

**Form 477  
System Guide**

# Form 477 System Guide

---

## Table of Contents

Table of Figures.....	iv
1 INTRODUCTION .....	1-5
1.1 Purpose .....	1-5
1.2 Additional Documentation .....	1-5
2 SYSTEM SUMMARY .....	2-5
3 USING THE SYSTEM.....	3-5
3.1 Obtaining an FRN .....	3-6
3.2 Login / Authentication to the New Form 477 Submission System .....	3-6
3.3 Using the Main Menu .....	3-6
3.4 Completing the Cover Page .....	3-7
3.5 Using the Submission Menu .....	3-7
3.6 A Form 477 Submission with Insufficient Data cannot be Submitted .....	3-9
3.7 Entering Part I, Broadband Statewide Totals .....	3-9
3.8 Entering Part II, Local Telephone and Interconnected VoIP Totals .....	3-13
3.9 Part III, Mobile Local Telephone Information .....	3-15
3.10 Entering Part IV Information, Explanations and Comments .....	3-15
3.11 Entering Part V data, ZIP Code Information .....	3-15
3.12 Entering Census Tract Information by Hand .....	3-15
3.13 Revising Census Tract Information .....	3-17
3.14 Entering Census Tract Information by Upload File .....	3-18
3.15 Entering Census Tract Information by Upload File – Large Files .....	3-20
3.16 Entering Data by File Upload .....	3-21
3.17 Service-Location Address Data .....	3-22

# *Form 477 System Guide*

---

3.18	Printing, Checking or Saving a Submission	3-22
3.19	Submitting a Valid Form 477	3-23
3.20	Re-Opening a Previously-Submitted Form 477	3-24
3.21	Submission where Census Tract Values do not Add to State Totals	3-25
3.22	Submission where Census Tract Percentages do not Add to State Percentage	3-25
3.23	Deleting an "Original – In Progress" Submission	3-26
APPENDIX A.....		A1
APPENDIX B.....		B1

# Form 477 System Guide

---

## Table of Figures

Figure 1 - "Create New Form 477" options .....	3-7
Figure 2 - Form 477 Submission Menu.....	3-8
Figure 3 - Entering Data on Part I.A.....	3-11
Figure 4 - Part I.B Broadband Data .....	3-13
Figure 5 - Interconnected VoIP .....	3-14
Figure 6 - Census Tract Information .....	3-16
Figure 7 - "View/Edit" Link for Census Tract Data .....	3-17
Figure 8 - Form 477 Data File Upload .....	3-18
Figure 9 - Database upload notification .....	3-20
Figure 10 - Printing a Submission.....	3-23
Figure 11 - Filing Submittal.....	3-23
Figure 12 - Main Menu with submitted entry.....	3-24
Figure 13 - Status Change Window for a Submitted filing .....	3-24
Figure 14 - Non-matching Totals for submission .....	3-25
Figure 15 - Non-matching Totals for Residential Percentages.....	3-26

# *Form 477 System Guide*

---

## **1 INTRODUCTION**

Federal Communications Commission (FCC) Form 477 collects information about broadband connections to end-user locations, wired and wireless local telephone services, and interconnected Voice over Internet Protocol (VoIP) services in individual states. The term "state" includes the District of Columbia and the "Territories and possessions" (see 47 U.S.C. § 153(40)). Data obtained from this form is used to describe the deployment of broadband infrastructure and competition to provide local telecommunications services.

### **1.1 PURPOSE**

This document describes how to use the Form 477 online application. It is the implementation of FCC orders 08-89 and 08-148 regarding enhanced broadband and local telephone competition data collection.

### **1.2 ADDITIONAL DOCUMENTATION**

The reader should be familiar with the Form 477 Instructions available at the FCC Forms page, [www.fcc.gov/formpage.html](http://www.fcc.gov/formpage.html). That document contains a detailed description of who must file and line-by-line instructions for completing the form. Also on the FCC Forms page is a tutorial describing how to use the online application.

## **2 SYSTEM SUMMARY**

The Form 477 application is a web interface that allows broadband, wired and wireless local telephone, and interconnected VoIP service providers to submit data to the FCC. The system has four components:

- Authentication Using the COmmission REgistration System (CORES) FCC Registration Numbers (FRNs) and Password
- Web Form and File Upload Option for Collecting Parts I-V Form 477 Data
- Web Form and File Upload Option for Collecting Part VI Census Tract Summary Data
- Web Form for Collecting Part VI Address Data (requires prior approval)

## **3 USING THE SYSTEM**

Before using the application, it is necessary to have an FCC Registration Number (FRN) in the Commission Registration System (CORES). The URL for CORES is <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>.

# Form 477 System Guide

---

## 3.1 OBTAINING AN FRN

*If you already have an FRN and associated password proceed to login as described in Section 3.2. Otherwise, complete the following steps before trying to access the system. (Note: Third parties who prepare and/or submit Forms 477 for a client must make arrangements with the client to use one or more of the clients FRNs and associated passwords. There are no restrictions on using an existing or new FRN. Single or multiple FRNs may be used for a particular state or nationally, as long as any individual Form 477 submission is uniquely identified by: FRN; Type of operations – either incumbent local exchange carrier (ILEC) or non-ILEC; and State.)*

1. Access the CORES database at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>.
2. Create an FRN by filling out all of the required fields, and clicking “Submit.” CORES will display a confirmation page showing the FRN and login password. Save or print the resulting confirmation page for future reference.

Proceed to the Form 477 online application using the FRN and password you just created.

3. *If you already have an FRN that you wish to use, but you do not recall the password, consult the “Passwords” section of the Frequently Asked Questions, which are located in the “Customer Service” section at the bottom of the CORES Webpage, for information and assistance.*

## 3.2 LOGIN / AUTHENTICATION TO THE NEW FORM 477 SUBMISSION SYSTEM

Note: You must enable cookies on your browser to use this system.

1. Open a browser and go to the Electronic Filing link that you will find by scrolling down to “477” in the “Current FCC Forms” section at <http://www.fcc.gov/formpage.html>. The link will be in the left-hand column of the page, under “477.” Alternatively access the system at the URL <https://specialreports.fcc.gov/wcb/Form477/>.
2. Enter your FRN (numbers only) and Password (case sensitive)
3. Click the “Login” button

## 3.3 USING THE MAIN MENU

You will now see the main menu, which allows you to create a new Form 477 Submission. You can also reach this page by clicking on the link [Form 477 Home](#) that is in the top left corner of every page except the login page and main menu. At the top of the screen will be a header with the FRN and company name. There also is a list of previously created state submissions, by date of the data, for this FRN.

1. To create a new Form 477 Submission, select the state from the drop-down list, then select ILEC or Non-ILEC for Operations (See Figure 1). Leave the “Data as of” drop-down

# Form 477 System Guide

---

to the default value unless this data is for a different point in time. Click the "Create New" button at the right of the "Create New Form 477" section.



