

2016-2017



**SEAGO – in Partnership with AZDOT
DETERMINING TRUE COSTS: FORMULATING A
TRANSPORTATION BUDGET**

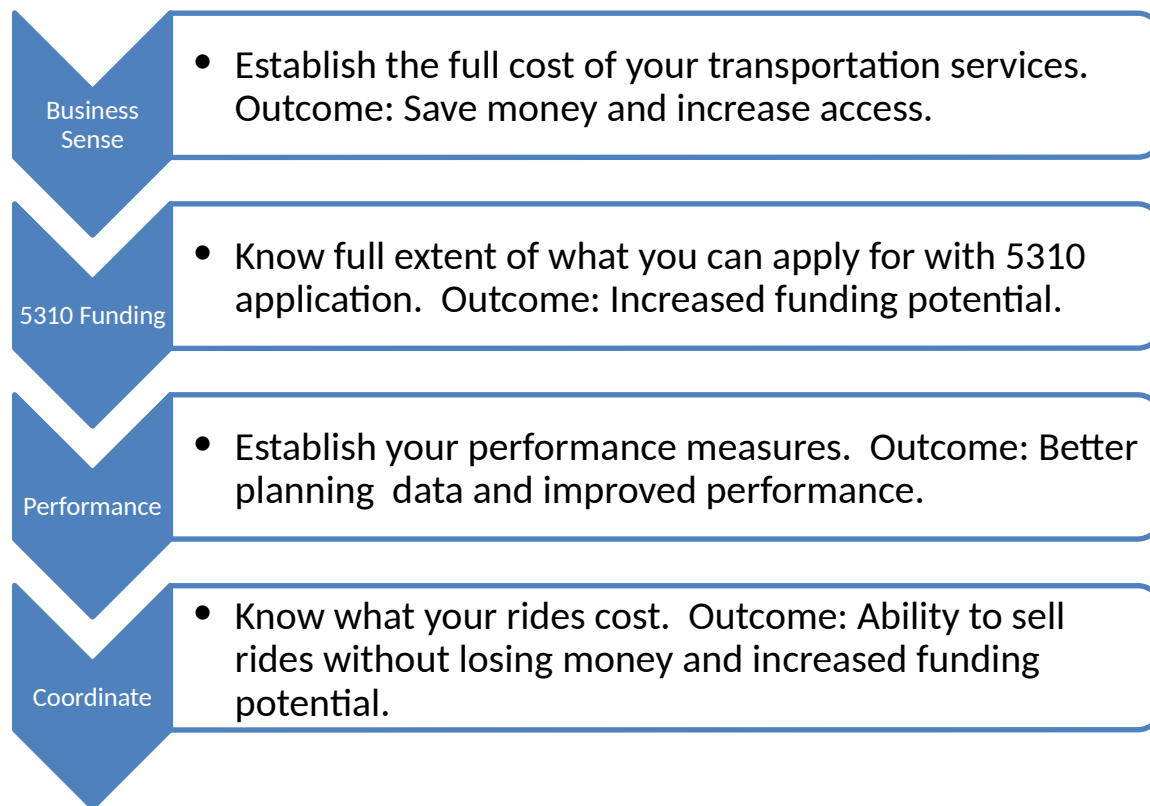
**M. Greene Planning
& Resource Development**

Linking organizations with resources to meet
challenges, direct growth, and build sustainability.

Why you should know the full cost of Transportation Services

Our objective is to fully identify transportation costs.

Our focus is four fold: 1) Understand the **full cost of transportation services** so as to make **good business decisions**; 2) Understand **what costs are eligible under the 5310 program** so as to **maximize your use of funds**; 3) **Establish baseline performance measures for planning and reporting**; and 4) Understand **how much your rides cost** so as to **expand coordination** opportunities.



GUIDANCE

[2 CFR 200 Supercircular replacing A-87 and A-122](#)

The new Supercircular replaces the old A-87 (for state and local governments) and A-122 Circulars (for Non-profits) and consolidates guidance for all users. Where principals are different, separate guidance is provided within the circular.

Until new guidance is developed for the FAST Act – and as long as funding available through ADOT is MAP-21 funding, we will use current guidance.

[FTA Circular 9070.1G - Guidance for 5310 funds](#) – Check for updates from the FAST Act

FTA provides guidance on its MAP-21 5310 program through its circular 9070.1G. This further refines eligible and allowable costs for programs using FTA funds.

[FTA Circular 9040.1G - Guidance for 5311 funds](#) – Check for updates from the FAST Act

FTA provides guidance on its MAP-21 5311 program through its circular 9040.1G. This further refines eligible and allowable costs for programs using FTA funds.

[FTA Circular 5010.1 D = Guidance for Grant Management](#)

This circular provides information on how to manage FTA funds once awarded; however, it's a great source of information that allows you to understand cost accounting requirements in your pre-application planning.

[AZDOT 5310 Program and Application Guide](#)

AZDOT's Program Guide not only iterates Federal policy but includes State policy with regard to cost allowability. This is important to know as not all costs that are related to transportation can be included or funded in an AZDOT application.

ADOT allows both operating and eligible administrative costs to be considered as direct costs. Administrative costs are only eligible if they are direct costs that support transportation service or mobility management- specific duties. If an administrative cost is shared and an agency can **clearly** document through timesheets and other related documentation the amount of time spent on transit related activities, then this cost will be considered in the application for funding and reimbursement.

[TCRP Report 144 Sharing the Cost of Human Services Transportation](#)

The Transit Cooperative Research Program has a very useful document that discusses both why and how full cost accounting improves Transportation programs.

Information relayed in this workshop comes almost entirely from these guidance documents. While everyone is very, very busy with more work than they can reasonably achieve on any given day, these documents are essential to the efficient, smooth, and compliant operations of your programs. Please make time to go through them.

