

<p>FRA Standard Cost Categories for Capital Projects What to include where...</p>	<p>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 80 Professional Services.</p>
<p>10</p>	<p>Guideway & Track Elements Include rough grading, excavation, finish grading, ballast, concrete base when applicable, drainage structures, rails, connectors, transitional curves, ties, vibration and noise dampening; all construction materials and labor regardless of whom is performing the work; put guideway and track elements associated with yards in SCC 30 Support Facilities;</p> <p>For Aerial structures, include foundation excavation; guideway structures including caissons, columns, bridges, viaducts, cross-overs, fly-overs. For Built-up Fill, include construction of earthen berms. For Underground cut & cover, include excavation, retaining walls, backfill, underground guideway structure and finishes. For Underground tunnel, include tunneling by means of a tunnel boring machine, drill blasting, mining, and immersed tube tunneling; tunnel structure and finishes. For Retained cut or fill, include excavation, retaining walls, backfill, underground guideway structure and finishes.</p>

<p>20</p>	<p>Stations, Stops, Terminals, Intermodels</p> <p>Include 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; put guideway and track associated with stations in SCC 10 Guideway & Track Elements above.</p> <p>For Aerial structures, include station structures including caissons, columns, platforms, superstructures, etc. For Underground stations, include retaining walls, backfill, structure.</p> <p>For Joint Development -- describe in the aspect of your project that is income-producing with a transportation nexus related to a real estate asset in which FRA has an interest. . .Joint development is commercial, residential, industrial, or mixed-use development that enhances the effectiveness of transportation projects.</p>
<p>30</p>	<p>Support Facilities: Yards, Shops, Admin. Bldgs</p> <p>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. Where a support facility shares the structure with a station, its cost may be included with station cost. Except for guideway and track associated with a yard, include all guideway and track costs associated with support facilities in SCC 10 Guideway & Track Elements above.</p>

<p>40</p>	<p>Sitework & Special Conditions</p> <p>Include all construction materials and labor regardless of whom is performing the work; include project-wide clearing, demolition, fine grading; site utilities. For haz mat, include underground storage tanks, fuel tanks, other hazardous materials and treatments, etc.</p> <p>For 40.060, Pedestrian / bike . . . include sidewalks, paths, plazas, landscape, site and station furniture, site lighting, signage, public artwork, bike facilities, permanent fencing.</p> <p>For 40.080, Temporary Facilities . . .</p> <ul style="list-style-type: none"> - 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 Temporary Facilities 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. - For 40.084, Maintenance of Traffic. . . include costs to successfully handle the complexity of construction within an existing operating railroad environment, including the reroute, shutdown, reschedule, stage, phase, worker-protect, and work-around existing rail traffic; also cost of agreements with and/or compensation to impacted freight or passenger train owners and other third parties. <p>NOTE: Include contractor's general liability and other insurance related to construction such as builder's risk in Cats. 10 - 50, not in SCC 80 Professional Services.</p>
<p>50</p>	<p>Systems</p> <p>Include all construction materials and labor regardless of whom is performing the work. 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.</p>

60	Row, Land, Existing Improvements Include real estate costs and professional services costs associated with real estate. Such professional services costs may include agency staff oversight and administration, real estate and relocation consultants, legal counsel, court expenses, insurance, etc. 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 it as a cost.
70	Vehicles 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.

<p>80</p>	<p>Professional Services</p> <p>These costs apply to SCC 10-50. SCC 80 includes all professional, technical and management services related to the design and construction of fixed infrastructure (SCC 10 - 50) during the planning, preliminary engineering, final design, construction, and start-up phases of the project. This includes planning, environmental work, design, engineering and architectural services; specialty services such as safety or security analyses; value engineering, risk assessment, cost estimating, scheduling, ridership forecasting, operations modeling, before-and-after data gathering and analysis, auditing, legal services, administration and management, etc. by agency staff or outside consultants.</p> <p>Include professional liability insurance and other non-construction insurance on SCC 80.05.</p> <p>Include costs associated with professional services related to real estate and vehicles in SCC 60 and SCC 70 respectively.</p>
<p>90</p>	<p>Unallocated Contingency</p> <p>Includes unallocated contingency, project reserves. Show allocated contingencies for individual line items on the Main Worksheet.</p>
<p>100</p>	<p>Finance Charges</p> <p>Include finance charges expected to be paid by the Grantee to fund the project.</p>

