



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
HARRISBURG, PENNSYLVANIA

OFFICE OF
SECRETARY OF TRANSPORTATION

September 17, 2007

Dear MPO and RPO Planning Directors:

Statewide Planning Regulations issued by the Federal Highway Administration (FHWA) on February 14, 2007, contained a requirement that all projects contained on Transportation Improvement Programs (TIPs) and Long Range Transportation Plans (LRTPs) be expressed in Year of Expenditure by December 11, 2007. Regulations governing Year of Expenditure require that TIPs and LRTPs account for revenue growth and inflation and that projects are aligned on the TIP and LRTP in the years in which expenditure is expected to occur.

Enclosed is guidance related to the Year of Expenditure requirements. Please review the guidance particularly as it relates to your Long Range Transportation Plan. Your Central Office representative will be available to assist you should you have questions regarding revenue growth or inflation assumptions. Engineering Districts are currently updating project estimates and will be working with you to ensure TIP compliance by December 11, 2007. Please be aware that the FHWA will not approve amendments to the TIP or LRTP after December 11, 2007, if Year of Expenditure requirements are not met.

If you have any questions please do not hesitate to contact Robin Metz at rmetz@state.pa.us or by phone at (717) 787-5248. If you have questions specifically related to the regulatory requirements, Mr. Matt Smoker can be reached at (717) 221-3703.

Sincerely,

A handwritten signature in black ink, appearing to read "James D. Ritzman".

James D. Ritzman, P.E.
Deputy Secretary for Planning

Enclosures

cc: Mr. Matt Smoker, FHWA

Year of Expenditure Guidelines

Federal planning regulations issued on February, 14, 2007, require that project costs on all Transportation Improvement Programs (TIPs) and Long Range Transportation Plans (LRTPs) be expressed in Year of Expenditure (YOE) by December 11, 2007. Year of Expenditure (in part) refers to the utilization of inflation rates to more accurately state the cost of a project on the TIP, STIP, and LRTP. Year of Expenditure reflects an emphasis on realistic project schedules and sound cost estimates.

As a result of the final planning rule, TIPs and LRTPs may need to be adjusted to reflect revenue growth, inflation, and project schedules, as well as the year(s) and amount of anticipated expenditure for each project. Failure to do so by December 11, 2007, will jeopardize federal approval of any TIP or LRTP amendment or new air quality conformity analysis. The following are general guidelines for your use to ensure that TIPs and LRTPs are in compliance with Year of Expenditure requirements.

Current TIP

- Update estimated project costs in MPMS. Cost estimates for phases not yet obligated or encumbered must be expressed in 2008 dollars. 2008 will serve as the base year for calculating project phase inflation rates. Project phases already encumbered or obligated on the current TIP are considered fully funded.
- Programmed costs must be consistent with estimated costs. This may result in shifting some project phases to the LRTP. As this has the potential to impact the existing Air Quality conformity analysis, care should be taken to avoid TIP/LRTP actions that could trigger Air Quality Conformity re-evaluations.
- Project phases included on the current TIP that are cash flowed beyond the TIP must be shown on the LRTP. These projects must also be shown in the out years of the Twelve Year Program.
- Revenue estimates in the current TIP will remain the same, except for the addition of Act 44 Revenue.
- Notify the Program Center when your reviews and updates have been completed, but no later than November 16, 2007. Based on your actions and compliance, we will provide documentation to FHWA by December 11, 2007.

2009 TIP Update

- Carryover projects – Carryover projects should be consistent with the current TIP in terms of estimate, programmed costs, and schedule.