Create New Form 477

Data as of: Dec 31, 2009 State: Press Arrow to Choose Select State

Figure 1 - "Create New Form 477" options

## 3.4 COMPLETING THE COVER PAGE

Once you have clicked "Create New," the system displays the "Cover Page" data screen for Form 477. This screen contains administrative summary data for the Form 477 submission. Check that the company name (item #2) has been filled in properly from the CORES database or from what you filed in your last filing. If that field is blank, enter the name of your company or operations. Note that if you filed data for this state and type of operation previously, information from that filing is transferred to this cover page. In this case only items 10 and 11 must be completed. However, you also should change any fields that are no longer accurate.

1. Select an option for item 4, the common-control name. If the common-control name of your entity is shown on the drop-down list, select it. Otherwise, you can select "not shown" and enter the correct name in the box provided, or select "same as company name."
2. Enter information for items 6, 7, 10, and 11, which are required fields. Also review item 9, for which the default value is "No."
3. When you are satisfied that the data on this page is complete, click the button "Save and Go to Edit Menu."

NOTE: You can reach this Cover Page at any time by clicking on the hyperlink "[Form 477 Submission for FRN...](#)" at the top of the Submission Menu (Section 3.5). By returning to this page you may change any Cover Page values except FRN and State at any time. In particular, if you incorrectly chose ILEC or Non-ILEC Operation when creating a new submission you can change it by changing item 3 here.

## 3.5 USING THE SUBMISSION MENU

The Submission Menu (also referred to as the Edit Menu) for Form 477 Submissions will be displayed, initially indicating that no data has been entered (See Status column in Figure 2). The submission is created with a filing status of "Original – In Progress" as shown at the bottom of the form. The Submission Menu is the starting point to enter any kind of broadband or voice information.

# Form 477 System Guide

Form 477 Submission Menu

Data Section	Status
<input checked="" type="checkbox"/> Part I.A: Broadband - Asymmetric xDSL	Data Entered
<input type="checkbox"/> Part I.A: Broadband - Symmetric xDSL	Data Entered
<input type="checkbox"/> Part I.A: Broadband - Other Wireline	No data for this category.
<input type="checkbox"/> Part I.A: Broadband - Cable Modem	No data for this category.
<input type="checkbox"/> Part I.A: Broadband - Optical Carrier (fiber to the end user)	Data Entered
<input type="checkbox"/> Part I.A: Broadband - Satellite	No data for this category.
<input type="checkbox"/> Part I.A: Broadband - Terrestrial Fixed Wireless	No data for this category.
<input type="checkbox"/> Part I.A: Broadband - Terrestrial Mobile Wireless	Data Entered
<input type="checkbox"/> Part I.A: Broadband - Electric Power Line	No data for this category.
<input type="checkbox"/> Part I.A: Broadband - All Other	No data for this category.
<input type="checkbox"/> Part I.B: Broadband xDSL (asymmetric or symmetric) / Cable Modem / Terrestrial Mobile Wireless	Data Entered
<input type="checkbox"/> Part II.A: Local Exchange Telephone Service	No data for this category.
<input type="checkbox"/> Part II.B: Interconnected VoIP Service	Data Entered
<input type="checkbox"/> Part III: Mobile Local Telephone	No data for this category.
<input type="checkbox"/> Part IV: Explanations and Comments	No data for this category.
<input type="checkbox"/> Part V: Zip Code Information -- Local Voice Telephone Service and Interconnected VoIP	8 Zip Codes On File.

Part VI: Broadband Connection Counts by Technology, Census Tract, and Information Transfer Rate

Enter Census Tract Detail Data by Hand

[View/Edit Census Tract Detail Data \(2 records\)](#)

Print Form

Select one of the following and click OK to see a preview of what will print. Then use your browser's capability to print or save the document.

- Cover Page
- Part I
- Part II
- Part III
- Part IV
- Part V
- Part VI
- Complete Report including all Part VI detail
- Complete Report without Part VI
- Errors/Warnings

OK

Options for this Submission

The current status for this Form 477 Submission is **Original - In Progress**.

[Submit this submission as complete](#)

[Delete this Submission](#)

Data File Upload For All Parts

Figure 2 - Form 477 Submission Menu



# Form 477 System Guide

---

## 3.6 A FORM 477 SUBMISSION WITH INSUFFICIENT DATA CANNOT BE SUBMITTED

Submissions lacking required data will not be accepted as valid. In particular, if no data has been entered yet, the submission cannot yet be filed. If you click on "[Submit this submission as complete](#)" at the bottom of the Submission Menu, a message will appear stating the first error that is found such as that there are no statewide totals entered. If you reach this point, click the link entitled "Return to Current Submission Menu," and note that the status is still listed as "Original – In Progress."

The following sections describe how to input data starting at the Submission Menu.

## 3.7 ENTERING PART I, BROADBAND STATEWIDE TOTALS

If you are a facilities-based provider of any kind of broadband connections to end users (see instructions - WHO MUST FILE THIS FORM),

1. From the Form 477 Filing (Submission) Menu, under "Data Section," click "Part I.A: Broadband - xxx" where xxx is one of the 10 technologies listed.

This will bring up the statewide totals section for this part of the filing. See Figure 3 on the following page for the Asymmetric xDSL screen.

2. Enter the total number of connections in the state in column (1).
3. Enter the appropriate percentages of the connections listed in column (1) into columns (2) through (5). Percentages should be entered as numbers between 0 and 100. If the correct percentage is 0, you must enter 0 rather than leaving the cell in column (2) through (5) blank.
4. Enter the number of connections in each of the relevant speed tiers in columns (6) through (13), then click "Save and Return to Edit Menu." If there are no connections for a given speed tier you must leave the cell blank rather than enter 0.

Make sure that the number of connections in the grid of speed tiers sums up to the entry in column (1) labeled "Total connections."

The Part I.A. data for "Symmetric xDSL" and "Other Wireline"<sup>1</sup> will both contain only one row for columns (6) through (13), since upload and download speeds are the same. Keep in mind that the sum of all entries in columns (6) through (13) must add up to the value reported for (1).

The Part I.A. data for Terrestrial Mobile Wireless has the same 8x9 grid of speed tiers as Asymmetric xDSL and the other non-symmetric technologies, but also requires the percentage residential for each speed tier with subscribers. (However, census tract subscribership data in Part

---

<sup>1</sup> Other Wireline most frequently refers to T-carrier and Ethernet carried over copper.

## *Form 477 System Guide*

---

VI of this form does not have to be submitted for Terrestrial Mobile Wireless and column (2) is not applicable for this technology.) Also make sure the number of residential subscribers that is implicit in the answers to columns (6) through (13) is consistent with the number of residential subscribers implicit in the answers to (4) and (5).

