

Memorandum

Date: 2/11/19, Revised 8/23/19
To: David Haines
From: Kevin Sheahen
Subject: Pittsburgh BRT Basis of Cost Estimate

This memo provides a description of the methodology used to develop the Basis of Estimate for the Pittsburgh BRT Project 60%, 60% VE, 100%, & PS&E Design level capital cost estimates.

The 60% VE Design estimate update will assume two construction contracts (One for the Civil Alignment, a second for the East Liberty Garage and Wallace Charging Station).

Buses, Ticket Vending/Validator Equipment (TVM), real time signs, smart spine, and station shelter procurement will be by Port Authority (PAAC) and the City of Pittsburgh. The estimates will be in conformance with the latest revision of Federal Transit Administration's (FTA) Standard Cost Categories (SCC) format, which was last revised June 21, 2019.

Capital Cost Estimate Methodology

The quantities of work for each item of work will be taken-off from the design drawings by the design disciplines. Items of work will be specified in the technical specifications. Specifications Measurement and Payment sections will define the scope of work in each item. Items will be identified by their respective specification number.

The capital cost estimates for the project will be developed in a bottom-up process based upon the above described specification measurement and payment scope of work. Bottom-up estimates will include direct labor, equipment costs, material costs, and other related supplies. Where applicable, Pennsylvania Department of Transportation (PennDOT) pay items and their unit rates appropriate for the scope of work will be utilized. These estimates will be categorized according to Construction Specification Institute (CSI) specification sections. These pay items will correspond with the proposed contract Bid Item Breakdowns. The corresponding FTA SCC line items will be organized using these estimates and pay items to coordinate with the FTA SCC summary sheet.

The project capital costs components that will not be included in the proposed construction projects will be estimated and included in the project cost and reported with the project

updates. Examples of these cost components are the buses, the existing bus renovations, Right-of-Way, and the station shelters.

Contract bid items will be summarized by contract with the associated Engineers Estimate unit prices such that a comparison of the submitted bids can be readily prepared. Any discrepancies will be reviewed, and a discussion/explanation will be prepared.

General Contractor Mark-Ups

The estimates bottom-up calculation will not include the contractor mark-ups. These mark-ups will be added separately to create the pay item unit price. PennDOT item unit prices gathered from the ECMS system do include these contractor mark-ups. These indirect mark-up costs will include but may not be limited to: contractor overhead, general and administrative home office, bonds, insurance, taxes, profit, cost of capital, equipment depreciation, security, equipment maintenance, escalation, and any special considerations.

Sales Tax

Sales tax on material costs are included in the 60% VE cost estimate. Further research by PAAC/City of Pittsburgh will need to occur for project sales tax exemption opportunities.

Contingencies

In accordance with the FTA SCC, there will be two levels of contingencies; Allocated and Unallocated. The Allocated Contingency will be included for each SCC cost category to address risk, scope and quantity definition relative to the level of design. This allocated contingency amount is based on each of the estimate items per their respective costs and a level of certainty and judgment assigned contingency based on the estimate and design progress detail. For example, signage may have an allocated contingency of 5% versus 25% for the underground utility related work. Each SCC item total will be applied its specific allocated contingency and then the contingencies will be totaled for the total contingency as per the FTA SCC format. The contingency levels will generally decrease with design progression due to increased detail in the estimate as indicated in Appendix A. For example, Concrete Pavement (10.01) might decrease from 10% in the 60% Estimate to 5% in the progressive design estimates. The amount of contingency depends on the complexity of any particular item as well as the stage of engineering completion.

The unallocated contingency will be applied to the total project costs as per FTA SCC guidelines. This contingency is designed to represent the costs of changes in scope, uncertainty in the present design, including political events, labor strife, weather, variable commodity pricing, unfavorable market conditions, bid risk, changed conditions, etc. that occur during construction for all SCC line items.