- New projects - new project estimates are to be developed using present day cost (2008). The draft TIP must reflect a realistic cost with the appropriate inflation rate. An electronic “Year of Expenditure” calculator will be provided to the District for this purpose.
- Review project schedules and ensure that the draft TIP accurately reflects the correct year(s) of anticipated expenditures.
- Construction costs should be programmed based on the estimated Notice to Proceed date. This is the date that the construction phase will begin to incur costs. If construction spans more than one federal fiscal year, the amount programmed in each TIP year must reflect the expected cash flow of the project.
- Beyond the Preliminary Engineering phase, all estimated project costs must be accounted for on the draft TIP, TYP and/or Long Range Plan (LRTP), and be consistent with information in the environmental document in order to receive environmental clearance.
- Districts, MPOs and RPOs must document what inflation factor was applied if the recommended 4 percent is not utilized), and how it was applied (ideally to the project estimate based on the project schedule). If the recommended 4 % inflation factor is used, the Program Center will document Year of Expenditure compliance.
- Inflation factors do not need to be applied to Advance Construct conversions.

All projects and/or phases beyond the PE phase must be fully funded on the TIP, TYP and/or LRTP in order to receive environmental clearance.

Current LRTP

- MPO and RPO revenue estimates should be projected out through the end of the LRTP. Current revenue projection guidelines are as follows:
 - Federal highway/bridge funds – 4% annual growth (already accounted for in 2008, 2009, and 2010 through 2007 Financial Guidance)
 - Federal transit funds – 2.67% annual growth
 - Act 44 Revenue – 2.5% annual growth
 - State highway and bridge funds – 1.5% annual growth
 - State transit funds – 2.5 % annual growth (except for Asset Improvement – Bond, which is expected to remain flat)
- An inflation factor of at least 4% (annually) must be applied to the project estimate. Higher inflation rates may be used, but FHWA requests prior consultation when doing so.

- Document actions taken to ensure Year of Expenditure compliance.

Project phases not on the current TIP, but on the LRTP may be assigned to a “cost band” (the equivalent of the current 2nd 4 Years, or 3rd 4 years of the Twelve Year Program, or beyond). An inflation figure (4% recommended), compounded annually is then applied to the phase cost estimate and the cost shown on the LRTP. A middle year cost band is considered an acceptable point at which to apply the inflation factor.

Calculating the Year of Expenditure

The Year of Expenditure (YOE) must be calculated for all new and carry over project phases that have not been obligated or encumbered prior to October 1, 2008. YOE does not apply to advance construct conversions. Both the estimated cost and the TIP/LRTP programmed cost must match and reflect Year of Expenditure.

Financial Guidance recommends the use of a 4% inflation factor for highway and bridge projects. This is a minimum inflation factor to be used in all cases. A higher rate may be used, but prior approval is required from FHWA and the District/MPO/RPO will be required to provide documentation of its use.

Below is a guide to calculating highway and bridge inflation from present day estimates:

Year	Estimate
Present Day (2008)	\$100,000
2009	$\$100,000 \times 1.04 = \$104,000$
2010	$\$104,000 \times 1.04 = \$108,160$
2011	$\$108,160 \times 1.04 = \$112,486$
2012	$\$112,486 \times 1.04 = \$116,986$

You may also find the attached table helpful for projecting inflation costs for your TIPs and LRTPs.