# Form 477 System Guide

**FCC Form 477 - Local Telephone Competition and Broadband Reporting**

Form 477 Submission for FRN: 18461806, Company: tom telephone -- Ellen Testing, State: HI, Operations: ILEC, Data as of Dec 31, 2009

Part I.A: Broadband - Asymmetric xDSL

In Part I.A, report connections (wired "lines") to end users that you (including affiliates) equipped to enable the end user to receive information from and/or send information to the Internet at information transfer rates exceeding 200 kbps in at least one direction. Report only in-service connections. The end user's Internet access service may be provided by you (including affiliates) or by an unaffiliated entity. For purposes of Part I.A, Internet Service Providers (ISPs) are not end users. Categorize the connection based on the technology employed by the part of the connection that terminates at the end user location. (Do not report anywhere in Form 477 any high-capacity connections between two locations of the same end user customer, ISP or communications carrier.)

(1)	(2)	(3)	(4)	(5)
<b>Total connections</b> to end users that you (including affiliates) equipped as broadband over your own local loop facilities or the equivalent, or over UNE loops or other facilities you obtained from an unaffiliated entity. Do not convert lines into a voice-grade-equivalent measure.	<b>Percentage of (1)</b> that you (including affiliates) equipped over your own local loop facilities or the equivalent. (Enter 0 if the true value is 0 percent.)	<b>Percentage of (1)</b> that are billed (or incorporated in a service billed) to end users by you, or your affiliates or agents. (Enter 0 if the true value is 0 percent.)	<b>Percentage of (1)</b> that connect to residential end users. (Enter 0 if the true value is 0 percent.)	<b>Percentage of (1)</b> that connect to residential end users and have information transfer rates exceeding 200 kbps in both directions. (Enter 0 if the true value is 0 percent.)
80146	0.000	0.000	83.993	83.993

Break down the total connections reported in (1) to show the non-zero number in each of the following speed tiers. If the number of connections in a particular speed tier is zero, leave that data cell blank.

Connections reported in **EACH** data cell below must equal the sum of Asymmetric xDSL connections reported in Part VI by Census Tract, for that download/upload combination, and the sum of **ALL** data cells below must equal the total connections reported in (1).

Figure 3 - Entering Data on Part I.A

# Form 477 System Guide

		Download information transfer rate to the end user (8 categories):							
		(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		Greater than 200 kbps and less than 768 kbps	Greater than or equal to 768 kbps and less than 1.5 mbps	Greater than or equal to 1.5 mbps and less than 3 mbps	Greater than or equal to 3 mbps and less than 6 mbps	Greater than or equal to 6 mbps and less than 10 mbps	Greater than or equal to 10 mbps and less than 25 mbps	Greater than or equal to 25 mbps and less than 100 mbps	Greater than or equal to 100 mbps
<b>Upload information transfer rate from the end user (9 categories):</b>	Less than or equal to 200 kbps	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Greater than 200 kbps and less than 768 kbps	<input type="text"/>	3463	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Greater than or equal to 768 kbps and less than 1.5 mbps	<input type="text"/>	<input type="text"/>	7761	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Greater than or equal to 1.5 mbps and less than 3 mbps	<input type="text"/>	<input type="text"/>	<input type="text"/>	57262	10558	1102	<input type="text"/>	<input type="text"/>
	Greater than or equal to 3 mbps and less than 6 mbps	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Greater than or equal to 6 mbps and less than 10 mbps	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Greater than or equal to 10 mbps and less than 25 mbps	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Greater than or equal to 25 mbps and less than 100 mbps	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Greater than or equal to 100 mbps	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**This is the end of PART I.A for Asymmetric xDSL. If you are an ILEC you MUST ALSO complete Part I.B for xDSL (asymmetric or symmetric).**

[Form 477 Home](#)

[Log Out](#)

Figure 3b – Entering Speed Tier Data on Part I.A

# Form 477 System Guide

5. If you are an ILEC reporting any type of DSL connections in your "study area," a cable system reporting cable modem connections in your franchise area, or a Terrestrial Mobile Wireless provider reporting subscribers with broadband-speed data plans in Part I.A, click "Part I.B: Broadband xDSL (asymmetric or symmetric) / Cable Modem / Terrestrial Mobile Wireless" to enter required data (See Figure 4). Note that Part I.B only applies to these broadband technologies.

ILECs and cable systems will enter a numeric value between 0 and 100 to report a percentage. Terrestrial mobile wireless providers will report a number of subscribers. This number may be larger than the number of subscribers with broadband-speed data plans that was reported in Part I.A. Specifically, the number of subscribers reported in Part I.B will include the subscribers with broadband-speed data plans reported in Part I.A and also other subscribers who do not purchase a broadband-speed data plan, but whose mobile device is capable of supporting a broadband-speed data plan.

Part I.B: Broadband - Cable Modem	
Complete Part I.B for Cable Modem ONLY IF you are a cable system (or an affiliate of a cable system) that is required to complete Part I.A for Cable Modem.	
For the purposes of completing Part I.B for Cable Modem:	
(1) "Residential end user premises" include residential living units, individual living units in such institutional settings as college dormitories and nursing homes, and other end user locations to which you (including affiliates and agents) market services that are primarily designed for residential use.	
(2) The "service area" of a cable system consists of those residential end user premises to which the system can deliver cable television service over cable plant that it owns.	
I.B. Report your best estimate of the percentage of residential end user premises in your service area, in this state, to which your Cable Modem connections (with information transfer rates exceeding 200 kbps in at least one direction) could be provided using installed distribution facilities. Providers of Cable Modem connections should base responses on the service area of the affiliated cable systems.	(a) Estimated % of residential end user premises <input type="text" value="45.000"/>
THIS IS THE END OF Part I.B for Cable Modem.	

Part I.B: Broadband - Terrestrial Mobile Wireless	
Complete Part I.B for Terrestrial Mobile Wireless ONLY IF you (including affiliates) are required to complete Part I.A for Terrestrial Mobile Wireless.	
Report the number of business and residential subscribers whose mobile devices are capable of sending or receiving data at information transfer rates exceeding 200 kbps in at least one direction.	(a) Subscribers with devices capable of sending or receiving data at information transfer rates exceeding 200 kbps in at least one direction
I.B. Number of subscribers.	<input type="text" value="10"/>
THIS IS THE END OF Part I.B for Terrestrial Mobile Wireless.	

Figure 4 - Part I.B Broadband Data

## 3.8 ENTERING PART II, LOCAL TELEPHONE AND INTERCONNECTED VOIP TOTALS

If you are a provider of local exchange telephone service (see instructions - WHO MUST FILE THIS FORM),

1. From the Form 477 Submission menu, click "Part II.A: Local Exchange Telephone Service."

# Form 477 System Guide

2. Enter the number of lines in column (1) row (a), and a number between 0 and 100 for rows (b) through (k).
3. Confirm that the total for percentages (e) through (h) equals 100, and that the total for percentages (i) through (k) is less than or equal to 100.
4. Click "Save and Return to Edit Menu" to save.