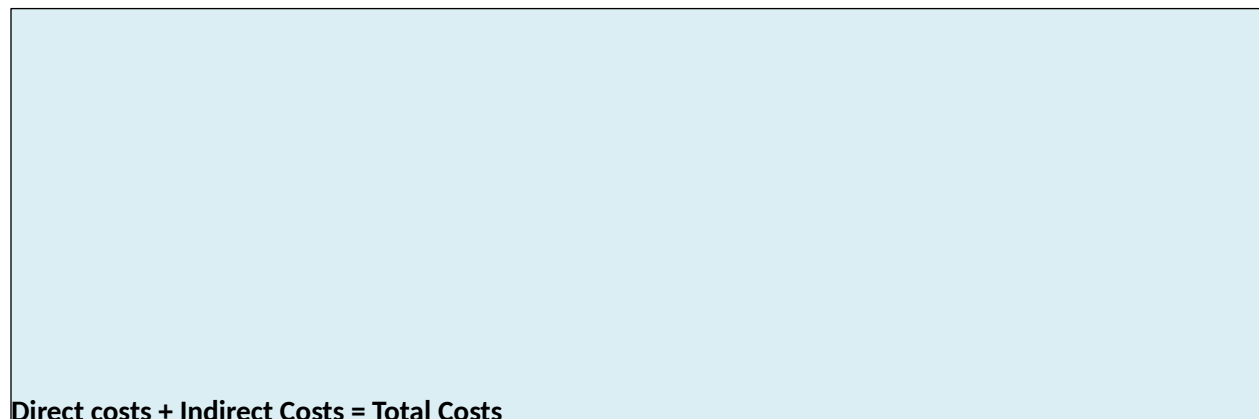
Why do we need to know the True Cost of our transit programs? There are many reasons. The best way to see the value is to ask yourself these questions (highlight the ones you don't know the answer to)

- How much of your transportation costs are you able to recover from other sources?
- Do you know how much a ride costs? – a mile? - an hour?
- How do you measure the efficiency of your program?
- Are you able to determine the value of holding onto a vehicle vs. buying a new one?
- When you bid on a contract to provide transportation services to the state (DDD, DES, etc.) are you losing money?
- Do you allocate transportation costs to your different programs?
- How do you decide if you can afford to expand your program in terms of miles? - hours of operation? -destinations?
- Is there a cheaper way to do what you do?
- Is there a way to improve service for your client?
- What's the most expensive part of your transportation program?
- How much did your transportation costs increase last year?
- How do transportation costs impact your staffing decisions?
- Is your transit grant application's budget accurate?

Knowing the true costs of your transportation program allows you to

- Determine the coming year's transportation budget
- Create maximum efficiency
- Identify potential for improving system performance

A WORD ABOUT TOTAL COSTS



Direct costs + Indirect Costs = Total Costs

Direct costs are costs that can be identified specifically with a particular cost objective and may be

charged directly to a grant, contract, or to other programs. All direct costs, even for project

administration activities, must be adequately supported with proper documentation. For example, all labor charges must be supported with time and accounting records.

Indirect costs are costs incurred for a common or joint purpose benefiting more than one cost objective.

Indirect costs must be supported by an approved Cost Allocation Plan (CAP) and/or Indirect Cost Rate

Proposal. 5010.1 D (5)(a) **Some indirect costs may be allocated as direct costs so long as the proportional share can be tied directly to a particular cost objective or program.**

Variable costs are those that CHANGE with the amount of service provided. These expenses typically include driver wages, fuel costs, and maintenance costs. The more miles and hours of service provided by the transportation service, the greater the costs of that service.

Fixed costs are those that DO NOT CHANGE according to the amount of service provided. In most systems, this means that modest changes in the numbers of hours or miles of service will not result in corresponding changes to the fixed costs. Fixed costs typically include such items as administrative salaries and facility depreciation.

Cost per Unit * Number of Units = Total Costs

Cost per unit is derived from a calculation using variable and fixed costs and can be measured by the units identified as the variables. In transit, variables are typically miles and hours. Cost per mile and Cost per hour are unit costs. The fixed costs are the costs not included in either of the variable costs.

The number of units is derived from the total number of units in a given time period. For example, 15,000 miles driven per year. 4,000 service hours per year.



A WORD ABOUT FULL COST ACCOUNTING

FOUR STEPS TOWARD BUDGET SUCCESS
Full cost accounting describes when all costs whether they are **fixed or variable, direct or indirect**, including **manufacturing costs**, are used to compute the total **cost** per unit.

ONE

Identify all the costs you have for transportation – both direct and indirect.

TWO

Lay out your Transportation Budget. Use all costs that are eligible using 2 CFR 200 that can reasonably be attributed to Transportation.