The cost of vehicle purchases is a known value and has therefore received a 1% allocated contingency and has been excluded from unallocated contingency calculation.

Inflation

The Year of Expenditure is determined by applying an inflation rate to the base year capital cost. The base year will be 2019. For this project, the inflation rate of

3.0 percent is proposed to use based on recent “Construction Cost Index” (CCI) by Engineering News Record (ENR). This inflation rate will be included in the FTA SCC Inflation worksheet to calculate the project escalation. The current project schedule durations and the tentative project completion date of 2025 is the basis for this escalation calculation.

Value Engineering

The 60% VE Estimate submission is inclusive of the project’s selected value engineering items resulting from a Value Engineering report, as well as value engineering ideas developed by AECOM. For further details regarding the cost impact of each VE item, please refer to the Value Engineering memorandum.

DESCRIPTION OF STANDARD COST CATEGORIES

The capital cost estimates in the FTA format use the SCC guideway categories. These categories will include all of the foundational construction elements up to and including the pavement, bike lanes, line striping, curbs, etc.

1.1. Guideway (SCC 10.0)

Guideway elements are portions of the transit system that can be assigned costs at a fairly aggregate level with a certain level of accuracy. Guideway costs through the stations will be included in the Guideway category. Maintenance of Traffic and Sediment and Erosion costs will be included in the SCC 40.08 section. Generally, each of the guideway cost estimates includes work identified in the SCC Definitions.

2.1 Stations, Stops, Terminals, Intermodal (SCC 20.0)

The capital cost estimates in the FTA format will use one of the SCC sub-categories:

- At-Grade Platform
- Station sitework associated with parking, bus, kiss-and-ride and access will be included in 40.06 and 40.07. Generally, all the station cost estimates consist of the following:
 - Platforms
 - Site work, including excavation and foundations
 - Grading, borrow fill, and soil stabilization
 - Concrete footings, walls, platform slab and roof
 - Architectural finishes of all station elements; i.e., platform, canopies/weather protection
 - Allowance for signs, and other furnishings
 - Lighting, electrical, and CCTV estimates
 - Fare collection is in SCC 50.06
 - Parking lots and landscape is in SCC 40.06 and 40.07

2.2 Support Facilities; Yard, Shops, Administration Buildings (SCC 30.00)

This cost category will include site development, parking, storm water management; site excavation, landscaping, personnel facilities, vehicle storage and maintenance buildings,

charging systems, storage of bus vehicles, maintenance of way facilities, and shop equipment. Communications for the shop area will be included in this item.

This estimate will assume existing yards or shops are generally adequate for the expansion.

2.3 Sitework & Special Conditions (SCC 40.00)

The capital cost estimates in the FTA format use eight of the SCC sub-categories. Special conditions include items that cannot be adequately represented by a typical section because of complexity, uncertain alignment, special site conditions, or other unique circumstances. Special condition elements include:

- **Demolition, Clearing, Earthwork** - In the re-arrangement of individual cost elements from the categories of the FTA standard cost categories, some of these cost elements remain with guideways and station categories. This cost element will include the cost for the demolition of special features such as buildings (if not included as part of right-of-way), large structures (bridges or retaining walls), or other existing unusual features. Project clearing and grubbing not included in the stations, yard or the guideway is included in this item.
- **Site Utilities Utility Relocation** - One of the cost elements within this cost category will be the relocation of existing utilities within the guideway corridor. These relocations will include both public and private utilities, subject to any agreements that may apply to franchised utilities that exist within public rights-of-way. The power ductbanks and connections to each of the stations, will be included in this item. Stormwater Management costs are included in this category except for the Yard and Shop areas.

The current 60% VE estimate includes 10% of the estimated cost of utility replacement throughout the corridor as a risk mitigation approach.