The Submission menu now has a link for "Part V: ZIP Code Information -- Local Voice Telephone Service and Interconnected VoIP." (See Section 3.11)

If you are a provider of Interconnected Voice over Internet Protocol (VoIP) service (see instructions - WHO MUST FILE THIS FORM),

1. From the Form 477 Submission menu click "Part II.B: Interconnected VoIP Service."
2. Fill in columns (1) through (3) (See Figure 5). For a given customer location count the maximum number of simultaneous calls that you allow the user to make to determine VoIP subscriptions. For example, a business that can make 100 calls from among their 1,000 telephones is counted as 100 connections, not one and not 1,000.

Part II.B: Interconnected VoIP Service

If you report end user subscriptions in (1) and/or (2), you must also complete Part V of Form 477.

**Reporting by State:** Subscriptions reported in (1) must be reported in the state of the subscriber's "Registered Location" as of the data-collection date. (This is the most recent information obtained by an interconnected VoIP service provider that identifies the physical location of the end user. See 47 C.F.R. § 9.3.) Subscriptions reported in (2) must be reported in the same state as the broadband connection purchased in conjunction with the VoIP service.

**Reporting subscriptions in (1) and (2):** Count one subscription for each end user (retail customer) who subscribes to this service. If the customer pays for the ability to make multiple simultaneous calls from a single location, then count the maximum number of calls that can be active at one time. In general, VoIP service to a business retail customer will be counted as more than one subscription.

**Reporting wholesale customers in (3):** Count the number of companies who purchase your VoIP components or service and resell them, as part of their own VoIP service, to end users or other wholesalers in this state.

	(1)	(2)	(3)
	VoIP subscriptions that end users purchased from you without also purchasing a broadband connection from you	VoIP subscriptions that end users purchased from you in conjunction with the purchase of a broadband connection	Wholesale customers who purchased your VoIP service to resell as their own VoIP service
(a) Total number.	12		
(b) Percentage of (a) provided under residential grade service plans	50.000		
(c) Percentage of (a) purchased under terms that allow use with any broadband connection ("nomadic" functionality)	0.000		
(d) Percentage of (a) provided in conjunction with a copper wire-based broadband connection (DSL or Other Wireline)			
(e) Percentage of (a) provided in conjunction with a fiber-to-the-end user broadband connection			
(f) Percentage of (a) provided in conjunction with a Cable Modem broadband connection			
(g) Percentage of (a) provided in conjunction with a fixed wireless broadband connection			
(h) Percentage of (a) provided in conjunction with any other type of broadband connection			

Done

Figure 5 - Interconnected VoIP

# Form 477 System Guide

---

3. Confirm that the sum of the percentages entered in rows (d)-(h) equals 100.
4. Click "Save and Return to Edit Menu" to save.

*Reminder:* All ILECs must complete either part II.A or part II.B.

## 3.9 PART III, MOBILE LOCAL TELEPHONE INFORMATION

If you are a provider of mobile local telephone service (see instructions - WHO MUST FILE THIS FORM),

1. From the Form 477 Submission menu, click "Part III: Mobile Local Telephone Service."
2. Enter the number of subscribers and the percentage that are directly billed or pre-paid.
3. Click "Save and Return to Edit Menu" to save

## 3.10 ENTERING PART IV INFORMATION, EXPLANATIONS AND COMMENTS

1. From the Form 477 Submission menu, click "Part IV: Explanations and Comments."
2. Enter any comments into the text box, and click "Save and Return to Edit Menu." Note the part and column to which the comment refers.

## 3.11 ENTERING PART V DATA, ZIP CODE INFORMATION

If you entered information in Part II, either II.A or in Columns 1 or 2 of II.B, you must complete Part V, but DO NOT enter any census tract information related to Part II into Part VI.

1. From the Form 477 Submission Menu, select "Part V: ZIP Code Information -- Local Voice Telephone Service and Interconnected VoIP."
2. In the "Part V: Zip Code Information" box, enter all ZIP codes in which you have subscribers. Separate by commas, spaces, carriage returns or any combination thereof.
3. Click "Save and Return to Edit Menu" to save. You should now be at the Form 477 Submission menu. The status column for Part V should display the total number of ZIP codes entered as the number of "ZIP Codes on file."

## 3.12 ENTERING CENSUS TRACT INFORMATION BY HAND (IF ENTERING CENSUS TRACT INFORMATION VIA BULK UPLOAD, SKIP TO SECTION 3.14)

ILECs, cable system operators, and other entities with a "defined service territory" (see "Glossary" at p. 20 of the Form 477 Instructions): For each technology for which you have any broadband customers in the state (as reported in Part I.A), you must enter tract-level data for each tract in your defined service territory, regardless of whether you have broadband customers in that tract. If you have no customers in a particular census tract for one of these

# Form 477 System Guide

technologies simply enter zeros for number of connections and percentage residential in any pair of cells that allows data entry, i.e., any speed tier for which you have at least one customer in the state.

Other entities (other than terrestrial mobile wireless providers): Report tract-level data for each tract where you have broadband customers.

1. From the Form 477 Submission menu, click the button "Enter Census Tract Detail Data by Hand" in the Part VI box near the bottom of the page.
2. When the "Part VI: Broadband by Technology, Census Tract, and Download/Upload Information Transfer Rate Combinations" window appears, select a technology, county, and census tract from the pulldown menus for data input. For the technology "All Other" you must also enter the technology in the box provided.
3. Click the button "Enter data for this Census Tract." The Census Tract data screen will appear. (See Figure 6)

Census Tract / Technology: \_\_\_\_\_

Technology of the connections: **Asymmetric xDSL**

Census Tract: State: **VA** County: **Alexandria city** Census Tract: **2001.02**

		DOWNLOAD INFORMATION TRANSFER RATE.							
		Greater than 200 kbps and less than 768 kbps	Greater than or equal to 768 kbps and less than 1.5 mbps	Greater than or equal to 1.5 mbps and less than 3 mbps	Greater than or equal to 3 mbps and less than 6 mbps	Greater than or equal to 6 mbps and less than 10 mbps	Greater than or equal to 10 mbps and less than 25 mbps	Greater than or equal to 25 mbps and less than 100 mbps	Greater than or equal to 100 mbps
<b>UPLOAD INFORMATION TRANSFER RATE:</b>									
<b>Less than or equal to 200 kbps</b>	Number of Connections:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Percentage Residential:	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %
<b>Greater than 200 kbps and less than 768 kbps</b>	Number of Connections:	<input type="text"/>	30	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Percentage Residential:	<input type="text"/> %	33 %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %
<b>Greater than or equal to 768 kbps and less than 1.5 mbps</b>	Number of Connections:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Percentage Residential:	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %
<b>Greater than or equal to 1.5 mbps and less than 3 mbps</b>	Number of Connections:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Percentage Residential:	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %
<b>Greater than or equal to 3 mbps and less than 6 mbps</b>	Number of Connections:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Percentage Residential:	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %
<b>Greater than or equal to 6 mbps and less than 10 mbps</b>	Number of Connections:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Percentage Residential:	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %
<b>Greater than or equal to 10 mbps and less than 25 mbps</b>	Number of Connections:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Percentage Residential:	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %
<b>Greater than or equal to 25 mbps and less than 100 mbps</b>	Number of Connections:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Percentage Residential:	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %
<b>Greater than or equal to 100 mbps</b>	Number of Connections:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Percentage Residential:	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %

Figure 6 - Census Tract Information

4. Enter data for any of the cells in the 8x9 grid of speed tiers that have an entry in the state totals. You will not be able to enter numbers into cells that have no entry in the state totals.
  - a. The "Number of Connections" value must be an integer.