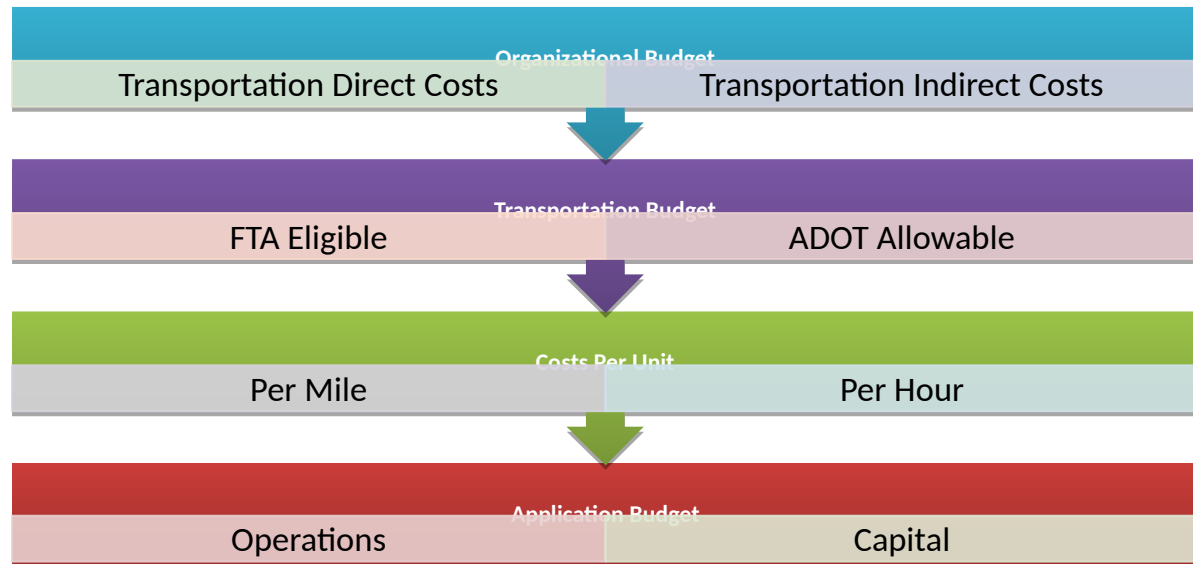
2 CFR 200.4 states that costs must be necessary, reasonable, and allocable.

THREE

If you are going to apply for and use any FTA funds in support of your transportation services, make sure your costs meet the eligibility criteria (local government or non-profit) and that you have properly calculated proportional share as described in 2 CFR 200. If you plan to use FTA 5310 funds, make sure your costs meet the criteria outlined in FTA Program Circular (9070.1 G) and Grant Management Circular (5010.1 D). Review the AZDOT 5310 Guidebook to identify the costs that are eligible in the 5310 application process in Arizona.

FOUR

Identify your cost per hour, per mile, and per ride to establish a baseline for measuring performance and selling rides.



STEP ONE – IDENTIFYING DIRECT AND INDIRECT TRANSPORTATION COSTS

For this step you will need a copy of your organization's annual budget. This should be a detailed budget with categories of spending and line items that are clear. There may be back up documentation or program budgets that have more detailed information. Get those too. You need to be able to look at budget material and know what that money is being spent on.

Example: Materials and Supplies – \$4,000.00

Is this program supplies? Office supplies? Both? Does it include supplies for transportation vehicles like first aid kits or fuel and oil? Does it include cleaning supplies? How about wiper blades?

Try and find the backup documentation that was used to make the budget. This will go a long way in helping you determine whether some or all of a line item can be allocated as a transportation cost.

Next, get yourself three highlighters – each a different color.
Assign a color to Direct Cost, Indirect Cost, and Need More Information.

Make a note on your budget page as to which is which.

Direct **Indirect** **NMI**

Now, start identifying which line items have costs that can be attributed to transportation.

You may need to make several passes over your budget to identify which line items may have transportation costs, whether they are Direct or Indirect (or some of both), or if you need more information before making a determination.

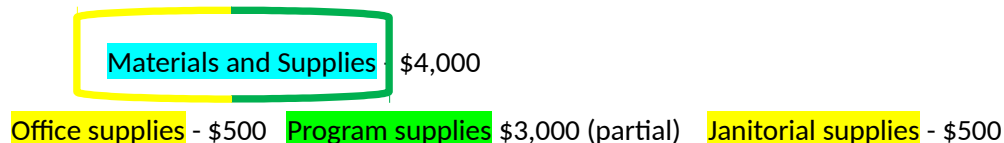
If you think a line could be both direct and indirect, use both highlighters.

Example: **Executive Director Salary:** \$40,000.00

This information will be useful in helping you determine whether to get an approved indirect cost allocation plan or justify a proportional share of typical indirect costs as direct.

Once you've highlighted your budget, make another pass and make notes on what backup documentation you will need to collect or create to justify your decisions.

For those items you marked as **NMI** (Need more information), follow up and chase down that information. Update your budget by circling the entry with the correct color or make notes that describe your findings.


Office supplies - \$500 Program supplies \$3,000 (partial) Janitorial supplies - \$500

STEP TWO – CREATE THE TRANSPORTATION BUDGET

Our Transportation budget will be broken down into six categories:

Personnel, Facilities, Operations, Maintenance, Indirect, In-Kind,

These categories will allow us to maximize utilization of match requirements for different types of funding.

You may wonder where Administration is. If it can be applied directly, an Admin cost is found in Operations. If it cannot be applied directly, it is in indirect costs.

Examples: Some State managed funding can allow preventative maintenance as a capital cost, thereby reducing the match requirement from 50% to 20%. Grant applications often ask for In-kind to be a separate line item in application budgets.

Sample Budget Outline

Using information you gathered from your organization budget, begin transferring description titles and amounts to your new Transportation budget. Include only those items that you highlighted as having a transportation component.

Enter the Organization Budgets (OB) amount for each line item under the OB column. This should be the full amount.

Indicate if this is a Direct Cost or an Indirect Cost or if it could be either.

Calculate the proportionate share that can be attributed to transportation and enter that figure into the Transportation Budget (TB column). **2 CFR 200 provides guidance on how you can allocate various costs and provides samples of allocation models and formulas. The important things to keep in mind are to be consistent across programs, don't double dip (charge the same cost more than once), and base your decisions on documentable evidence (Percentage of non-dedicated driver's time is based on time sheets, driver logs, etc.)**

Make notes on how you calculated the proportionate share. But before we do all that, let's review the Super Circular for Guidance....