- **Hazardous Material, Contaminated Soil Removal/Mitigation, and Ground Water Treatments** - Hazardous material, contaminated soil mitigation and ground water treatment costs will be in this section.
- **Environmental Mitigation, e.g. Wetlands, Historic/Archeological, Parks** - Special environmental mitigation costs, such as wetlands mitigation, noise or vibration control, and related items will be included in this category.
- **Site Structures Including Retaining Walls, Sound Walls** – Included with this category will be Retaining Walls, Sound Walls, etc. (except for sound walls incorporated into the guideway structures) - Major structures, such as retaining walls that are not included in the guideway, station or yard costs, will be included in this category.
- **Pedestrian/Bike Access and Accommodation, Landscaping** – This item includes landscaping and bike accommodations for this project.
- **Automobile, Bus, Van Accessways Including Roads, Parking Lots** – This item includes existing pavement removal/replacement/modification adjacent to the guideway and at the stations, new sidewalks, ADA ramps, existing curb tie-ins, etc.
- **Temporary Facilities and Other Indirect Costs During Construction** –

- The project will assume no overtime is required. Any overtime that may be required will be included as the schedule and costs are refined if necessary.
- This item includes the costs to relocate any parking area or other existing facilities not included in the Right-of-Way (ROW) cost category to allow construction of the project.
- Indirect costs not included in the pay item unit prices including mobilization & demobilization, on-site contractor project management, construction support, and construction support staff. These costs will be based on project duration and crew-based costs.
- Profit is included in their respective SCC line items.
- Maintenance and Protection of Traffic (MPT) will be included in this item.

2.4 Systems (SCC 50.00)

The capital cost estimates in the FTA format use the SCC system sub-categories. These categories are:

2.4.1 Communications

The communications system provides the necessary subsystems to support the total operational requirements of the BRT Corridor. The communications system costs will provide for the following subsystems and/or functions:

- Supervisory and control and data acquisition subsystems (SCADA) to enable the remote monitoring and control of vehicle/train operations, and station support facilities from Pitt Tower.
- Communications subsystems consisting of two-way radio, public address (PA), closed circuit television (CCTV) surveillance equipment, PABX (digital switch) telephone equipment, and variable message signs (VMS) and as specified in the preliminary design
- Interface to the fare collection and ticket vending equipment
- Equipment for the hearing-impaired, reader boards, and associated wiring, as well as an allowance for testing, training, and startup will be included in the unit costs for the communications elements.

2.4.2 Revenue Collection

Costs for elements in this category cover the fare collection equipment at the BRT Corridor stations. Collection equipment costs will be based on PAAC fare collection equipment and upgrades. The number of fare collection units at each station will be based on the projected passenger volumes during peak hours. The unit cost for fare collection will include all equipment costs, and installation costs. The hardware will include provisions for fare vending facilities and access for the physically handicapped. The unit costs will include an allowance for testing, training, and startup for the contractor personnel.

No future ridership expansion fare collection costs will be included in this estimate.

2.4.3 Central Control

This includes an interface with the existing Pitt Tower Control Center. This interface includes integration of the new communications into the existing operations, and testing the BRT system.

2.5 Right-of-Way, Land, Existing Improvements (SCC 60.00)

This cost category covers all land acquisition and acquisition-related costs required to obtain various real property needed for the construction, operation, and maintenance of the different alignments.

The right-of-way costs will include the fee acquisition of permanent and temporary easements, relocation costs, legal fees, business damages and other miscellaneous costs. Right-of-way cost estimates will be based on present evaluations or negotiations or if necessary, average local per acre value with factors for the above costs of the properties being considered.

2.6 Vehicles (SCC 70.00)

The costs for revenue vehicles (buses and bus modifications) will include soft costs, spare parts, shipping / delivery and testing by the supplier. Non-revenue vehicles (where non-revenue vehicles include maintenance-of-way vehicles, as well as agency trucks and automobiles) will include highway maintenance vehicles and maintenance personnel vehicles will be assumed to be existing for this estimate.