FRA MAIN WORKSHEET										Issue Date 5/4/16
Grantee Name				Today's Date						8/28/14
Project Name and Location: Rail Project A, Two cities with rural in-between				Yr of Base Year \$						2014
Current Phase : Final Design, Ready to Procure Construction				Yr of Revenue Ops						2017
Standard Cost Category	Unit	Quantity	Base Year Dollars						YOE Dollars Total (X000) (from Inflation Worksheet)	
			Without Contingency (X000)	Allocated Contingency (X000)	TOTAL (X000)	Unit Cost (X000)	Percent of Construction Cost	Percent of Total Project Cost		
10	Guideway & Track Elements	Lineal Miles of Guideway	105	1,520,000	140,000	1,660,000	15,810	69%	52%	1,718,100
10.010	Guideway: At-grade exclusive right-of-way	Lineal Miles of Guideway	100	550,000	50,000	600,000	6,000			
10.020	Guideway: At-grade semi-exclusive (allows cross-traffic)	Lineal Miles of Guideway		0		0				
10.030	Guideway: At-grade in mixed traffic	Lineal Miles of Guideway		0		0				
10.040	Guideway: Aerial structure	Lineal Miles of Guideway		0		0				
10.041	Bridges	Lineal Miles of Guideway		0		0				
10.042	Viaduct	Lineal Miles of Guideway		0		0				
10.043	Other Structure	Lineal Miles of Guideway		0		0				
10.044	Unspecified	Lineal Miles of Guideway		0		0				
10.050	Guideway: Built-up fill	Lineal Miles of Guideway		0		0				
10.060	Guideway: Underground cut & cover	Lineal Miles of Guideway		0		0				
10.061	Cut & Cover Guideway Soft Soils	Lineal Miles of Guideway		0		0				
10.062	Cut & Cover Guideway Hard Soils	Lineal Miles of Guideway		0		0				
10.063	Cut & Cover Guideway Vent Soft Soils	Lineal Miles of Guideway		0		0				
10.064	Cut & Cover Guideway Vent Hard Soils	Lineal Miles of Guideway		0		0				
10.065	Unspecified	Lineal Miles of Guideway		0		0				
10.070	Guideway: Underground tunnel	Lineal Miles of Guideway	5	550,000	50,000	600,000	120,000			
10.071	Bored Earth Open	Lineal Miles of Guideway		0		0				
10.072	Bored Earth Close	Lineal Miles of Guideway		0		0				
10.073	Bored Earth Mixed Shield	Lineal Miles of Guideway		0		0				
10.074	Bored Earth Mixed Shield SEM	Lineal Miles of Guideway		0		0				
10.075	Rock Drill & Blast	Lineal Miles of Guideway		0		0				
10.076	Rock Boring Machine	Lineal Miles of Guideway		0		0				
10.077	Sunken Tunnel	Lineal Miles of Guideway		0		0				
10.078	Unspecified	Lineal Miles of Guideway		0		0				
10.080	Guideway: Retained cut or fill	Lineal Miles of Guideway		0		0				
10.090	Track: Direct fixation	Track Miles		0		0				
10.100	Track: Embedded	Track Miles		0		0				
10.110	Track: Ballasted	Track Miles	210	420,000	40,000	460,000	2,190			
10.120	Track: Special (switches, turnouts)	Track Miles		0	0	0				
10.130	Track: Vibration & Noise Dampening	Track Miles		0		0				
10.140	Special Structures	Lineal Miles of Guideway		0	0	0				
20	Stations, Stops, Terminals, Intermodels	Stations	4	131,000	14,000	145,000	36,250	6%	5%	150,075
20.010	At-Grade Station, Stop, Shelter, Mall, Terminal, Platform	Stations	3	41,000	5,000	46,000	15,333			
20.020	Aerial station, stop, shelter, mall, terminal, platform	Stations		0		0				
20.030	Underground station, stop, shelter, mall, terminal, platform	Stations	1	90,000	9,000	99,000	99,000			
20.031	Cut and Cover	Stations		0		0				
20.032	Bored Earth Soft Soils	Stations		0		0				