2 CFR 200 Appendix IV (B)(4) Direct Allocation Method

a. Some nonprofit organizations treat all costs as direct costs except general administration and general expenses. These organizations generally separate their costs into three basic categories: (i) General administration and general expenses, (ii) fundraising, and (iii) other direct functions (including projects performed under Federal awards). Joint costs, such as depreciation, rental costs, operation and maintenance of facilities, telephone expenses, and the like are prorated individually as direct costs to each category and to each Federal award or other activity using a base most appropriate to the particular cost being prorated.

b. This method is acceptable, provided each joint cost is prorated using a base which accurately measures the benefits provided to each Federal award or other activity. The basis must be established in accordance with reasonable criteria, and be supported by current data. This method is compatible with the Standards of Accounting and Financial Reporting for Voluntary Health and Welfare Organizations issued jointly by the National Health Council, Inc., the National Assembly of Voluntary Health and Social Welfare Organizations, and the United Way of America.

c. Under this method, indirect costs consist exclusively of general administration and general expenses. In all other respects, the organization's indirect cost rates must be computed in the same manner as that described in section B.2 Simplified allocation method of this Appendix.

Establishing the proper base.

If there is only one program, you must use a method to determine your base that is equitable and used consistently for allocation purposes among all funds. There are many ways to do this so pick the one that is right for your organization.

Here is a very basic example:

Program funds = Fund A 60% of total income Fund B 30% of total income Transportation Funds 10%

Allocate 10% of Joint costs to the Transportation fund.

There are other ways to determine the proper base for your organization. Keep in mind that in organizations with multiple programs, the programs with the most funding are not always using joint costs in the same proportion. One program that receives a small portion of the organizational budget could be using a much higher portion of the joint costs dependent on how it functions.

For example, a program that uses 80% of the facility space would be allocated more of the facility support costs. Whereas a program that only uses one small office space would be assigned a much smaller portion of the facilities cost.

Establishing the proper base is often best left to the financial gurus of your office. **Whatever is decided, make sure that you can document how you came to your conclusion, that your back-up data supports your conclusion and that you use your formula consistently across programs.**

So with all that in mind, let's start to build a transportation budget.

Your budget line item	Organizational Budget (OB) Amount	Direct or Indirect	Transportation Budget (TB) Amount	Notes
Personnel				
Directors/Managers/HR/Finance Create a line item for each person		Direct (actual cost or portion of joint costs) Or Indirect	A percentage or portion that can be tracked or documented as related to transportation or an appropriate portion of joint costs	This should be limited only to time directly related to transportation such as review of reports, attendance at TAC or Coordination meetings, hiring, evaluation, financial management, bookkeeping, etc. If you have an indirect cost rate that accounts for <u>all</u> their time, do not allocate a direct portion.
Drivers Salaries and Wages dedicated (hired to drive)		Direct	Full amount	
Salaries and Wages of persons who drive but do other things as well		Direct	A percentage or portion of the OB amount that can be attributed to transportation	This includes all the time the driver uses to complete driver logs, performing pre and post inspections, fueling vehicles, transportation related training time and other transportation related tasks. Example: Dan spends... 25% of his time driving people to/from job sites, fueling/ washing the vehicle, attending transportation training, Coordination meetings, etc. 50% of his time is spent providing job coaching services 25% of his time is spent completing administrative tasks such as writing progress reports, attending staff meetings, training other job coaches, etc. Dan earns \$30,000/year 25% (% of time devoted to transportation tasks) of \$30,000 (annual salary) is \$7,500 that can be allocated to the TB
Escort/Attendant Wages and Salaries		Direct	Full amount	

Your budget line item	Organizational Budget (OB) Amount	Direct or Indirect	Transportation Budget (TB) Amount	Notes
(hired to accompany drivers or clients on vehicles – doesn't do anything else)				
Escort/Attendant Wages and Salaries (hired to do more than accompany driver/client)		Direct	The percentage of OB salaries and wages that can be allocated to the TB	Using the example for the non-dedicated drivers, determine the appropriate percentage of the Dispatcher's time that is related to transportation. If drivers are also escorts/attendants, you need only calculate the percentage once making sure that you include all the hours that a person acts as either a driver or an escort.
Dispatcher - Dedicated (hired to dispatch passenger vehicles and drivers)		Direct	Full Amount	
Dispatcher Non-Dedicated (hired to do other things as well)		Direct	The percentage of OB salaries and wages that can be allocated to the TB	Using the example for the non-dedicated drivers, determine the appropriate percentage of the Dispatcher's time that is related to transportation.
Other Personnel who may have a direct relation to transportation services but not including a Fleet Manager or the Maintenance or upkeep of vehicles		Direct	The percentage of OB salaries and wages that can be allocated to the TB	Include each person as a separate item and determine the appropriate percentage of their time that is related to transportation.
Fringe Benefits		Direct	The share of Fringe Benefits that can be allocated to the TB	Using the same percentage of Salary for each person listed in the Personnel section; calculate the combined Fringe Benefit cost.