Table of Compound Factors

Prepared by Pamela P. Peterson, Florida Atlantic University

Future Value Example

Number
of
Years

Discount rate

	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%
1	1.0100	1.0200	1.0300	1.0400	1.0500	1.0600	1.0700	1.0800	1.0900	1.1000	1.1100	1.1200
2	1.0201	1.0404	1.0609	1.0816	1.1025	1.1236	1.1449	1.1664	1.1881	1.2100	1.2321	1.2544
3	1.0303	1.0612	1.0927	1.1249	1.1576	1.1910	1.2250	1.2597	1.2950	1.3310	1.3676	1.4049
4	1.0406	1.0824	1.1255	1.1699	1.2155	1.2625	1.3108	1.3605	1.4116	1.4641	1.5181	1.5735
5	1.0510	1.1041	1.1593	1.2167	1.2763	1.3382	1.4026	1.4693	1.5386	1.6105	1.6851	1.7623
6	1.0615	1.1262	1.1941	1.2653	1.3401	1.4185	1.5007	1.5869	1.6771	1.7716	1.8704	1.9738
7	1.0721	1.1487	1.2299	1.3159	1.4071	1.5036	1.6058	1.7138	1.8280	1.9487	2.0762	2.2107
8	1.0829	1.1717	1.2668	1.3686	1.4775	1.5938	1.7182	1.8509	1.9926	2.1436	2.3045	2.4760
9	1.0937	1.1951	1.3048	1.4233	1.5513	1.6895	1.8385	1.9990	2.1719	2.3579	2.5580	2.7731
10	1.1046	1.2190	1.3439	1.4802	1.6289	1.7908	1.9672	2.1589	2.3674	2.5937	2.8394	3.1058
11	1.1157	1.2434	1.3842	1.5395	1.7103	1.8983	2.1049	2.3316	2.5804	2.8531	3.1518	3.4785
12	1.1268	1.2682	1.4258	1.6010	1.7959	2.0122	2.2522	2.5182	2.8127	3.1384	3.4985	3.8960
13	1.1381	1.2936	1.4685	1.6651	1.8856	2.1329	2.4098	2.7196	3.0658	3.4523	3.8833	4.3635
14	1.1495	1.3195	1.5126	1.7317	1.9799	2.2609	2.5785	2.9372	3.3417	3.7975	4.3104	4.8871
15	1.1610	1.3459	1.5580	1.8009	2.0789	2.3966	2.7590	3.1722	3.6425	4.1772	4.7846	5.4736
16	1.1726	1.3728	1.6047	1.8730	2.1829	2.5404	2.9522	3.4259	3.9703	4.5950	5.3109	6.1304
17	1.1843	1.4002	1.6528	1.9479	2.2920	2.6928	3.1588	3.7000	4.3276	5.0545	5.8951	6.8660
18	1.1961	1.4282	1.7024	2.0258	2.4066	2.8543	3.3799	3.9960	4.7171	5.5599	6.5436	7.6900
19	1.2081	1.4568	1.7535	2.1068	2.5270	3.0256	3.6165	4.3157	5.1417	6.1159	7.2633	8.6128
20	1.2202	1.4859	1.8061	2.1911	2.6533	3.2071	3.8697	4.6610	5.6044	6.7275	8.0623	9.6463
21	1.2324	1.5157	1.8603	2.2788	2.7860	3.3996	4.1406	5.0338	6.1088	7.4002	8.9492	10.8038
22	1.2447	1.5460	1.9161	2.3699	2.9253	3.6035	4.4304	5.4365	6.6586	8.1403	9.9336	12.1003
23	1.2572	1.5769	1.9736	2.4647	3.0715	3.8197	4.7405	5.8715	7.2579	8.9543	11.0263	13.5523
24	1.2697	1.6084	2.0328	2.5633	3.2251	4.0489	5.0724	6.3412	7.9111	9.8497	12.2392	15.1786
25	1.2824	1.6406	2.0938	2.6658	3.3864	4.2919	5.4274	6.8485	8.6231	10.8347	13.5855	17.0001
26	1.2953	1.6734	2.1566	2.7725	3.5557	4.5494	5.8074	7.3964	9.3992	11.9182	15.0799	19.0401
27	1.3082	1.7069	2.2213	2.8834	3.7335	4.8223	6.2139	7.9881	10.2451	13.1100	16.7386	21.3249
28	1.3213	1.7410	2.2879	2.9987	3.9201	5.1117	6.6488	8.6271	11.1671	14.4210	18.5799	23.8839
29	1.3345	1.7758	2.3566	3.1187	4.1161	5.4184	7.1143	9.3173	12.1722	15.8631	20.6237	26.7499
30	1.3478	1.8114	2.4273	3.2434	4.3219	5.7435	7.6123	10.0627	13.2677	17.4494	22.8923	29.9599