20.033	Bored Rock Hard Soils	Stations		0		0				
20.034	Unspecified	Stations		0		0				
20.040	Major stations, landings, terminals: Intermodal, ferry, trolley, etc	Stations		0		0				
20.050	Joint development	Stations		0		0				
20.060	Automobile parking multi-story structure	Spaces		0		0				
20.070	Elevators, escalators	Number		0		0				
20.071	Elevators	Number		0		0				
20.072	Escalators	Number		0		0				
20.073	Unspecified	Number		0		0				
20.080	Passenger Overpass	Number		0		0				
20.090	Underground Interconnecting Tunnel	Number		0		0				
20.091	Cut and Cover	Number		0		0				
20.092	Bored Earth Soft Soils	Number		0		0				
20.093	Bored Rock Hard Soils	Number		0		0				
20.094	Unspecified	Number		0		0				
20.100	Signage and Graphics	Number		0		0				
30	Support Facilities: Yards, Shops, Admin. Bldgs	Number	2	35,000	7,000	42,000	21,000	2%	1%	43,470
30.010	Administration Building: Office, sales, storage, revenue counting	Number	1	5,000	1,000	6,000	6,000			
30.011	Administrative Building	Number		0	0	0				
30.012	Central Control Facility	Number		0	0	0				
30.013	Central Revenue Counting Facility	Number		0	0	0				
30.014	Unspecified	Number		0	0	0				
30.020	Light Maintenance Facility	Number	1	30,000	6,000	36,000	36,000			
30.030	Heavy Maintenance Facility	Number		0	0	0				
30.040	Storage or Maintenance of Way Building	Number		0	0	0				
30.050	Yard and Yard Track	Number		0	0	0				
40	Sitework & Special Conditions	Lineal Miles of Guideway	105	295,000	31,000	326,000	3,105	14%	10%	337,410
40.010	Demolition, Clearing, Earthwork	Lineal Miles of Guideway	105	25,000	2,000	27,000	257			
40.020	Site Utilities, Utility Relocation	Lineal Miles of Guideway	105	200,000	20,000	220,000	2,095			
40.021	Urban Replacement In-Kind Public Utilities	Lineal Miles of Guideway		0	0	0				
40.022	Urban Replacement In-Kind Private Utilities	Lineal Miles of Guideway		0	0	0				
40.023	Urban Replacement Betterment Public Utilities	Lineal Miles of Guideway		0	0	0				
40.024	Urban Replacement Betterment Private Utilities	Lineal Miles of Guideway		0	0	0				
40.025	Suburban Replacement In-Kind Public Utilities	Lineal Miles of Guideway		0	0	0				
40.026	Suburban Replacement In-Kind Private Utilities	Lineal Miles of Guideway		0	0	0				
40.027	Suburban Replacement Betterment Public Utilities	Lineal Miles of Guideway		0	0	0				
40.028	Suburban Replacement Betterment Private Utilities	Lineal Miles of Guideway		0	0	0				
40.029	Unspecified	Lineal Miles of Guideway		0	0	0				
40.030	Haz. mat'l, contam'd soil removal/mitigation, ground water treatm	Lineal Miles of Guideway		0	0	0				
40.031	HazMat Abatement	Lineal Miles of Guideway		0	0	0				
40.032	Contaminated Soil Removal	Lineal Miles of Guideway		0	0	0				
40.033	Ground Water Treatment	Lineal Miles of Guideway		0	0	0				
40.034	Unspecified	Lineal Miles of Guideway		0	0	0				
40.040	Environmental mitigation, e.g. wetlands, historic/archeologic, pa	Lineal Miles of Guideway		0	0	0				
40.050	Site structures including retaining walls, sound walls	Lineal Miles of Guideway		30,000	3,000	33,000				
40.051	Mechanically Stabilized Earth Walls	Lineal Miles of Guideway		0	0	0				
40.052	Concrete Walls	Lineal Miles of Guideway		0	0	0				
40.053	Other Walls	Lineal Miles of Guideway		0	0	0				
40.054	Unspecified	Lineal Miles of Guideway		0	0	0				
40.060	Pedestrian / bike access and accommodation, landscaping	Lineal Miles of Guideway		0	0	0				
40.070	Automobile, bus, van accessways including roads, parking lots	Spaces		0	0	0				