Your budget line item	Organizational Budget (OB) Amount	Direct or Indirect	Transportation Budget (TB) Amount	Instructions/Examples
Facilities and Capital Equipment (Leased or owned)				
<p>For purposes of establishing the true cost of transportation, you must apply a proportional share of facilities and capital equipment. There are two ways to go about this but you must choose only one. One is to depreciate all capital assets according to methods outlined in 2 CFR 200. The other is to establish a proportional direct share for that asset to be assigned to the Transportation budget. Depreciation will give you a truer picture of costs; however it is not an allowable expense for FTA funded programs where the asset was purchased with federal funds. It may be useful to create a true cost budget using depreciation. Then create a FTA funding budget using</p>				

Your budget line item	Organizational Budget (OB) Amount	Direct or Indirect	Transportation Budget (TB) Amount	Instructions/Examples
direct cost or joint cost proportional shares.				
Administration space		Amount that can be tied directly to transportation or the proportional share of joint costs		<p>That portion of the space that is used specifically for all or a portion of support of the transportation program.</p> <p>Using methods described in super circular 2 CFR 200 you can calculate the value of the space used for purposes of direct costs. Depreciation, Capital Replacement Reserves and other categories of expense are allowed under specific circumstances.</p> <p>Otherwise you include them in your indirect cost allocation which must be approved by the cognizant agency (the federal department where your agency gets most of its funding) OR you can work with ADOT to account for the indirect cost in a de minimus 10% allocation.</p>
Operations space		Direct		<p>Use cost allocation guidelines from the 2CFR 200 guidance to determine direct costs for each of these.</p> <p>For equipment, software, and other capital items that are shared, use allocation guide from 2 CFR 200 to determine proportionate share for direct use. Otherwise you include them in your indirect cost allocation.</p> <p>For purposes of total transportation costs you cost out Depreciation but you cannot ask for reimbursement for depreciation of federally funded purchases from FTA programs.</p>
Bus storage facility		Direct		
Vehicles		Direct		
Computers and Software that are not maintenance related		Direct/ Joint Cost or Indirect		
Leased Equipment that is not maintenance related		Direct/ Joint Cost or Indirect		
Communications Equipment		Direct/ Joint Cost or Indirect		
Other capital items with a life of more than one year. Look at the list of eligible capital items in 9070.1 G that aren't maintenance related		Direct/ Joint Cost or Indirect		

Your budget line item	Organizational Budget (OB) Amount	Direct or Indirect	Transportation Budget (TB) Amount	Instructions/Examples
Operations				
Insurance – Vehicle		Direct		The proportionate share of insurance for vehicles that provide transportation

Your budget line item	Organizational Budget (OB) Amount	Direct or Indirect	Transportation Budget (TB) Amount	Instructions/Examples
				services for riders. Do not include costs of vehicles used only to transport staff i.e. the E.D.s company car that is only for her use.
Insurance – General Liability and Facilities		Direct/ Joint Cost or Indirect		For direct, use the proportionate share of insurance 2 CFR 200.477
Utilities - General		Direct/ Joint Cost or Indirect		
Utilities for Transportation related facilities (not maintenance)		Direct		
Program Materials and Supplies (first aid kits, fire extinguishers, uniforms,		Direct for those items that are directly related to transit, otherwise Joint Cost		2CFR 200.453
Purchased transportation (rides, vouchers, mileage reimbursement paid - contracted transportation services may be listed in the capital section.)		Direct or Direct with proportion ate share		
Program Training		Direct		2 CFR 200.472
Drug and Alcohol Testing		Direct/ Joint Cost		If the organization conducts tests across program, including drivers and others, then a proportional share of the overall cost must be determined.
Commercial Drivers Licenses training and testing		Direct		For those persons who much obtain a commercial license in order to transport people.
Vehicle Depreciation		Direct		If not counting vehicles in the capital section, compute depreciation here. In order to develop a true cost of transportation, you must account for all depreciation of vehicles used for transportation of eligible persons. However, you will not be able to

Your budget line item	Organizational Budget (OB) Amount	Direct or Indirect	Transportation Budget (TB) Amount	Instructions/Examples
				request reimbursement for depreciation costs from any FTA program except where vehicles were not purchased with federal funds. Depreciation = Cost divided by service life years. Example: Cut away with lift cost \$50,000. Applying AZ vehicle life cycle of 4.5 years (see AZ 5310 program guide) the annual straight line depreciation rate is $50,000 - \$5,000 \text{ salvage value} / 4.5$ or \$10,000 per year. OR , if you believe you will reach 100,000 miles prior to the 4.5 year service life, it may be advantageous to depreciate based on miles. $\$50,000 \text{ cost} / 100,000 \text{ miles} = \$.50 \text{ per mile}$. 30,000 miles in a given year is a \$15,000 depreciation cost for that year.
Vehicle licenses and registration fees		Direct		
Vehicle Leases (if not counted in the capital section)		Direct		
Fuel and Oil		Direct		
Vehicle Storage or Secured Parking		Direct/ Joint Cost	(cost or proportionate cost of depreciated value of owned facility)	You may only take a proportional share of the cost associated with the actual space used. In other words, a 30,000 sq ft. lot with a depreciated value of \$12,000 per year where the buses only use 2,000 square feet. The proportional share is $\$12,000 / 30,000 = \$.40 \text{ per sq. ft.} * 2000 \text{ sq ft.} = \800
Vehicle Repairs not considered Maintenance or capital replacement repairs (rebuilt engines, etc.)		Direct		This includes parts unless you have included them in supplies. It also includes labor and travel costs for repairs.
Planning		Direct		Transit only
Consultants – Technical Assistance		Direct		
Travel		Direct		
Purchased Service		Direct		If operations contracts are purchased they may qualify as a capital expense – check with ADOT.