# Form 477 System Guide

---

- b. The "Percentage Residential" must be between 0 and 100, and can include up to three numbers after the decimal point.
  - c. If a "Number of Connections" is entered, then the corresponding "Percentage Residential" is required. Any number of values can be entered in the grid.
5. When you have entered all desired values, click "Save and Return to Edit Menu."

## 3.13 REVISING CENSUS TRACT INFORMATION

The Edit menu now displays a link at the bottom of the "Part VI: Broadband Connection Counts by Technology, Census Tract, and Information Transfer Rate" section that allows you to View or Edit the Census Tract data (see Figure 7). Each "record" in the file has a unique county, census tract, technology, upload rate, and download rate.

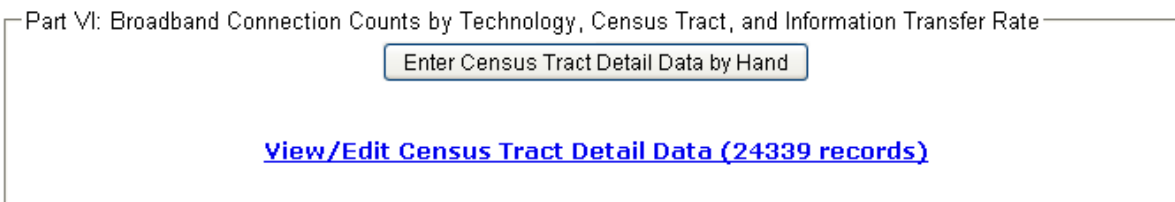


Figure 7 - "View/Edit" Link for Census Tract Data

1. Click the "View/ Edit Census Tract Detail Data" link.

There will be a summary list of all census tracts which contain data for each technology entered.

2. Click the checkbox or the county name to edit, or simply view, the record.

You will see the same "Census Tract Detail" entry page as before, but with the data you entered pre-filled.

3. Make any changes or additions to the data for this census tract.
4. Click "Save and Return to Edit Menu."

*Remember:*

1. The sum of all the census tract connection entries for a given speed tier must equal the same speed tier entry in Part I.A.
2. The residential subscribers computed from multiplying the subscribers to each technology and speed tier by the corresponding residential percentage must sum to the total residential subscribers indicated by multiplying Column 1 by Column 4 in Part I.A. Also, summing these products except for those for upload speeds of <200 kbps must equal the product of Column 1 and Column 5 in Part I.A.

# Form 477 System Guide

## 3.14 ENTERING CENSUS TRACT INFORMATION BY UPLOAD FILE (IF ENTERING CENSUS TRACT INFORMATION BY HAND, SEE SECTION 3.12)

For each technology for which you have any customers in the state (as reported in Part I.A), you must enter tract-level data for each tract in your defined service area, regardless of whether you have customers in that tract. If you have no customers in a particular census tract for one of these technologies simply enter zeros for number of connections and percentage residential in any speed tier for which you have at least one customer in the state. (See instructions for further information on service areas)

The “Data File Upload for All Parts” button at the bottom of the Submission Menu links to a screen titled “Form 477 Data File Upload” (see Figure 8) that allows you to enter the name of the XML file for Parts I-V (See Section 3.16) and the Census Tract data file for Part VI.

Form 477 Data File Upload

XML file:

Part I-V data option:  Delete all Part I-V data before inserting XML file contents (Note: Data for all parts will be deleted only if the input XML file is validated against the XML Schema.)

Part VI upload type:  Replace all Census Tract information for this submission with the data in this file (Note: this will first **delete all** Census Tract detail data previously entered for this state, then upload the new data. It will not overwrite state-level data entered in Part I.)  
 Merge this Census Tract information with the existing data for this submission (Note: use this option to correct and / or augment existing tract-level data as well as accept new tract-level data.)  
 Append this Census Tract information to the existing data for this submission (Note: this will add new tract-level data. Do not use this option to correct previously entered tract-level data. Attempting to do so will generate an error.)

Raw data upload file for Part VI detail:

Error Messages:  On\*  Off

\* The Error Messages option is much slower to process and is not recommended for large data sets.

As the upload function runs, you can monitor the progress in your browser. Leave your browser open and do not open other pages in the browser tab or session as the upload proceeds. This process uses URL redirection; if URL redirection is disabled in your browser settings the process will not complete. The process may take some time for larger data sets.

The upload for Parts I-V works exactly the same as the individual edit pages for Parts I-V. That is to say, if only data for Part I.A(A) Asymmetric xDSL is included in the upload file, then only data for that specific section will be updated in the processing. All other Part data will remain unchanged. This allows for flexibility as to how many input files of what types you wish to use. The data checks for each part are enforced individually as they are on the save for the individual Parts. No Part data with errors will be saved to the database, but any and all parts which do not have errors will be saved. The processing of the Part VI detail is more efficient in the raw data file; therefore it is not recommended that the XML upload be used for more than 5,000 Part VI data rows.

[Upload File Formatting Instructions](#)

Figure 8 - Form 477 Data File Upload

1. From the Form 477 Submission menu, click the button “Data File Upload for All Parts.”
2. Click on “Upload File Formatting Instructions” at the bottom of the page to link to the file upload instructions. Click on “Raw data upload for Census Tract detail” for the required file

# Form 477 System Guide

---

format and on "Part VI Census Tract Reference Tables" to show specific code values and to enter codes for "Other Technologies."