40.071	Surface Parking Lot	Spaces	1,000	10,000	1,000	11,000	11			
40.072	Auto Access	Stations		0	0	0				
40.073	Bus Access	Spaces		0	0	0				
40.074	Bus Parking and Berthing	Spaces		0	0	0				
40.075	Unspecified	Spaces		0	0	0				
40.080	Temporary Facilities and other indirect costs during construction	Lineal Miles of Guideway			0	0				
40.081	Roadway Changes	Lineal Miles of Guideway		0	0	0				
40.082	Third-Party Work	Lineal Miles of Guideway		0	0	0				
40.083	Mobilization	Lineal Miles of Guideway		0	0	0				
40.084	Maintenance of Traffic (Railroad reroute, shutdown, reschedule, stage, phase, worker-protect, work-around)	Lineal Miles of Guideway		30,000	5,000	35,000				
40.085	Unallocated Indirect Costs	Lineal Miles of Guideway		0	0	0				
40.086	Unspecified	Lineal Miles of Guideway		0	0	0				

50	Systems	Track Miles	105	216,500	21,030	237,530	2,262	10%	7%	245,844
50.010	Train control and signals	Track Miles	105	160,000	16,000	176,000	1,676			
50.011	Train Control - Wayside	Track Miles		0	0	0				
50.012	Train Control - On Board Systems	Track Miles		0	0	0				
50.013	Train Control - Centralized Systems	Track Miles		0	0	0				
50.014	Unspecified	Track Miles		0	0	0				
50.020	Traffic signals and crossing protection	Track Miles		20,000	2,000	22,000				
50.030	Traction power supply: substations	Track Miles		0	0	0				
50.040	Traction power distribution: catenary and third rail	Track Miles		0	0	0				
50.041	Catenary	Track Miles		0	0	0				
50.042	Third Rail	Track Miles		0	0	0				
50.043	Power Distribution and Connections	Track Miles		0	0	0				
50.044	Unspecified	Track Miles		0	0	0				
50.050	Communications	Lineal Miles of Guideway	105	30,000	3,000	33,000	314			
50.051	Wired	Lineal Miles of Guideway		0	0	0				
50.052	Radio Based	Lineal Miles of Guideway		0	0	0				
50.053	Unspecified	Lineal Miles of Guideway		0	0	0				
50.060	Fare collection system and equipment	Stations		500	30	530				
50.061	Central Revenue Counting Systems	Stations		0	0	0				
50.062	Revenue Collection - In Station	Stations		0	0	0				
50.063	Revenue Collection - On Vehicle	Vehicles		0	0	0				
50.064	Unspecified	Stations		0	0	0				
50.070	Central Control System	Lineal Miles of Guideway		6,000	0	6,000				
51	Construction Subtotal (10-50)	Lineal Miles of Guideway	105	2,197,500	213,030	2,410,530	78,426	100%	76%	2,474,899
60	Row, Land, Existing Improvements	Lineal Miles of Guideway		130,000	13,000	143,000			4%	148,005
60.010	Purchase or lease of real estate	Lineal Miles of Guideway		120,000	12,000	132,000				
60.011	Full Takes	Lineal Miles of Guideway		0		0				
60.012	Part Takes	Lineal Miles of Guideway		0		0				
60.013	Easement Acquisitions	Lineal Miles of Guideway		0		0				
60.014	Other Rights	Lineal Miles of Guideway		0		0				
60.015	Donated Value	Lineal Miles of Guideway		0		0				
60.016	Unspecified	Lineal Miles of Guideway		0		0				
60.020	Relocation of existing households and businesses	Lineal Miles of Guideway		10,000	1,000	11,000				
60.021	Residential (Owners)	Lineal Miles of Guideway		0		0				
60.022	Residential (Tenants)	Lineal Miles of Guideway		0		0				
60.023	Business (Owners and Tenants)	Lineal Miles of Guideway		0		0				
60.024	Others (Personal Property Moves)	Lineal Miles of Guideway		0		0				
60.025	Unspecified	Lineal Miles of Guideway		0		0				
60.030	Services	Lineal Miles of Guideway		0	0	0				
60.031	Property Management	Lineal Miles of Guideway		0		0				
60.032	Agency	Lineal Miles of Guideway		0		0				
60.033	Contractor R/W Services (Title/Appraisal, etc)	Lineal Miles of Guideway		0		0				
60.034	Legal Services	Lineal Miles of Guideway		0		0				
60.035	Unspecified	Lineal Miles of Guideway		0		0				
60.040	Other Real Estate Costs	Lineal Miles of Guideway		0	0	0				
70	Vehicles	Vehicles	15	54,000	7,900	61,900	4,127		2%	64,067
70.060	Non-revenue vehicles	Vehicles		0	0	0				
70.061	Maintenance of Way Vehicles	Vehicles		0	0	0				
70.062	Automobiles	Vehicles		0	0	0				
70.063	Trucks	Vehicles		0	0	0				
70.064	Unspecified	Vehicles		0	0	0				