Your budget line item	Organizational Budget (OB) Amount	Direct or Indirect	Transportation Budget (TB) Amount	Instructions/Examples
Maintenance				
Mechanic Salary /Wages		Direct		
Mechanic Fringe Benefit		Direct		
Maintenance Contract		Direct or Proportional Share		If your Maintenance Contract includes vehicles that do not provide transportation for eligible riders, use a proportional share. This could be a straight division i.e. Eligible vehicles = 70% of the fleet therefore assumes 70% of the contract costs.
Maintenance Materials and Supplies		Direct or share		
Tires		Direct or share		
Mechanic Training and Certifications		Direct or share		
Mechanic Travel		Direct or share		
Maintenance Travel		Direct or share		Cost of travel for warranty or maintenance work
Maintenance Uniforms		Direct or share		
Maintenance Tools		Direct or share		
Maintenance Equipment Rental		Direct or share		
Maintenance Equipment		Direct or share		
Maintenance Facility Rental		Direct or share		
Maintenance Facility Depreciation		Direct or share		Like other real property, use depreciation formulas and rates allowed in 2CFR 200
Bus wash facility or contracts		Direct or share		

Your budget line item	Organizational Budget (OB) Amount	Direct or Indirect	Transportation Budget (TB) Amount	Instructions/Examples
In Kind				
List each item separately. Volunteers, Services,		Direct or Joint Cost portion		In kind expenses are any allowable costs that are given to the organization without cost. These must be

Facilities, Materials/Supplies, Equipment, Vehicles, Other				documented and assigned value must adhere to 9070.1G III (16) and the 5310 Guide Book.
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Your budget line item	Organizational Budget (OB) Amount	Direct or Indirect	Transportation Budget (TB) Amount	Instructions/Examples
Indirect				
List each item separately.		Indirect		All indirect costs not already allocated as direct or joint cost. List each item separately.

Use the Step 2 worksheet included with this workbook to work through initial allocations. Use the electronic spreadsheet when you are ready to enter figures.

Before we get started on steps three and four, let's look at the purpose of those steps and why we may have to calculate our budgets differently for each step.

As TCRP Report 144 says in Chapter 6, "The primary reason for using full cost accounting is that **all costs must be paid sooner or later by someone.**" And if you are providing the ride, you are probably assuming the costs without asking to be paid.

Step three is a means of identifying eligible and allowable costs both for FTA and AZDOT. This helps us to prepare funding application budgets that will net the most funding possible for your transportation costs.

Step four is a means to identify costs per mile and per hour so that we can measure our program's performance and also know how to charge another organization or funding source for a ride without losing money. In this case, we want to use our True Cost Budget, not our FTA/AZDOT Budget. Keep in mind that if you are providing rides for organizations that pay you with FTA/AZDOT funds, only eligible and allowable expenses can be reimbursed. If that's the case, you may only charge based on what FTA/AZDOT allows. The purchaser can either use non-federal funds to pay the difference between what OMB allows and what FTA allows or you have to find another source of funding to cover those non-allowable costs.

Another consideration is Performance Measures. If we want our performance to be compared with other programs using FTA and AZDOT funds, we may wish to calculate our costs per mile and hour based on the FTA/AZDOT Transportation Budget that we made in Step three.

Example: Real or True cost budget will be higher than the FTA/AZDOT cost budget because FTA/AZDOT do not allow some costs to be included in their transportation budgets. It would also give your program a higher cost per mile and hour – both performance measures – when compared to other competing programs.

The bottom line is you may want to do both. One with the True Cost if you need to know how much to charge for rides provided to another organization and one with the FTA/AZDOT costs for application and state performance measure purposes.

With that in mind, let's move on to Step Three.

STEP THREE - Identifying eligible and allowable costs for FTA and AZDOT funding

Use the Step 3 worksheet included with this workbook to work through initial allocations. Use the electronic spreadsheet when you are ready to enter figures.

Go through each line item of your Transportation Budget and determine if the cost is eligible under the AZDOT and/or the FTA Guidelines.

Eligible Cost categories for Arizona's 5310 program can be found in Part II Appendix B of the [5310 Program and Application Guide](#).

If you find line items in your Transportation Budget that do not fit into one of ADOT's categories check Chapter VI (18) of the [FTA 5310 Program Guide Circular 9070.1G](#) to determine if it is an eligible cost.

2 CFR 200 Basic Cost Considerations (402) and General Provisions for Selected Items may also help clarify whether a cost is eligible. However, for 5310 funding purposes in Arizona, AZDOT policy, so long as it does not supersede FTA policy, is the final word.

If you are confused or want to make a case for a particular cost item, have your references in 9070.1G and 2CFR200 ready when you call AZDOT.

STEP FOUR – Variable and Fixed Costs determine cost per mile and cost per hour

Use the Step 4 Variable/Fixed worksheet included with this workbook to work through initial allocations. Use the electronic spreadsheet when you are ready to enter figures.

Variable costs are those that CHANGE with the amount of service provided. These expenses typically include driver wages, fuel costs, and maintenance costs. The more miles and hours of service provided by the transportation service, the greater the costs of that service.

Variable costs can be logically linked to either one of two service variables: hours or miles. For example, the number of vehicle hours is directly related to most of the operator labor costs because driver expense is a function of the amount of time that vehicles are in operation. The number of miles accounts for most maintenance labor and materials costs as well as the cost of fuel consumed and vehicle depreciation.

Fixed costs are those that DO NOT CHANGE according to the amount of service provided.

In most systems, this means that modest changes in the numbers of hours or miles of service will not result in corresponding changes to the fixed costs. Fixed costs typically include such items as administrative salaries and facility depreciation.

Fixed costs are the expense items that do not vary with the number of miles or hours of operation but, instead, **reflect the scale or size of the agency.** Examples include administration and building rents.

The total cost of providing transportation service equals the sum of all fixed and variable costs.

Data required to use this variable budget information

- Total miles driven in 1 year
- Total hours of operation for 1 year
- Total number of trips for 1 year

Trips are calculated as one for each time a rider boards a vehicle. I.e.

Passenger is picked up at home and driven to grocery store.

Passenger returns to vehicle and is driven to doctor's appointment.

Passenger returns to vehicle and is driven home.

= 3 trips.

Below is an abbreviated budget with variable and fixed costs. At the bottom you will find annual hours and miles along with an overhead rate.