This item also will include spare parts, special tools and training for the vehicles, stations, and for the systems during the testing period. Spare parts for use beyond the Revenue Service Date are not included.

PAAC current operational plans include (15) new electric buses (cost difference between electric bus and 40' diesel bus), (35) 60' diesel articulated buses (cost difference between 60' diesel and 40' diesel), (16) rebranded 60' diesel articulated buses, and the cost of (4) fewer 40' diesel buses required.

2.7 Professional Services (SCC 80.0)

The soft costs in the FTA format use ten of the SCC sub-categories. These allowances are computed by applying a percentage to the total construction cost estimated for each cost category (excluding right-of-way and vehicles) or as otherwise described. Table 2-1 provides a list of the percentage multipliers that will be applied to the total construction costs to cover these items:

Table 2-1: Professional Services Percentages

Soft Costs	Percentage of FTA SCC Construction Subtotal (10-50)
Project Development (Includes Design Costs & Designer Construction Phase Services)	Actual Costs (LS) (18.31%)
Engineering	0.00% (not applicable to small starts)
Project Management for Force Account and Administration	2.00%
Construction Administration & Management (Includes City of Pittsburgh Inspectors & Project Manager)	8.00%
Professional Liability and other non-Construction Insurance	0.50%
Legal; Permits; Review Fees by other agencies, cities, etc.	0.50%
Surveys, Testing, Investigation, Inspection	0.50%
Start-up* (Safety Certification and Activation)	0.50%
TOTAL Soft Costs	30%

*Includes only the training and start-up for the agency personnel. Contractor related costs are included in their respective line item estimates.

Soft cost categories include the following:

- **Project Development** – This cost will include preliminary engineering up to final funding.
- **Engineering** – This cost will include final design including design services during construction. (not applicable to small starts)
- **Project Management for Design and Construction** - An estimated Professional Services percentage will be used for PAAC/City of Pittsburgh PM staff for administration and force account work.
- **Construction Administration & Management** - This sub-category will cover the costs of construction administration of the following:
 - Consultant that provides construction management services (CM/CEI)

- **Professional Liability and Other Non-Construction Insurance** - Project insurance includes all premium costs to provide “wrap-up” insurance coverage through a Contractor Controlled Insurance Program (CCIP). This category will include professional liability, comprehensive general liability, builder’s risk, worker’s compensation and employer’s liability, construction equipment loss or damage, and automobile insurance.
- **Legal; Permits; Review Fees by Other Agencies, Cities, etc.** – Includes legal fees (except real estate legal fees), permitting fees, and review fees by other entities.
- **Surveys, Testing, Investigation, Inspection** – This item includes independent testing, third party surveying during construction to confirm progressed work, investigations of contractor claims or differing site conditions, and special inspections required by PAAC/City of Pittsburgh, or the local building authorities.
- **Start-Up** - This sub-category will include the costs in training transit personnel and testing of the new systems. This includes safety certification and activation.

APPENDIX A – FTA CONTINGENCY GUIDELINES

Estimate Stage	Probable Accuracy ¹	Design Stage	Purpose	Information Available	Estimate Methods	Contingency Guideline
Order of Magnitude (conceptual)	50% - 30%	Preliminary	Evaluation of projects or alternatives	100-scale alignment, facility descriptions, sketches, study reports	<i>Parametric</i> – Cost of a similar facility is adjusted to represent the new facility. Includes costing by SF, LF, or CF. <i>Model</i> – A typical design is used to develop quantities and costs for elements.	20% or higher
Preliminary (budget)	15% - 30%	Preliminary Design Report (25%)	Establish Control Budget	40-scale alignment, facility descriptions, sketches, study reports, cross sections, profiles, elevations, geotechnical data, staging plans, schedule, definition of temporary work	Quantity development of major commodities, pricing by database, manuals, quotes, bid results, or experience which may be adjusted for the conditions of the specific package. Rough estimates or allowances developed for immeasurable items.	10% - 20%
Definitive	15% - 5%	75% to 100% complete	Detailed Control Budget, Cost Control, and Reporting	Progress Plans and Specifications, working construction schedule	Takeoff of quantities from plans, representative pricing by database, manuals, quotes, bid results, or experience adjusted for the conditions of the specific package. Crewed approach to labor and equipment, percent approach to general conditions, overhead and profit, contingency, and escalation. Some allowances carried for immeasurable items.	5% - 15%
Detailed (engineer's estimate)	± 5%	PS&E	Check Estimate for Bids, Commit Funds	Complete Plans and Specifications for Bidding, Detailed Construction Schedule, Contract Terms and Conditions	Detailed takeoff of all measurable items, detailed review of specifications, detailed pricing including price quotes, crewed approach to labor and equipment, detailed estimate of general conditions, overhead & profit, and escalation. Consideration of construction schedule, work restrictions, shift requirements, and risk.	0% - 10%

