kept by Elisabeth Reddic) and then reclassify the roads affected by the Urbanized Area and Urban Cluster boundary revisions.												
5	The Project Manager will schedule a meeting with GIS (currently Mark Mintz) to correct the preliminary (in Microstation) maps prior to the coordination with the Regional Units. New Draft FC maps will be plotted for the next step.												
6	The Project Manager will send <i>the Functional Classification Overhaul Guidance</i> to NCDOT MPO Coordinators and NCDOT RPO Coordinators and the corresponding Supervisors. (See Sample Guidance from 2000 Census) This guidance will assist the coordinators in reviewing the Draft FC maps for accuracy. Each MPO and RPO Coordinator and their Group Supervisors must initial their respective Draft FC maps before returning them to the Project Manager.												
7	The MPO or RPO Coordinator will review the Draft FC maps with their local MPO and RPO staff. Comments received will be reviewed by the Project Manager, Coordinator, Group Supervisor and Unit Head. Upon completion of this review, the Branch Manager will make a determination as to how to incorporate the proposed changes by the MPO or RPO.												
8	When the Project Manager receives the corrected Draft FC maps from the Regional Groups, the Project Manager will send the corrected Draft FC maps to the Program Development Branch for their review. The Program Development Branch must initial the Draft FC map before returning them to the Project Manager.												
9	The Project Manager will coordinate with GIS (currently Mark Mintz) once again to revise the Draft FC as per the corrections suggested by the Regional Planning Groups, MPOs, RPOs and the Program Development Branch.												
10	The Project Manager and the Transportation Technician will perform a second review in order to verify that the GIS Unit made all changes. After this review, the Group Supervisor will review the maps and initial them to show agreement with all changes and reclassifications of the FC System.												
11	The Project Manager and Group Supervisor will then meet with the Transportation Planning Branch Manager and all Unit Heads for their review. Again, the TPB Branch Manager and the Unit Heads must initial all maps before they are sent for FHWA approval. The Project Manager will then send the Draft FC maps to GIS if any changes are suggested in this meeting and then the Project Manager upon return will review them again. If there are no suggested changes to be made, continue to next step.												
12	MPO/RPO Coordination: FHWA requires that the “State shall cooperate with responsible local officials in developing and updating the functional classification”. The NCDOT coordinators, not the Project Manager is responsible for the coordination with the MPOs and RPOs. MPO coordinators must receive minutes												

	from the TAC meeting, or a letter from the TAC Chairman. RPO Coordinators should receive a letter from the RPOs stating that NCDOT has coordinated with them in the update. (See Response Letter for Overhaul) The TPB Coordinator is responsible for providing a copy of the letter to the Project Manager. The Project Manager will send a copy of the letter to FHWA as part of the Submittal Process.
13	<p>SUBMITTALS Process:</p> <ol style="list-style-type: none"> 1. FHWA Submittal – The Project Manager will submit to FHWA the following items: <ul style="list-style-type: none"> • Cover letter (See Transmittal Letter to FHWA) – The cover letter should include a statement that the RPO has been involved in the functional reclassification (for urban clusters) or that the MPO has been fully involved in the functional reclassification (for MPOs). A copy of the letter/resolution from the RPO or MPO should be attached. • Three (for urban clusters or rural areas) or four (for MPOs) copies of the Final FC maps showing all functional classifications properly color-coded. (The third copy- MPO only – will be forwarded by FHWA for coordination with FTA). The map should include a north arrow, color legend, and a revision date (to be the same date as the date on the letter of transmittal to FHWA). • A table summarizing the changes to each FC category. 2. Upon approval, FHWA shall return two signed approved copies of the Final FC maps to the Project Manager. The Project Manager will keep one signed copy and forward the second copy to the GIS Director. 3. Distribution of Final FC mapping. Additional copies of the revised map shall be prepared and distributed as follows with the distribution letter (See Distribution Letter for Overhaul): <ul style="list-style-type: none"> • RPO or MPO – letter • County – letter • GIS Director – letter + one signed copy • Program Development Branch Manager – letter + one copy • Regional Group Supervisor – letter • Division Engineer – letter + one copy
14	The Project Manager will organize signed copies by region and keep for reference. An unsigned copy will need to be placed in map books in the 6 th floor map room.

Warnings and Precautions

In rural and small urban areas, a letter or resolution of coordination from the RPO must be provided. A letter from the Clerk, City Manager, or any other municipality staff member is **not acceptable**.

In MPO areas, a letter or resolution of coordination from the MPO must be provided.

For clarification, include an explanation of all changes that were made in each functional classification category.

It is important to maintain good records throughout the process.

The information contained in this procedure is deemed accurate and complete when posted. Content may change at any time without notice. We cannot guarantee the accuracy or completeness of printed copies. Please refer to the online procedure for the most current version.

Resources and Tools

Letter Templates:

- [Distribution Letter for Overhaul](#)
- [Response Letter for Overhaul](#)
- [Transmittal Letter to FHWA](#)

[“Administration of the Boundary Revision Program” procedure](#)

[FHWA Functional Classification Guidelines: Highway Functional Classification – Concepts, Criteria and Procedures](#)

[FHWA Guidance on urbanized boundaries and functional classification – 23CFR470.105](#)

[Sample Guidance from 2000 Census](#)

Contacts

Glossary

Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA-LU)

User Access

Restricted NCDOT, FHWA, MPO, RPO, Consultants, etc.

Flowchart

None