

**2010 COUNTY FREIGHT AND GOODS SYSTEM  
STATUS REPORT  
EXECUTIVE SUMMARY**

The Washington State Legislature has recognized that Washington State is uniquely positioned as a gateway to the global economy. Washington, as one of the most trade-dependent states per capita in the nation, its economy is highly dependent on an efficient multimodal transportation network in order to remain competitive. The vitality of the state's economy is placed at risk by growing traffic congestion that impedes the safe and efficient movement of goods. Freight corridors that serve international and domestic interstate and intrastate trade and those freight corridors that enhance the state's competitive position through regional and global gateways are strategically important. Ownership of the freight mobility network is fragmented and spread across various public jurisdictions, private companies, and state and national borders. Transportation projects have grown in complexity and size, requiring more resources and longer implementation time frames. State investments in projects that enhance or mitigate freight movements should pay special attention to solutions that utilize a corridor solution to address freight mobility issues with important transportation and economic impacts well beyond any local area.

The County Freight and Goods System is made up of 11,640 centerline miles of county roads, 29.4% of the 39,550 total miles of county road. 9,830 miles of the CFGS are classified as arterials and collectors. This represents 84.4% of the County Freight and Goods System.

The purpose of the County Freight and Goods System (CFGS) Status Report is:

1. To develop criteria for determining which roads should be included in the CFGS;
2. To obtain the field data necessary to determine which roads are CFGS routes;
3. To establish the CFGS network, statewide;
4. To develop criteria to evaluate deficiencies in the CFGS;
5. To obtain a needs assessment to determine the costs to improve the CFGS to all-weather standards; and
6. To provide information on County Roads Strategic Freight Corridors.

The counties will monitor changes in their truck routes and obtain truck classification and volume information on new and existing truck routes annually. This information is used by each County to develop their priority arrays, deficiency and needs analysis, six-year programs, and annual road improvement programs. This information will also be used to provide an updated annual status report on the County Freight and Goods System, and be provided to WSDOT to update the Freight and Goods Transportation System inventory and to FMSIB to update their Strategic Corridors inventory.

## TRUCK ROUTE CLASSES

In order to be integrated with the statewide FGTS, the CFGS uses the same method of classification as the FGTS. The current FGTS classes are based on gross annual tons of freight and goods on the route. To determine gross annual tons on each road, every county must have accurate truck volumes and classification information on its road system. All counties are obtaining the needed information as part of their annual traffic counting and classification program.

## TRUCK ROUTE CLASSES

<u>CFGS Class</u>	<u>FGTS Class</u>	<u>Description</u>
T-1	T-1	Over 10 million gross tons annually.
T-2	T-2	4 to 10 million gross tons annually.
T-3	T-3	300,000 to 4 million gross tons annually.
T-4	T-4	100,000 to 300,000 gross tons annually.
T-5	T-5	Seasonal – Over 100,000 gross tons in 60 days.
T-6		Cyclical – Over 100,000 gross tons annually, but not every year.
T-7		Missing Link – Over 100,000 gross tons annually if improved.
T-8		Over 100,000 gross tons annually if Snake River drawdown occurs.

Three additional truck route classes, T-6, T-7, and T-8 have been created for the purposes of this study to allow the counties to better classify County Freight and Goods System (CFGS) routes in the future. The inclusion of T-6, T-7, and T-8 will allow these routes to be identified and properly managed. The table above shows the Truck Route Classes. Class T-1 through T-5 are the same as the current Freight and Goods Transportation System (FGTS) truck route classes established by the Transportation Commission.

**T-6** is a road that has over 100,000 gross annual tons, but not in every year. These are cyclic truck routes. An example is lowland logging. Certain roads will carry many loaded trucks during the year(s) that their tributary areas are being logged, but these areas are logged only once every 10 to 25 years. During the harvest years, these roads will likely meet the criteria for a FGTS/CFGS route, but only in those years. While there may be better ways to manage these routes than reconstruction to FGTS standards (e.g., haul road agreements), this classification will provide an inventory of these routes.