3. In the "Raw data upload file for Part VI detail" box (Figure 8 above), click "Browse" and navigate to the file you wish to upload. Note: The format for this file *must* be comma delimited .txt or .csv.
4. In the box labeled "Part VI upload type" select the "Replace," "Merge" or "Append" option (except for the first time you load data into the system when no choice is available). The "Replace" option replaces all census tract data, for all technologies, that was previously entered into that particular Form 477 submission by file upload or by hand. The "Merge" option modifies census tract data for tracts you have already entered and adds new data. The "Append" option adds new census tract data. Turning the "Error Messages" option ON will show all error messages but will slow the upload process. It should only be used on relatively small files (See Section 3.15).
5. For "Other Technology" go to the instruction screen and either choose an existing code from box "Technology Codes (other)" or add a code by clicking "Enter a new "Other" Technology Code", entering a description, and clicking "Save this new Code." The upload file must contain "0" in field 5 and the code in field 6.
6. For Terrestrial Mobile Wireless you must list only those Census Tracts that best represent your broadband-speed mobile wireless service area. For those tracts put a "1" in field 7 and "0" in field 8. Do not include geographic areas where your company does not itself own or operate the broadband-speed network, but serves them through roaming arrangement with other providers.
7. Click the "Upload and Import Form 477 Data" button to display the "File Upload Confirmation" window. Confirm that "YES" is displayed next to the label "File was saved OK."
8. Click "Add Census Tract Information to the database."

The upload has three phases:

- Inserting the census tract file into a temporary location in the database.
- Either updating the merge data or deleting old Census Tract data if either of those options has been selected.
- Inserting the uploaded data into the permanent Form 477 database tables.

The web site will display messages while the data is merged into the database, and will ultimately present a message stating that "Upload to database is complete" as shown in Figure 9.

# Form 477 System Guide

---

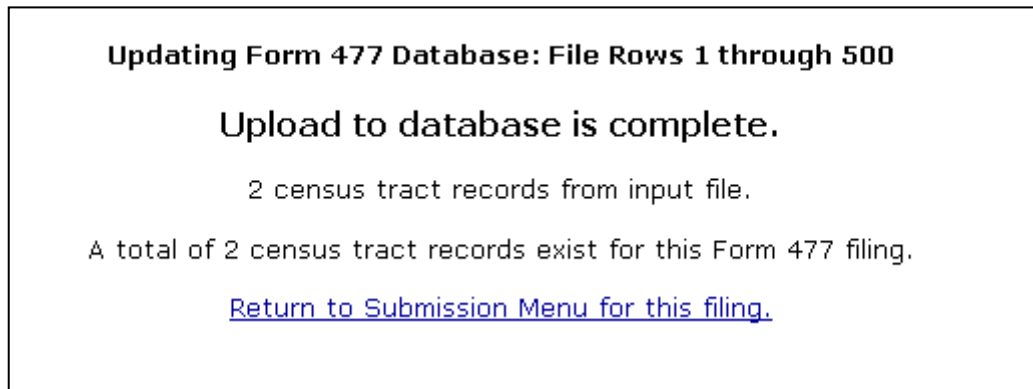


Figure 9 - Database upload notification

9. Click the "Return to Submission Menu for this Filing" link, and confirm that the correct number of records is listed in the "View/Edit Census Tract Detail Data" link at the bottom of the page.

You may view a summary of the census tract data that has just been uploaded by clicking the View/Edit Census Tract Detail Data link.

10. After viewing the list, click the "Current Form 477" link at the top of the page to return to the current submission.

Note 1: For the technology "All Other" you must also identify the technology in Part IV, Comments, if you have provided an upload file of census tract information.

Note 2: For the technology "Terrestrial Mobile Wireless" census tract upload records should show one (1) for the number of connections and zero (0) for percentage of lines that are residential.

### 3.15 ENTERING CENSUS TRACT INFORMATION BY UPLOAD FILE – LARGE FILES

There is a limit of 100,000 records for a file upload. For larger amounts of data it is necessary to break the data into files containing no more than this number.

1. From the Form 477 Submission menu, click the button "Data File Upload for All Parts." Note that if you uploaded a file it is listed in the section "Previously uploaded files."
2. In the "Raw data upload file for Part VI detail" section, click "Browse" and navigate to the first file you wish to upload.
3. Select the "Replace" (or "Merge" or "Append") option (except for the first time you load data into the system when no choice is available). Be sure that the "Error Messages" option is turned OFF or it will take a very long time to upload the file.

# Form 477 System Guide

---

4. When you click the "Upload and Import Census Tract Data" button, the "File Upload Confirmation" window is displayed.
5. Confirm that "YES" is displayed next to the label "File was saved OK," and click "Add Census Tract Information to the database."

The upload has three phases:

- Inserting the census tract file into a temporary location in the database.
- Either updating the merge data or deleting old Census Tract data if either of those options has been selected.
- Inserting the uploaded data into the permanent Form 477 database tables.

The large file upload will take a considerable amount of time and will tie up this web browser window while it is uploading. However you may continue working in other windows of this browser or use another browser during this time.

6. Repeat steps 1-5 for the files that are part of this census tract submission using the "Append" option for the succeeding files.

When the process is complete, the "Upload to database is complete" message will be displayed.

7. Click "Return to Main Menu for this filing." The "View/Edit" census tract detail link should indicate the number of census tract detail records that exist.

## 3.16 ENTERING DATA BY FILE UPLOAD

Filers who are proficient in XML (Extensible Markup Language) may use a single XML-formatted file (or a small number of such files) to upload all Part I through Part V data for a particular Form 477 submission. Further, filers with no more than 5,000 census tracts may include Part VI records in the XML-format file. (For more than 5,000 census tracts see Sections 3.14 and 3.15 for file upload instructions.)

1. Click on the "Data File Upload for All Parts" button at the bottom of the Submission Menu. This links to a screen titled "Form 477 Data Upload" (See Figure 8) that allows you to enter the name of the XML file for Parts I-V and/or the Census Tract data file for Part VI. At the bottom of the page is a link to instructions on preparing an XML file entitled "Upload File Formatting Instructions."
2. In the "XML File" box, click "Browse" and navigate to the XML file you wish to upload. If you already have entered Part I through Part V data that you wish to replace, check the box after the words "Part I-V data option:"

# Form 477 System Guide

---

3. If this file also contains Part VI data then go to step 4. Otherwise you may enter a Census Tract data file (in .txt or .csv format) as described in Section 3.14.
4. Click on "Upload and Import Form 477 Data" and follow the directions starting with step 7 in Section 3.14

## 3.17 SERVICE-LOCATION ADDRESS DATA

If you are authorized to submit address data in lieu of census tract data, and at least one technology has had State Totals entered, click "Enter Address Data by Hand" in the Submission Menu. The Address data is entered in a similar manner to the Census Tract data. Either a full address or the first line of an address and a set of latitude/longitude coordinates are required to define a particular address. Once an address has been entered, the actual grid data for details is exactly the same as the Census Tract data input. It is not possible to enter address data for "Terrestrial Mobile Wireless."

Note: When entering Latitude and Longitude information you must enter values for degrees, minutes and seconds, even if they are zero.