70.070	Spare parts/ Rotable Components	Vehicles		0	0	0			
70.080	Intercity Passenger Rail	Vehicles		0	0	0			
70.081	Diesel Locomotive	Vehicles	3	15,000	2,000	17,000	5,667		
70.082	Cab Car	Vehicles	2	9,000	900	9,900	4,950		
70.083	Bi-Level Coach	Vehicles	10	30,000	5,000	35,000	3,500		
70.084	Single Level Coach	Vehicles		0	0	0			
70.085	DMU	Vehicles		0	0	0			
70.086	EMU	Vehicles		0	0	0			
70.087	Unspecified			0	0	0			
80	Professional Services			385,000	39,000	424,000			13%
80.000	Planning and Concept Design			30,000	5,000	35,000			
80.010	Preliminary Engineering			60,000	4,000	64,000			
80.020	Final Design			100,000	10,000	110,000			
80.030	Project Management for Design and Construction			100,000	10,000	110,000			
80.031	Agency Project Management			0	0	0			
80.032	Project Management Oversight Support			0	0	0			
80.033	Agency Force Account			0	0	0			
80.034	Unspecified			0	0	0			
80.040	Construction Administration & Management			60,000	5,000	65,000			
80.050	Professional Liability and other Non-Construction Insurance			0	0	0			
80.060	Legal; Permits; Review Fees by other agencies, cities, etc.			15,000	1,000	16,000			
80.070	Surveys, Testing, Investigation, Inspection			15,000	3,000	18,000			
80.080	Start up			5,000	1,000	6,000			
80.081	Training/Start-up			0	0	0			
80.082	Safety Certification			0	0	0			
80.083	Off-Site Vehicle Testing, Test Runs			0	0	0			
80.084	Commissioning			0	0	0			
80.085	Unspecified			0	0	0			
80.090	Other			0	0	0			
81	Subtotal (10-80)	Lineal Miles of Guideway	105	2,766,500	272,930	3,039,430	28,947		95%
90	Unallocated Contingency	Total Amount		130,000	15,000	145,000			5%
91	Subtotal (10-90)	Lineal Miles of Guideway	105	2,896,500	287,930	3,184,430	30,328		100%
100	Finance Charges	Total Amount		0	0	0			0%
101	Total Project Costs (10-100)	Lineal Miles of Guideway	105	2,896,500	287,930	3,184,430	30,328		100%
Allocated Contingency as % of Base Yr Dollars w/o Contingency					9.87%				
Unallocated Contingency as % of Base Yr Dollars w/o Contingency					5.24%				
Total Contingency as % of Base Yr Dollars w/o Contingency					15.11%				