**T-7** is a route that would be an FGTS route but there is some problem with the road that prevents truck traffic from using it. If these problems were eliminated, the roads would become preferred truck routes with a savings of time and/or distance over currently used routes. An example of such a route comes from Spokane County: There is a road, the use of which would save trucks both time and distance, but there is an inadequate railroad crossing that prevents use of the route. If the railroad crossing were improved, trucks would use the road. Using this classification will provide a list of road improvements that would benefit the movement of freight and goods.

**T-8** was created for the Lower Snake River Drawdown Study (1999), to inventory those county roads that would become an FGTS route if barge traffic were removed from the Snake River. As grain is hauled from farm or storage to the Tri-Cities or beyond rather than to the barge loading facilities on the Snake River, truck travel patterns will change. Truck Route Class T-8 will identify those routes that will likely become FGTS/CFGS routes if this happens.

## **COUNTY DATA COLLECTION AND ANALYSIS**

Counties conduct traffic counts on a portion of their road system annually. They annually conduct volume and classification studies on many roads that are existing and/or potential truck routes. To provide the best information possible, some counties work with trucking concerns (haulers, grain co-ops, and industry representatives) to develop tonnage data.

The field data obtained provides the number of truck-by-truck classifications. The methodology developed by WSDOT, described in “Instructions for FGTS Truck Tonnage Estimation”, is used to convert this information to Gross Annual Tons. The WSDOT methodology was used so that the designation of Truck Route Classes would be consistent between the state and the counties.

Counties submit an annual Roadlog Update to CRAB that includes all changes made to its road system during the year. The Roadlog contains road and usage information for all identified CFGS routes. CRAB extracts the information for each CFGS route. This information provides an inventory of the CFGS routes, and a deficiency elimination evaluation and maintenance needs evaluation for each counties system. This is the basis for the CFGS Annual Status Report.

## **DEFICIENCY ELIMINATION EVALUATION**

### Roads

One of the tasks of the Cost Responsibility Study was to define a set of “Minimum Tolerable Conditions” (MTC) that a FGTS route must meet to be deemed ‘adequate’. The MTCs were established for Roadway Width and Structural Adequacy.

1. Roadway Width is a measure of the safety and ease of operation of trucks. A narrower roadway provides operational impediments to safe and efficient operation of trucks. Pavement Width and Shoulder Width are required fields in the Roadlog, and are certified correct by the County Engineer.
2. Structural Adequacy is the ability of the pavement and base to adequately support the number of heavy loads on the road. Weeks of Weight Restriction (how many weeks in a typical average year the road is restricted to lighter loads) and Base Adequacy (an evaluation of the adequacy of the road base to support the volume of heavy trucks using the road) are not required fields. The counties were encouraged to enter correct data in these fields. However, due to data and staff limitations, some information may not be current.

A scenario approach was adopted by the CRS to produce estimates of needs under alternative sets of minimum tolerable conditions. This provides policy makers with a range of options and

information on how the needs vary depending on the MTCs selected. Scenario 1 is "all weight restrictions addressed", and assumes that all FGTS segments with weight restrictions will be upgraded to all-weather roads. Scenario 2 is "some weight restrictions addressed", and assumes that minimal weight restrictions would be allowed in the lower truck route classes (T-3 thru T-5). Scenario 3 is "most severe weight restrictions addressed", and assumes moderate weight restrictions will be allowed in all truck route classes.

Deficiencies are determined by comparing the data in the Roadlog with the Minimum Tolerable Condition, established in the CRS. The total miles of the several identified improvements are determined, and cost factors used to determine the funding needed to remove the deficiencies.