## 3.18 PRINTING, CHECKING OR SAVING A SUBMISSION

The Submission Menu now offers options to print out (or save to your computer) copies of the individual parts of an in-progress or officially submitted form. The complete form can be printed if the form includes data for no more than 50 Census Tracts or has no more than 3,600 individual Census Tract data cells filled out.

Below Part VI on the Submission Menu is a box entitled "Print Form" (See Figure 10). Select any part, or the complete submission, and click OK to display a print preview. You may then use your browser's print or save capabilities.

Note in particular the "Errors/Warnings" option. Selecting this button and clicking OK will provide the errors that would appear if you tried to submit the form. This is a more efficient way to check the form before submitting it.

# Form 477 System Guide

Print Form

Select one of the following and click OK to see a preview of what will print. Then use your browser's capability to print or save the document.

- Cover Page
- Part I
- Part II
- Part III
- Part IV
- Part V
- Part VI
- Complete Report including all Part VI detail
- Complete Report without Part VI
- Errors/Warnings

OK

Figure 10 - Printing a Submission

## 3.19 SUBMITTING A VALID FORM 477

Submitting a file which is marked "Original – In Progress" was discussed in Section 3.6. If you now have a valid filing,

1. From the Submission menu, click the link "Submit this submission as complete." This will bring up the "Submit Current Form 477 Submission" screen (Figure 11).

Submit Current Form 477 Submission

Click "Submit As Complete" to Submit Current Form 477 Submission.  
The current status is **Original - In Progress**.

**This will officially submit the data in this Form 477 to the FCC as complete.**

Submit As Complete Cancel

Figure 11 - Filing Submittal

2. Click "Submit as Complete."

The system will run tests in the background, and display a page with the notice reading "This Submission was accepted. The submission has been accepted and is now protected."

3. When the submission is accepted, click the "Return to Current Submission Menu" link.

The submission menu items will now be protected, allowing only viewing. If the status had been "Original – In Progress" the new status will be "Original – Submitted." If the previous status was

# Form 477 System Guide

“Revised – In Progress” then the new status will be “Revised – Submitted (see Figure 12).” In either case you will only be able to view it unless you reopen it for editing (see Section 3.20).

## Existing Form 477 Submissions:

Existing Form 477 Submissions Data as of Dec 31, 2009

Status	State	Operations	View/Edit By Part	Revise/Submit
Original - In Progress	Arizona	Non-ILEC	<input type="button" value="View/Edit"/>	<input type="button" value="Submit"/>
Revised - In Progress	California	Non-ILEC	<input type="button" value="View/Edit"/>	<input type="button" value="Submit"/>
Original - In Progress	Hawaii	ILEC	<input type="button" value="View/Edit"/>	<input type="button" value="Submit"/>
Revised - In Progress	Montana	Non-ILEC	<input type="button" value="View/Edit"/>	<input type="button" value="Submit"/>
Revised - Submitted	South Carolina	Non-ILEC	<input type="button" value="View"/>	<input type="button" value="Revise"/>

Figure 12 - Main Menu with submitted entry

4. Click the “Form 477 Home” link at the top of the screen to return to the main menu.

### 3.20 RE-OPENING A PREVIOUSLY-SUBMITTED FORM 477

1. Click the “View” Link from the main menu to get to the Submission menu for a previously successful submission.

At the bottom of the Submission Menu, there is an indication that the current status for the filing is “Original – Submitted” or “Revised – Submitted.”

2. Click the link “Revise this Submission.” The status change window will appear as, for example:

Re-Open Current Form 477 Submission for Revision

Click "Re-Open For Revision" to Re-Open Current Form 477 Submission for Revision.  
The current status is **Revised - Submitted**.

**This will re-open this Form 477 submission in order to submit a revision.**

Figure 13 - Status Change Window for a Submitted filing

3. Click the re-open option button and click “Change Status” to re-open the file for revision.
4. When the message stating “This Submission has been re-opened for revision” is displayed, click “Return to Current Submission Menu.”



# Form 477 System Guide

The Submission will be listed as "Revised – In Progress."

## 3.21 SUBMISSION WHERE CENSUS TRACT VALUES DO NOT ADD TO STATE TOTALS

If the Census Tract Values do not add to Reported State Totals when submitting the filing as described in Section 3.19 the filing is rejected. In this case a grid is displayed showing where the reported state totals and the computed totals based on census tract detail differ. This grid should appear as, for example:

Errors / Warnings

**Some of the totals computed from the Part VI detail data do not match reported Part I.A. state totals. For your convenience, the non-matching cells are detailed below.**

**Asymmetric xDSL**

Upload Information transfer rate from the end user	Download Information Transfer Rate							
	200 - 767.9 kbps	768 kbps - 1.49 mbps	1.5 - 2.9 mbps	3 - 5.9 mbps	6 - 9.9 mbps	10 - 24.9 mbps	25 - 99.9 mbps	> 100 mbps
> 100 mbps					90			
Reported on Part I:					90			
Computed from Part VI:					100			

Figure 14 - Non-matching Totals for submission

In this case the number entered in Part I.A for Asymmetric xDSL in a specific speed tier was 90 but totaling the numbers for all entries in Part VI for the same speed tier gives 100.

1. Click "Return to Current Submission Menu," then "View/Edit Census Tract Detail Data."
2. Select the census tract(s) or state total in error and make corrections.
3. When you have saved and are back at the filing menu, click "Submit this submission as complete," and submit the submission as described in Section 3.19.

If a state reported entry is blank when there is a zero in the census tract speed tier data (Figure 14) either a file was uploaded containing a zero for a speed tier for which there is no Part I entry or because census tract data should have been entered for this speed tier.

## 3.22 SUBMISSION WHERE CENSUS TRACT PERCENTAGES DO NOT ADD TO STATE PERCENTAGE

If the weighted-average of the Census Tract Values do not add to Reported State Total when submitting the filing as described in Section 3.19 the filing is rejected. In this case a grid is displayed showing where the reported state totals and the computed totals based on census tract detail differ. This grid should appear as, for example:

# Form 477 System Guide

Errors / Warnings

**This Submission contains the following errors:**

The state total reported for **Part I.A: Broadband - Asymmetric xDSL** Column (4) *Percentage of (1) that connect to residential end users. (Enter 0 if the true value is 0 percent.),* **90.000**, does not match the residential percentage computed from reported census tract detail data, **100.000**.\*

The state total reported for **Part I.A: Broadband - Asymmetric xDSL** Column (5) *Percentage of (1) that connect to residential end users and have information transfer rates exceeding 200 kbps in both directions. (Enter 0 if the true value is 0 percent.),* **80.000**, does not match the residential percentage computed from reported census tract detail data, **100.000**.\*

\* The following methodology is used to calculate these values: When the census tract data is saved for this technology, the total number of residential connections is calculated for each census tract upload/download speed based on the reported number of connections and percentage residential. Then, in order to derive the percentages of state totals from the census tract detail, these calculated numbers are added up by state and divided by the total of all the combined residential/non-residential connections as originally reported in the census tract detail for this technology. The resulting calculated percentages are then compared to the percentages for the state that were reported in columns (4) and (5) of Part I.A. These percentages should correspond to each other.