FRA INFLATION WORKSHEET

Issue Date of this worksheet

5/4/16

Orange cells - Costs

Insert Project Sponsor's Name here

Today's Date

6/22/15

Green cells - Catego

Insert Project Name and Location

Yr of Base Year \$

2015

Purple cells - Catego

Blue cells - Applies c

Insert Current Phase (e.g. Planning, PE, FD, Construction, Rev Ops)

Yr of Revenue Ops

2020

White cells - Base Y

BASE YEAR DOLLARS (X\$000)	Base Yr Dollars	Double-Check Total	2005	2006	2007	2008
10 GUIDEWAY & TRACK ELEMENTS (route miles)	100,000	100,000	0	0	0	0
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	30,000	30,000	0	0	0	0
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	10,000	10,000	0	0	0	0
40 SITEWORK & SPECIAL CONDITIONS	53,350	53,250	0	0	0	0
50 SYSTEMS	30,000	30,000	0	0	0	0
60 ROW, LAND, EXISTING IMPROVEMENTS	35,175	35,175	0	0	0	0
70 VEHICLES (number)	30,000	30,000	0	0	0	0
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	77,168	77,366	0	0	0	0
90 UNALLOCATED CONTINGENCY	20,000	20,000	0	0	0	0
100 FINANCE CHARGES	14,582	14,582	0	0	0	0
Total Project Cost (10 - 100)	400,275	400,372	0	0	0	0
Inflation Rate			0.035	0.035	0.035	0.035
10 GUIDEWAY & TRACK ELEMENTS (route miles)			0.010	0.010	0.010	0.010
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)			0.015	0.015	0.015	0.015
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS			0.020	0.020	0.020	0.020
40 SITEWORK & SPECIAL CONDITIONS			0.025	0.025	0.025	0.025
50 SYSTEMS			0.030	0.030	0.030	0.030
60 ROW, LAND, EXISTING IMPROVEMENTS			0.035	0.035	0.035	0.035
70 VEHICLES (number)			0.040	0.040	0.040	0.040

80 PROFESSIONAL SERVICES (applies to Cats. 10-50)				0.045	0.045	0.045	0.045
90 UNALLOCATED CONTINGENCY				0.050	0.050	0.050	0.050
100 FINANCE CHARGES				0.055	0.055	0.055	0.055
Compounded Inflation Factor				1.411	1.363	1.317	1.272
10 GUIDEWAY & TRACK ELEMENTS (route miles)				1.105	1.094	1.083	1.072
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)				1.161	1.143	1.126	1.110
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS				1.219	1.195	1.172	1.149
40 SITEWORK & SPECIAL CONDITIONS				1.280	1.249	1.218	1.189
50 SYSTEMS				1.344	1.305	1.267	1.230
60 ROW, LAND, EXISTING IMPROVEMENTS				1.411	1.363	1.317	1.272
70 VEHICLES (number)				1.480	1.423	1.369	1.316
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)				1.553	1.486	1.422	1.361
90 UNALLOCATED CONTINGENCY				1.629	1.551	1.477	1.407
100 FINANCE CHARGES				1.708	1.619	1.535	1.455
YEAR OF EXPENDITURE DOLLARS (X\$000)		YOE Dollars		2005	2006	2007	2008
10 GUIDEWAY & TRACK ELEMENTS (route miles)		101,355		0	0	0	0
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)		30,909		0	0	0	0
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS		10,302		0	0	0	0
40 SITEWORK & SPECIAL CONDITIONS		53,831		0	0	0	0
50 SYSTEMS		31,836		0	0	0	0
60 ROW, LAND, EXISTING IMPROVEMENTS		35,350		0	0	0	0
70 VEHICLES (number)		31,824		0	0	0	0
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)		77,692		0	0	0	0
90 UNALLOCATED CONTINGENCY		21,551		0	0	0	0
100 FINANCE CHARGES		9,500		0	0	0	0
Total Project Cost (10 - 100)		404,150		0	0	0	0