The costs for improvements to ensure that minimum tolerable conditions exist were originally determined in the Road Jurisdiction Study (1988), reviewed and updated for the Cost Responsibility Study (1993), and adopted for use in the Needs Assessment Evaluation (1994). They represent standards of design and construction that existed at that time. These costs have been adjusted to 2010 dollars using WSDOT Planning and Programming Service Center, Economics Branch, implicit price deflators.

These cost estimates are conservative. The costs assume structural adequacy and adequate width. They do not include costs that are necessary for other safety improvements or upgrades to improve truck operational efficiencies, currently required environmental permitting, mitigation, and project delays or other potential restrictions. The emphasis on environmental concerns has dramatically escalated since these cost factors were developed.

### Bridges

Bridge restrictions are a major impediment to truck traffic. Removing bridge restrictions can provide (1) alternate truck routes that save time and/or distance and (2) truck routes that can carry both legal and oversized/overweight permitted loads. Both result in more efficient truck travel.

Bridges are also evaluated by scenario. In Scenario 1 all bridge deficiencies will be removed (load postings, narrow widths, and vertical clearance problems). In Scenario 2, load limit and vertical clearance deficiencies will be removed. In Scenario 3, only load limit deficiencies will be removed.

The current WSDOT bridge inventory system provides counties with an automated inspection form. Each county inspects its bridges on a regular basis and submits the data to WSDOT. Analysis and management functions are performed by WSDOT.

### Railroad Crossings

Railroad crossing deficiencies can impede truck traffic in several ways:

1. Steep approach grades to the crossing;
2. Sight distance restrictions;
3. Narrow and or height restricted under crossings that constrict the free flow of traffic;

4. Lack of warning lights, gates, and other safety devices.

Washington Utilities and Transportation Commission (WUTC) and WSDOT cooperate to improve railroad crossings on a priority basis. CRAB does not have the ability to segregate the railroad crossings on the CFGS to develop an inventory, deficiency listing or a needs analysis.

## **MAINTENANCE NEEDS EVALUATION**

The Road Jurisdiction Study included an evaluation of annual maintenance needs. It identified a reasonable standard for road maintenance for a typical local agency and determined costs required to achieve that standard. The Cost Responsibility Study used those standards and costs to determine annual maintenance needs for the FGTS. For the Needs Assessment Study, CRAB used the RJS and CRS standards and costs to develop a maintenance needs assessment routine applicable to county roads.

This evaluation was used (with costs updated to reflect 2010 costs) to determine the estimated annual maintenance needs on the County Freight and Goods system. It must be noted that these costs are 'not unreasonable' estimates of the total statewide annual maintenance needs for counties, based on the criteria established by the RJS and CRS.

## **STRATEGIC FREIGHT CORRIDORS**

RCW 47.06A.010 (6) defines Strategic Freight Corridors as:

“... a transportation corridor of great economic importance within an integrated freight system that:

- (a) Serves international and domestic interstate and intrastate trade;
- (b) Enhances the state's competitive position through regional and global gateways;
- (c) Carries freight tonnages of at least:
  - (i) Four million gross tons annually on state highways, city streets, and county roads;
  - (ii) Five million gross tons annually on railroads; or
  - (iii) Two and one-half million net tons on waterways; and
- (d) Has been designated a strategic corridor by the board under RCW 47.06A.020 (3). However, new alignments to, realignments of, and new links to strategic corridors that enhance freight movement may qualify, even though no tonnage data exists for facilities to be built in the future.”

Two hundred and twenty one (221) miles of county roads, in 14 counties, have been classified as Strategic Freight Corridors. These are the routes that are classified Truck Route Class T-1 and T-2.

Strategic Freight Corridors are eligible for Freight Mobility Strategic Investment Board (FMSIB) funding. However, the FMSIB funding rating method is based on reduction of congestion, measured by delay. A review of the “Freight Mobility Strategic Investment Board – 2009 Activities and Recommendations Report” indicates that their current priorities are improvements at railroad crossings, which reduce congestion and delay of both trucks and trains.