¹ Probable Accuracy as stated by the Association for the Advancement of Cost Engineering International (AACE)

APPENDIX B – FTA SCC Definitions

Standard Cost Categories for Capital Projects DEFINITIONS		NOTE: The SCC cost breakdown is based on a traditional Design Bid Build model. If your project is Design Build, to the best of your ability, separate construction costs from design, administration, testing, etc. Put all construction costs in 10 through 50. Put design, administration, testing, etc. in <i>80 Professional Services</i> .
(Rev.18, May, 2016)		
10 GUIDEWAY & TRACK ELEMENTS (route miles)		<p>Include guideway and track costs for all transit modes (heavy rail, light rail, commuter rail, BRT, rapid bus, bus, monorail, cable car, etc.) The unit of measure is route miles of guideway, regardless of width. As associated with the guideway, include costs for rough grading, excavation, and concrete base for guideway where applicable. Include all construction materials and labor regardless of whom is performing the work.</p> <p>In your written description of the scope, and in supporting graphic diagrams, indicate whether busway or rail track is single, double, triple, relocated, etc. Put guideway and track elements associated with yards in <i>30 Support Facilities</i> below.</p>
10.01	Guideway: At-grade exclusive right-of-way	
10.02	Guideway: At-grade semi-exclusive (allows cross-traffic)	
10.03	Guideway: At-grade in mixed traffic	
10.04	Guideway: Aerial structure	Include foundation excavation; guideway structures including caissons, columns, bridges, viaducts, cross-overs, fly-overs.
10.05	Guideway: Built-up fill	Include construction of earthen berms.
10.06	Guideway: Underground cut & cover	Include excavation, retaining walls, backfill, underground guideway structure and finishes.
10.07	Guideway: Underground tunnel	Include tunneling by means of a tunnel boring machine, drill blasting, mining, and immersed tube tunneling; tunnel structure and finishes.
10.08	Guideway: Retained cut or fill	Include excavation, retaining walls, backfill, underground guideway structure and finishes.
10.09	Track: Direct fixation	Include rails, connectors.
10.10	Track: Embedded	Include rails, ties; ballast where applicable
10.11	Track: Ballasted	Include rails, ties and ballast.
10.12	Track: Special (switches, turnouts)	Include transitional curves.
10.13	Track: Vibration and noise dampening	Include upcharge for vib/noise dampening to any track condition above.
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)		<p>As associated with stations, include costs for rough grading, excavation, station structures, enclosures, finishes, equipment; mechanical and electrical components including HVAC, ventilation shafts and equipment, station power, lighting, public address/customer information system, safety systems such as fire detection and prevention, security surveillance, access control, life safety systems, etc. Include all construction materials and labor regardless of whom is performing the work.</p> <p>NOTE: Count paired inbound/outbound boarding platforms as one station - do not report the total number of boarding platforms.</p> <p>Put guideway and track associated with stations in <i>10 Guideway & Track Elements</i> above.</p>
20.01	At-grade station, stop, shelter, mall, terminal, platform	
20.02	Aerial station, stop, shelter, mall, terminal, platform	Include station structures including caissons, columns, platforms, superstructures, etc.
20.03	Underground station, stop, shelter, mall, terminal, platform	Include retaining walls, backfill, structure.
20.04	Other stations, landings, terminals: Intermodal, ferry, trolley, etc.	
20.05	Joint development	Per FTA's Joint Development Guidance, "Joint development is any income-producing activity with a transit nexus related to a real estate asset in which FTA has an interest. ...Joint development projects are commercial, residential, industrial, or mixed-use developments that are induced by or enhance the effectiveness of transit projects. . ."
20.06	Automobile parking multi-story structure	Include retaining walls, backfill, structure.
20.07	Elevators, escalators	
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS		<p>As associated with support facilities, include costs for rough grading, excavation, support structures, enclosures, finishes, equipment; mechanical and electrical components including HVAC, ventilation shafts and equipment, facility power, lighting, public address system, safety systems such as fire detection and prevention, security surveillance, access control, life safety systems, etc. Include fueling stations. Include all construction materials and labor regardless of whom is performing the work.</p> <p>Where a support facility shares the structure with a station, its cost may be included with station cost. Identify this with a note.</p> <p>Except for guideway and track associated with a yard, include all guideway and track costs associated with support facilities in <i>10 Guideway & Track Elements</i> above.</p>
30.01	Administration Building: Office, sales, storage, revenue counting	
30.02	Light Maintenance Facility	Include service, inspection, and storage facilities and equipment.
30.03	Heavy Maintenance Facility	Include heavy maintenance and overhaul facilities and equipment.
30.04	Storage or Maintenance of Way Building	
30.05	Yard and Yard Track	Include yard construction, guideway and track associated with yard.