0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045
0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055
1.229	1.188	1.148	1.109	1.071	1.035	1.000	1.035	1.071	1.109	1.148	1.188	1.229	1.272
1.062	1.051	1.041	1.030	1.020	1.010	1.000	1.010	1.020	1.030	1.041	1.051	1.062	1.072
1.093	1.077	1.061	1.046	1.030	1.015	1.000	1.015	1.030	1.046	1.061	1.077	1.093	1.110
1.126	1.104	1.082	1.061	1.040	1.020	1.000	1.020	1.040	1.061	1.082	1.104	1.126	1.149
1.160	1.131	1.104	1.077	1.051	1.025	1.000	1.025	1.051	1.077	1.104	1.131	1.160	1.189
1.194	1.159	1.126	1.093	1.061	1.030	1.000	1.030	1.061	1.093	1.126	1.159	1.194	1.230
1.229	1.188	1.148	1.109	1.071	1.035	1.000	1.035	1.071	1.109	1.148	1.188	1.229	1.272
1.265	1.217	1.170	1.125	1.082	1.040	1.000	1.040	1.082	1.125	1.170	1.217	1.265	1.316
1.302	1.246	1.193	1.141	1.092	1.045	1.000	1.045	1.092	1.141	1.193	1.246	1.302	1.361
1.340	1.276	1.216	1.158	1.103	1.050	1.000	1.050	1.103	1.158	1.216	1.276	1.340	1.407
1.379	1.307	1.239	1.174	1.113	1.055	1.000	1.055	1.113	1.174	1.239	1.307	1.379	1.455
2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
0	0	0	0	0	0	10,000	45,450	45,905	0	0	0	0	0
0	0	0	0	0	0	0	10,150	10,302	10,457	0	0	0	0
0	0	0	0	0	0	0	5,100	5,202	0	0	0	0	0
0	0	0	0	0	10,000	20,000	13,325	10,506	0	0	0	0	0
0	0	0	0	0	0	0	10,300	10,609	10,927	0	0	0	0
0	0	0	0	0	5,000	20,000	10,350	0	0	0	0	0	0
0	0	0	0	0	0	0	15,600	16,224	0	0	0	0	0
0	500	1,000	1,000	2,000	5,000	50,000	10,450	5,460	2,282	0	0	0	0
0	0	0	0	0	0	5,000	5,250	5,513	5,788	0	0	0	0
0	0	0	0	500	500	500	500	500	500	500	500	500	500
0	500	1,000	1,000	2,500	20,500	105,500	126,475	110,221	29,955	500	500	500	500

0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045
0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055
1.317	1.363	1.411	1.460	1.511	1.564	1.619	1.675	1.734	3.529	10.709	43.213	217.576
1.083	1.094	1.105	1.116	1.127	1.138	1.149	1.161	1.173	1.184	1.196	1.208	1.220
1.126	1.143	1.161	1.178	1.196	1.214	1.232	1.250	1.269	1.288	1.307	1.327	1.347
1.172	1.195	1.219	1.243	1.268	1.294	1.319	1.346	1.373	1.400	1.428	1.457	1.486
1.218	1.249	1.280	1.312	1.345	1.379	1.413	1.448	1.485	1.522	1.560	1.599	1.639
1.267	1.305	1.344	1.384	1.426	1.469	1.513	1.558	1.605	1.653	1.702	1.754	1.806
1.317	1.363	1.411	1.460	1.511	1.564	1.619	1.675	1.734	1.795	1.857	1.923	1.990
1.369	1.423	1.480	1.539	1.601	1.665	1.732	1.801	1.873	1.948	2.026	2.107	2.191
1.422	1.486	1.553	1.623	1.696	1.772	1.852	1.935	2.022	2.113	2.208	2.308	2.412
1.477	1.551	1.629	1.710	1.796	1.886	1.980	2.079	2.183	2.292	2.407	2.527	2.653
1.535	1.619	1.708	1.802	1.901	2.006	2.116	2.232	2.355	2.485	2.621	2.766	2.918
2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
500	500	500	500	500	500	500	500	500	0	0	0	0
500	0	0	0	0								