If you are formulating a True Cost budget for internal use only and you only have one program, you can easily calculate performance measures as instructed below and variable costs may not be useful to you.

If you are formulating a True Cost budget for internal use, you have more than one program, and you want to know the proportionate share of transportation costs for each program, you will want to use the variable and fixed cost method.

If you are thinking about providing rides for another organization and will want to bill them for their proportionate share of transportation costs, again, you will want to use the variable and fixed cost method.

The sample budget below is not reminiscent of real transportation costs and should not be used as a comparison for your own program.

Using the definitions for variable costs and fixed costs on page 16 and the spreadsheet on the next page, determine how the total costs should be categorized: variable miles, variable hours or fixed.

Pencil in the numbers and total them at the bottom.

Now enter the following operating statistics in the appropriate column.

4,176 Hours per year

88,904 Miles per year

With the operating statistics, calculate the per unit cost of an hour and a mile using these formulas and place those numbers in the Unit cost cells.

- Total Variable cost per hour/the total annual hours = Unit cost per hour
 $\$47,862/4176 = \11.4613 per hour
- Total Variable cost per mile/the total annual miles = Unit cost per mile
 $\$64,576/88,904 = \0.7264 per mile

Using your totals for Fixed costs, vehicle Hours Costs and vehicle Miles Costs (totals not unit prices) calculate your Overhead rate using the following formula and place that in the Overhead rate cell.

- Fixed costs / (Vehicle Hours Cost + Vehicle Miles Cost) = Overhead Rate
 $\$63,831/(\$47,862 + \$64,576) = 56.77\%$ or
 $\$63,831/\$112,438 = 56.77\%$

Expense Account	Total Cost	Variable Costs		Fixed Costs
		Vehicle Hours	Vehicle Miles	
Vehicle Operations & Maintenance				
Labor				
Driver Salaries & Wages	42,048			
Dispatcher Salaries & Wages	5,738			
Mechanic Salaries & Wages				
Fringe Benefits				
Driver Fringe	5,814			
Dispatcher Fringe	954			
Mechanic Fringe				
Contract Maintenance Services	8,754			
Materials & Supplies				
Fuel & Lubricants	8,975			
Tires & Tubes	1,044			
Other Parts & Supplies	2,207			
Vehicle Licensing & Registration Fees	225			
Purchased Transportation	1,244			
Depreciation Passenger Vehicles	30,000			
Depreciation - Maintenance Facilities				
Insurance - Passenger Revenue Vehicles	12,352			
Leases & Rentals -Passenger Revenue Vehicles				
Lease or Rental Maintenance Facility				
General Administrative				
Labor				
Transportation Manager's Salary and Wages	18,000			
Director's Salaries & Wages	5,865			
Other Administrative Salaries & Wages	3,069			
Fringe Benefits				
Transportation Manager's Fringe Benefits	5,400			
Director's Fringe Benefits	1,760			
Other Administrative Fringe Benefits	921			
Professional & Technical Services	433			
Materials & Supplies	2,010			
Utilities	1,200			
Insurance (other than passenger revenue vehicles)	7,106			
Miscellaneous Expenses				
Dues & Subscriptions	152			
Travel & Meetings	1,500			
Leases & Rentals				
General Administrative Facilities	9,500			
Total Costs	176,270			
Annual Operating Statistics				
Unit Cost				
Overhead rate				

Expense Account	Total Cost	Variable Cost		Fixed Cost
		Vehicle Hours	Vehicle Miles	
Vehicle Operations & Maintenance				
Labor				
Driver Salaries & Wages	42,048	42,048		
Dispatcher Salaries & Wages	5,738			5,738
Mechanic Salaries & Wages	-		-	
Fringe Benefits				
Driver Fringe	5,814	5,814		
Dispatcher's Fringe	954			954
Mechanic Fringe	-		-	
Contract Maintenance Services	8,754		8,754	
Materials & Supplies				
Fuel & Lubricants	8,975		8,975	
Tires and Tubes	1,044		1,044	
Other Parts & Supplies	2,207		2,207	
Vehicle Licensing & Registration Fees	225			225
Purchased Transportation	1,244		1,244	
Depreciation--Passenger Revenue Vehicles	30,000		30,000	
Depreciation--Maintenance Facilities	-			-
Insurance--Passenger Revenue Vehicles	12,352		12,352	
Leases & Rentals--Passenger Revenue Vehicles	-		-	
Lease or Rental for Maintenance Facilities	-			-
General Administrative				
Labor				
Transportation Manager's Salaries & Wages	18,000			18,000
Director's Salaries & Wages	5,865			5,865
Other Administrative Salaries & Wages	3,069			3,069
Fringe Benefits				
Transportation Manager's Fringe Benefits	5,400			5,400
Director's Fringe Benefits	1,760			1,760
Other Administrative Fringe Benefits	921			921
Professional & Technical Services	433			433
Materials & Supplies	2,010			2,010
Utilities	1,200			1,200
Insurance (Other Than Passenger Revenue Vehicles)	7,106			7,106
Depreciation on Buildings & Equipment	-			-
Miscellaneous Expenses				
Dues & Subscriptions	152			152
Travel & Meetings	1,500			1,500
Leases and Rentals				
General Administration Facilities	9,500			9,500
TOTAL COSTS	\$ 176,270	\$ 47,862	\$ 64,576	\$ 63,831
Annual Operating Statistics		4,176	88,904	
Unit Cost		\$ 11.4613 per hour	\$ 0.7264 per mile	
Overhead Rate (Total Fixed Cost as a % of Total Variable Cost)		56.77%		

Using this model, you can calculate “costs per” or performance measures for your one-program organization:

Total Annual Cost = \$176,270

Total Annual Hours = 4,176 Cost per hour $176,270 / 4,176 = \$42.21$ per hour

Total Annual Miles = 88,904 Cost per mile $176,270 / 88,904 = \$ 1.98$ per mile

Total Annual Trips = 20,000 Cost per trip $176,270 / 20,000 = \$ 8.81$ per trip

Using the Unit cost rates and the overhead rate calculated in the budget, we can also calculate the cost of providing rides to other organizations or to programs within our own organization.