Figure 15 - Non-matching Totals for Residential Percentages

In this case the number entered in Column 4 of Part I.A for Asymmetric xDSL in a specific speed tier was N but totaling the percentages times the number of connections for all entries in Part VI gives NN.

4. Click "Return to Current Submission Menu," then "View/Edit Census Tract Detail Data."
5. Select the census tract(s) or state total in error and make corrections.
6. When you have saved and are back at the filing menu, click "Submit this submission as complete," and submit the submission as described in Section 3.19.

If a state reported entry is blank when there is a zero in the census tract speed tier data (Figure 15) either a file was uploaded containing a zero for a speed tier for which there is no Part I entry or because census tract data should have been entered for this speed tier.

## 3.23 DELETING AN "ORIGINAL – IN PROGRESS" SUBMISSION

Below "Print Form" on the Submission Menu is a box entitled "Options for this Submission." Click on "Delete this Submission" and confirm to remove it from the system.

An erroneous state name cannot be corrected after the file has been successfully submitted. Instead, reopen that file for revision and simply leave it in the resulting "Revised – In Progress" status. Further, deleting all data entries in Parts I through III of the file will ensure that the erroneous file won't be accidentally resubmitted.

# Form 477 System Guide

---

## APPENDIX A: HELPFUL REMINDERS

### I. Data Entry Reminders/Restrictions/Recommendations (the 3 Rs)

1. To reach the Cover Page click the link "Form 477 Submission for FRN:..." at the top of the Submission Menu
2. Always start a new state submission by entering applicable data in Parts I, II, and III before entering anything in Parts IV, V, and VI
3. The "Number of Connections" value must be an integer in Part I.A and in Part VI
4. If a "Number of Connections" is entered in Part VI, then the corresponding "Percentage Residential" is required
5. Percentages must be from 0 to 100, and can include up to three numbers after the decimal point
6. A Terrestrial Mobile Wireless upload file record should have one (1) and zero (0) as positions 7 and 8
7. For any broadband speed combination the sum of the entries for all census tracts in Part VI must equal the state total for that speed combination shown in Part I.A
8. There is a limit of 100,000 records for an individual upload file
9. Turn the "Error Messages" option off when uploading a large file or it may take a very long time
10. Click "View/Edit" at the bottom of the Submission Menu to see and/or modify census tract data you have entered. The button "Enter Census Tract Detail Data by Hand" is for entering data for additional census tracts.
11. If you enter data in Part I.A under "All Other" you must enter the technology when completing Part VI. If you upload census tract data then put this information into Part IV, Comments.
12. If you enter data in Part II (unless you are reporting only wholesale VoIP) then you must enter ZIP codes in Part V
13. Use tab or click to move around on a screen; do not use Enter/carriage return

### II. Useful Hyperlinks (Hot Links)

<u>Link</u>	<u>Purpose</u>
Form 477 Home	Display Main Menu
Form 477 Submission for FRN: xxx	Display Cover Page
Current Form 477	Display Submission Menu
View/Edit Census Tract Detail Data (nn records)	View or change previously entered census tract data
Submit this submission as complete	Submit or reject and display error messages
Log Out	Logs user out and displays log in menu

# Form 477 System Instructions

## APPENDIX B: CENSUS TRACT UPLOAD DATA ELEMENTS

Position	Value	Data Type	Description
1	<b>County FIPS</b>	Integer	County FIPS Code (3 digits). The County is a part of the Census Tract definition.
2	<b>Census Tract</b>	Decimal number	Census Tract value. Census tracts are represented as numbers with a decimal, such as "3042.00." Up to four digits before the decimal, up to two digits after.
3	<b>Upload Rate</b>	Integer	Upload Rate as defined in the "Rates" table detailed below.
4	<b>Download Rate</b>	Integer	Download Rate as defined in the "Rates" table detailed below.
5	<b>Technology Code</b>	Integer	Technology Code as defined in the table below. Note that positions 7 and 8 for "Terrestrial Mobile Wireless" Technology are treated differently than for all other technologies. For the purpose of this data upload, when compiling your file for submission enter "1" in position 7 and "0" in position 8 for any census tracts containing data for "Terrestrial Mobile Wireless."
6	<b>Technology Code Other</b>	Integer or empty	This is for Technology Types which do not exist in the assigned list of Technologies. Note that "Ethernet" is not a valid "Other" technology code. If you use Technology Code Other, then the value for "Technology Code" <u>must</u> be '0' (numeric zero). Leave this field blank for the standard technology codes.
7	<b>Number of Connections</b>	Integer	Number of connections in this census tract for this combination of technology code, upload rate, download rate.
8	<b>Percentage Residential</b>	Number between 0 and 100. Up to three numbers to the right of the decimal.	The percentage of connections for this combination of technology code, upload rate, download rate which are "Residential." The format for percentage data input is "XXX.XXX." For example, if 1/2 of the connections in a census tract are residential, enter "50" or "50.000" for this value. "0.50" will be translated as one half of one percent.

# Form 477 System Instructions

Upload Rates	
Rate Code	Description
1	Less than or equal to 200 kbps
2	Greater than 200 kbps and less than 768 kbps
3	Greater than or equal to 768 kbps and less than 1.5 mbps
4	Greater than or equal to 1.5 mbps and less than 3 mbps
5	Greater than or equal to 3 mbps and less than 6 mbps
6	Greater than or equal to 6 mbps and less than 10 mbps
7	Greater than or equal to 10 mbps and less than 25 mbps
8	Greater than or equal to 25 mbps and less than 100 mbps
9	Greater than or equal to 100 mbps

Download Rates	
Rate Code	Description
2	Greater than 200 kbps and less than 768 kbps
3	Greater than or equal to 768 kbps and less than 1.5 mbps
4	Greater than or equal to 1.5 mbps and less than 3 mbps
5	Greater than or equal to 3 mbps and less than 6 mbps
6	Greater than or equal to 6 mbps and less than 10 mbps
7	Greater than or equal to 10 mbps and less than 25 mbps
8	Greater than or equal to 25 mbps and less than 100 mbps
9	Greater than or equal to 100 mbps

Technology Codes	
Technology Code	Description
1	Asymmetric xDSL
2	Symmetric xDSL
3	Other Wireline
4	Cable Modem
5	Optical Carrier (fiber to the end user)
6	Satellite
7	Terrestrial Fixed Wireless
8	Terrestrial Mobile Wireless
9	Electric Power Line
0	All Other

Technology Codes (Other) This code requires the entry of "0" for "Technology Code"	
Other Technology Code	Description
1	Optional Other Tech Value #1
2	