40 SITEWORK & SPECIAL CONDITIONS		Include all construction materials and labor regardless of whom is performing the work.
40.01	Demolition, Clearing, Earthwork	Include project-wide clearing, demolition and fine grading.
40.02	Site Utilities, Utility Relocation	Include all site utilities - storm, sewer, water, gas, electric.
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments	Include underground storage tanks, fuel tanks, other hazardous materials and treatments, etc.
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	Include other environmental mitigation not listed.
40.05	Site structures including retaining walls, sound walls	
40.06	Pedestrian / bike access and accommodation, landscaping	Include sidewalks, paths, plazas, functional landscaping, site and station furniture, site lighting, signage, bike facilities, permanent fencing.
40.07	Automobile, bus, van accessways including roads, parking lots	Include all on-grade paving.
40.08	Temporary Facilities and other indirect costs during construction	As a general rule and to the extent possible, appropriately allocate indirect costs among the construction costs in Categories 10 through 50. Where that is not possible, include in 40.08 <i>Temporary Facilities</i> costs for mobilization, demobilization, phasing; time and temporary construction associated with weather (heat, rain, freezing, etc.); temporary power and facilities; temporary construction, easements, and barriers for storm water pollution prevention, temporary access and to mitigate construction impacts; project and construction supervision; general conditions, overhead, profit. NOTE: Include contractor's general liability and other insurance related to construction such as builder's risk in Cats. 10 - 50, not in 80 Professional Services below.
50 SYSTEMS		Include all construction materials and labor regardless of whom is performing the work.
50.01	Train control and signals	
50.02	Traffic signals and crossing protection	Include signal prioritization at intersections.
50.03	Traction power supply: substations	
50.04	Traction power distribution: catenary and third rail	
50.05	Communications	Include passenger information systems at stations and on vehicles (real time travel information; static maps and schedules). Include equipment to allow communications among vehicles and with central control.
50.06	Fare collection system and equipment	Include fare sales and swipe machines, fare counting equipment.
50.07	Central Control	
Construction Subtotal (10 - 50)		
60 ROW, LAND, EXISTING IMPROVEMENTS		Include professional services associated with the real estate component of the project. These costs may include agency staff oversight and administration, real estate and relocation consultants, legal counsel, court expenses, insurance, etc.
60.01	Purchase or lease of real estate	If the value of right-of-way, land, and existing improvements is to be used as local match to the Federal funding of the project, include the total cost on this line item. In backup documentation, separate cost for land from cost for improvements. Identify whether items are leased, purchased or acquired through payment or for free. Include the costs for permanent surface and subsurface easements, trackage rights, etc.
60.02	Relocation of existing households and businesses	In compliance with Uniform Relocation Act.
70 VEHICLES (number)		Include professional services associated with the vehicle component of the project. These costs may include agency staff oversight and administration, vehicle consultants, design and manufacturing contractors, legal counsel, warranty and insurance costs, etc.
70.01	Light Rail	Include light rail and streetcar rail using electric, diesel or other power supply.
70.02	Heavy Rail	
70.03	Commuter Rail	Include locomotives (diesel, electric, or other), trailer cars, self-propelled multiple units (EMU electric or DMU diesel, or other power supply)
70.04	Bus	Includes "rubber-tired" buses and trolleys including new, used, historic replica, articulated, using electric, diesel, dual-power, or other power supply.
70.05	Other	Include Vans, Sedan/Station Wagon, Cable Car, People Mover, Monorail, Car/Inclined Railway, Ferry Boat, Transferred Vehicle
70.06	Non-revenue vehicles	
70.07	Spare parts	