This requires that we determine how much of the total hours and miles each program uses then assign it a proportionate share of those costs along with the overhead rate.

So for instance:

If your Day Program annually used 40,000 miles and 2,000 hours of service

And your Group Home annually used 48,904 miles and 2,175 hours of service

How would you bill or allocate costs for the transportation each used?

Day Program	Program Inputs	Variable Inputs	Outputs	
	Operating Statistics	Unit Cost	Total Cost	
Hours	2,000	\$11.4613	\$ 22,922.60	Hours Cost (Unit Cost * Hours)
Miles	40,000	\$ 0.7264	\$ 29,056.00	Miles Cost (Unit Cost * Miles)
			\$ 51,978.60	Total Variable Cost (Hours Cost * Miles Cost)
Overhead Rate		56.77%	\$ 29,508.25	Fixed Cost (Total Variable Cost * Overhead Rate)
Total Cost To Program			\$ 81,486.85	Total Cost (Variable Cost + Fixed Cost)
Group Home	Program Inputs	Variable Inputs	Outputs	
	Operating Statistics	Unit Cost	Total Cost	
Hours	2,176	\$11.4613	\$ 24,939.79	Hours Cost (Unit Cost * Hours)
Miles	48,904	\$ 0.7264	\$ 35,523.87	Miles Cost (Unit Cost * Miles)
			\$ 60,463.65	Total Variable Cost (Hours Cost * Miles Cost)
Overhead Rate		56.77%	\$ 34,325.22	Fixed Cost (Total Variable Cost * Overhead Rate)
Total Cost To Program			\$ 94,788.87	Total Cost (Variable Cost + Fixed Cost)
Organizational Transit Costs			\$ 176,275.72	Check for rounding Differences

Should add up to total Transportation Budget

This same principal can be used to determine the cost of rides provided to another organization.

But beware – You will need to add in the anticipated costs of changing your service to your Transportation Budget so that the Cost per unit will reflect the additional miles and hours.

Or, you can create quarterly or monthly columns (depending on your billing cycle) for actual costs, miles and hours that allow you to bill for services during that period.

You must also account for the portion of miles and time you use for your own organization.

So, if you are providing rides for your own clients and two other organizations, you would have three proportionate shares to calculate using the same formulas above.

IN CLOSING.....

You may wish to work with ADOT staff to have your allocation strategies reviewed and approved.

You may decide that as an agency receiving more than one funding source, an indirect cost allocation plan approved by your cognizant agency would be worthwhile.

Get to know 2 CFR 200. It is the federal guide for financial cost accounting for non profits and local governments. Throw some tags or markers on sections that apply to you.

Get true costs by using the correct formulas for determining direct share. The appendices in 2 CFR 200 will help.

You may need to work on program strategies that maximize your use of capital costs and, thereby, capital funding. 9070.1 G III (14)

You may need to spend the time identifying the proportionate share of indirect costs that can be allowed as direct costs (2 CFR 200 Appendix 4 or, as allowed in 2 CFR 200.414). **Remember, you can allocate indirect costs as direct but your method has make sense and be used consistently in each of your programs.**

Or you might consider using an allowed 10% Indirect Cost rate for all federal grant purposes:

In addition to the procedures outlined in the appendices in paragraph (e) of this section, any non-Federal entity that has never received a negotiated indirect cost rate, except for those non-Federal entities described in Appendix VII to Part 200—States and Local Government and Indian Tribe Indirect Cost Proposals, paragraph D.1.b, may elect to charge a de minimis rate of 10% of modified total direct costs (MTDC) which may be used indefinitely. As described in §200.403 Factors affecting allowability of costs, costs must be consistently charged as either indirect or direct costs, but may not be double charged or inconsistently charged as both. If chosen, this methodology once elected must be used consistently for all Federal awards until such time as a non-Federal entity chooses to negotiate for a rate, which the non-Federal entity may apply to do at any time.

The [State of the Nonprofit Sector 2014 Survey](#), shows that 44% of Federal Government reimbursement rate of indirect costs to non-profits was for rates between 0 and 10%. An additional 34% was paid for rates between 10-15%.

If this is of interest to you, speak to your finance director and make an appointment with ADOT to make sure they will accept this form of indirect cost allocation.

Because Mobility Management is a Capital Expense, you may wish to pool your organization's underfunded or unmet needs with other organizations as Mobility Management projects: i.e. Card readers, insurance pool, training, shared administrative services (but not operations services) etc.

Full Cost Accounting is when all fixed and variable costs are used to establish a cost per unit. Full Cost Accounting takes time. But having spent it, you can gain so much knowledge and flexibility in how you deliver services. Consider asking for individual technical assistance from one of your organization's

fundings to help you create this dynamic budget and even establish an indirect cost rate with a federal agency.

The TCRP Report 144 comes with a CD that has fillable spreadsheets. While the budget line items aren't very detailed it may be of use to you. Order it from TCRP at www.tcrponline.org

Speaking of spreadsheets, the one that comes with this workshop has multiple pages – one for each step of the process. Be careful when you add lines to these or move things around as each page is tied to the previous page's entries. **CAUTION! Check all the formulas before finalizing your budget.**

Before you go!

Please take the time to fill out the post-workshop questionnaire and the evaluation.

These help us to know how the training can be improved and lets us provide additional technical assistance to you as you need it.