FRA INFLATION WORKSHEET

Insert Project Sponsor's Name here

Insert Project Name and Location

Insert Project Phase

BASE YEAR DOLLARS (X\$000)	Base Yr Dollars	Double-Check Total	2000	2001	2002	2003
10 GUIDEWAY & TRACK ELEMENTS (route miles)	100,000	100,000	0	0	0	0
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	30,000	30,000	0	0	0	0
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	10,000	10,000	0	0	0	0
40 SITEWORK & SPECIAL CONDITIONS	53,350	53,350	0	0	0	0
50 SYSTEMS	30,000	30,000	0	0	0	0
#N/A	35,175	35,175	0	0	0	0
#N/A	30,000	30,000	0	0	0	0
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	77,168	77,168	0	0	0	0
90 UNALLOCATED CONTINGENCY	20,000	20,000	0	0	0	0
#N/A	7,600	7,600	0	0	0	0
Total Project Cost (10 - 100)	393,293	393,292	0	0	0	0

Inflation Rate	0.035	0.035	0.035	0.035
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Compounded Inflation Factor	1.619	1.564	1.511	1.460
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YEAR OF EXPENDITURE DOLLARS (X\$000)	YOE Dollars	2000	2001	2002	2003
10 GUIDEWAY & TRACK ELEMENTS (route miles)	104,780	0	0	0	0
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	32,149	0	0	0	0
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	10,531	0	0	0	0
40 SITEWORK & SPECIAL CONDITIONS	54,167	0	0	0	0
50 SYSTEMS	32,149	0	0	0	0
60 ROW, LAND, EXISTING IMPROVEMENTS	35,350	0	0	0	0
70 VEHICLES (number)	31,593	0	0	0	0
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	77,424	0	0	0	0

Today's Date	8/28/14
Yr of Base Year \$	2014
Yr of Revenue Ops	2017

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
0	0	0	0	0	0	0	0	0	0	10,000	45,000
0	0	0	0	0	0	0	0	0	0	0	10,000
0	0	0	0	0	0	0	0	0	0	0	5,000
0	0	0	0	0	0	0	0	0	10,350	20,000	13,000
0	0	0	0	0	0	0	0	0	0	0	10,000
0	0	0	0	0	0	0	0	0	5,175	20,000	10,000
0	0	0	0	0	0	0	0	0	0	0	15,000
0	0	0	0	0	594	1,148	1,109	2,142	5,175	50,000	10,000
0	0	0	0	0	0	0	0	0	0	5,000	5,000
0	0	0	0	0	0	0	0	535	518	500	483
0	0	0	0	0	594	1,148	1,109	2,678	21,218	105,500	123,483

0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035
1.411	1.363	1.317	1.272	1.229	1.188	1.148	1.109	1.071	1.035	1.000	1.035
2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
0	0	0	0	0	0	0	0	0	0	10,000	46,575
0	0	0	0	0	0	0	0	0	0	0	10,350
0	0	0	0	0	0	0	0	0	0	0	5,175
0	0	0	0	0	0	0	0	0	10,000	20,000	13,455
0	0	0	0	0	0	0	0	0	0	0	10,350
0	0	0	0	0	0	0	0	0	5,000	20,000	10,350
0	0	0	0	0	0	0	0	0	0	0	15,525
0	0	0	0	0	500	1,000	1,000	2,000	5,000	50,000	10,350

90 UNALLOCATED CONTINGENCY	21,075		0	0	0	0
100 FINANCE CHARGES	9,500		0	0	0	0
Total Project Cost (10 - 100)	408,719		0	0	0	0

0	0	0	
500	500	500	
500	500	500	