80 PROFESSIONAL SERVICES (applies to Cats. 10-50)		Cat. 80 applies to Cats. 10-50. Cat. 80 includes all professional, technical and management services related to the design and construction of fixed infrastructure (Cats. 10 - 50) during the project development, engineering, and construction phases of the project. This includes environmental work, design, engineering and architectural services; specialty services such as safety or security analyses; value engineering, risk assessment, cost estimating, scheduling, Before and After studies, ridership modeling and analyses, auditing, legal services, administration and management, etc. by agency staff or outside consultants.
80.01	Project Development	
80.02	Engineering	
80.03	Project Management for Design and Construction	
80.04	Construction Administration & Management	Include professional liability insurance and other non-construction insurance on 80.05 unless insurance for the agency and its consultants is already included in other lines.
80.05	Professional Liability and other Non-Construction Insurance	Include costs associated with professional services related to real estate and vehicles in Cats. 60 and 70.
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.	<i>(Note that costs for planning activities and NEPA work done before FTA approval to enter project development (PD), <u>regardless of funding source</u>, are not included in an FFGA and therefore, should not be included in the Standard Cost Category worksheets. For example, on one and the same grant, costs incurred prior to FTA approval to enter PD should be omitted from these worksheets whereas costs incurred after FTA approval to enter PD should be included.)</i>
80.07	Surveys, Testing, Investigation, Inspection	
80.08	Start up	Include start up and training. Include in Cats. 10 - 50 above access and protection work by agency staff or outside contractors.
Subtotal (10 - 80)		
90 UNALLOCATED CONTINGENCY		Includes unallocated contingency, project reserves. Document allocated contingencies for individual line items on the BUILD Main worksheet.
Subtotal (10 - 90)		
100 FINANCE CHARGES		<p>Include finance charges expected to be paid by the project sponsor/grantee prior to either the completion of the project or the fulfillment of the New Starts funding commitment, whichever occurs later in time. Finance charges incurred after this date should not be included in Total Project Cost. (See FFGA Circular FTA C5200.1A Chapter III for additional information.)</p> <p>Derive finance charges from the New Starts project's financial plan, based on an analysis of the sources and uses of funds. The amount and type of debt financing required and revenues available determine the finance charges. By year, compute finance charges in year-of-expenditure (YOE) dollars. On the Inflation worksheet enter the finance charges for the appropriate years.</p>
Total Project Cost (10 - 100)		