CONSISTENCY DETERMINATION

Allotment Amounts:

June 1, 2022 – May 31, 2023

Comparing to Budgets from:

TAMP Version 2022.3.0

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BUREAU OF ENGINEERING
SUITE 700, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-0791

BUTCH ELEY
DEPUTY GOVERNOR &
COMMISSIONER OF TRANSPORTATION

BILL LEE
GOVERNOR

June 22, 2023

Pamela M. Kordenbrock
Division Administrator
Federal Highway Administration
404 BNA Drive
Building 200, Suite 508
Nashville, TN 37217

Re: Submission of 2023 Transportation Asset Management Plan (TAMP) Consistency Determination Report

Dear Ms. Kordenbrock,

In accordance with 23 CFR Part 515.13 (b) (3), the Tennessee Department of Transportation (TDOT) is pleased to present the enclosed submittal of our Transportation Asset Management Plan (TAMP) Consistency Determination for fiscal year 2023.

If you have any questions regarding this consistency determination, please contact me at 615-741-0791 or by email at Will.Reid@tn.gov.

Sincerely,

Will Reid, P.E.
Deputy Commissioner & Chief Engineer

WR/ch

enclosure
cc:

Mr. Butch Eley	Mr. Ted Kniazewycz	Mr. Gilberto DeLeon (FHWA)
Mr. Steve Townsend	Mr. Joe Deering	Mr. Greg Simmons (FHWA)
Mr. Joe Galbato	Mr. Tom Quinn	Mr. Rich Casalone (FHWA)
Mr. Preston Elliot	Mr. Xiaoyang Jia	
Mr. Matt Barnes	Mr. Chris Harris	
Mr. Benjamin Price	Ms. Jennifer Herstek	
Ms. Lori Lang	Ms. Jamie Waller	
Ms. Julie Carmean	Mr. Amos Pulley	

What is Consistency Determination?

TDOT strongly believes in operating as an open and transparent governmental body. TDOT's Transportation Asset Management Plan (TAMP) exemplifies TDOT's commitment to plan, design, build, maintain, and manage one of the best transportation systems in the nation. This effort is rooted in our Mission, Vision, and Values. The annual consistency determination is TDOT's proof that it is managing the state's NHS pavement and bridge assets in accordance with a strategic plan to be as efficient and effective as possible with federal and state dollars and achieve Tennessee's performance goals and objectives.

Mission:

Provide a safe and reliable transportation system that supports economic growth and quality of life.

Vision:

A commitment to excellence in managing and improving the state's transportation system, promoting the success of our employees, and strengthening the trust of our customers.

Values:

- Stewardship
- Integrity
- Safety
- Consistency
- Development
- Innovation
- Collaboration
- Family

What are the MAP-21 and Final Rule requirements?

Consistency requirements are identified in 23 CFR Part 515.13 (b) (2) as follows: *Annual determination of consistency under 23 U.S.C. 119(e)(5). Not later than August 31, 2019, and not later than July 31 in each year thereafter, FHWA will notify the State DOT whether the State DOT has developed and implemented an asset management plan consistent with 23 U.S.C. 119. The notice will be in writing and, in the case of a negative determination, will specify the deficiencies the State DOT needs to address. In making the annual consistency determination, the FHWA will consider the most recent asset management plan submitted by the State DOT, as well as any documentation submitted by the State DOT to demonstrate implementation of the plan. The FHWA determination is only as to the consistency of the State DOT asset management plan and State DOT implementation of that plan with applicable requirements and is not an approval or disapproval of strategies or other decisions contained in the plan. With respect to any assets the State DOT may elect to include in its plan in addition to NHS pavement and bridge assets, the FHWA consistency determination will consider only whether the State DOT has complied with § 515.9(l) with respect to such discretionary assets.*

(1) Plan development. The FHWA will review the State DOT's asset management plan to ensure that it was developed with certified processes, includes the required content, and is consistent with other applicable requirements in this part.

(2) Plan implementation. The State DOT must demonstrate implementation of an asset management plan that meets the requirements of 23 U.S.C. 119 and this part. Each State DOT may determine the most suitable approach for demonstrating implementation of its asset management plan, so long as the information is current, documented, and verifiable. The submission must show the State DOT is using the investment strategies in its plan to make progress toward achievement of its targets for asset condition and performance of the NHS and to support progress toward the national goals identified in 23 U.S.C. 150(b). The State DOT must submit its implementation documentation not less than 30 days prior to the deadline for the FHWA consistency determination.

(i) FHWA considers the best evidence of plan implementation to be that, for the 12 months preceding the consistency determination, the State DOT funding allocations are reasonably consistent with the investment strategies in the State DOT's asset management plan. This demonstration takes into account the alignment between the actual and planned levels of investment for various work types (i.e., initial construction, maintenance, preservation, rehabilitation and reconstruction).

(ii) FHWA may find a State DOT has implemented its asset management plan even if the State has deviated from the investment strategies included in the asset management plan, if the State DOT shows the deviation was necessary due to extenuating circumstances beyond the State DOT's reasonable control.

Is the TDOT TAMP Compliant with Current Federal Requirements?

In November 2022, the Federal government passed the Bipartisan Infrastructure Law (BIL), which modified 23 USC 119 to require the life cycle cost and risk management analyses used to develop the TAMP to consider extreme weather and resilience (23 USC 119(e)(4)(D)). TDOT's current TAMP (version 2022.3.0) has been certified by FHWA as compliant with all TAMP requirements including this new requirement.

What is TDOT's Process for Documenting Consistency?

TDOT will submit to FHWA a summary of how the agency's annual investment strategy of planned allocations, as documented in TDOT's TAMP Version 2022.3.0, is in alignment and reasonably consistent with actual investment amounts during the 12-month period from June 1, 2022 to May 31, 2023, as agreed to by TDOT and the FHWA Tennessee Division during the meeting on February 26, 2020. This 12-month period allows TDOT sufficient time to extract the actual investment amounts and prepare the consistency determination report before the deadline. Should the amounts significantly deviate, TDOT will provide documentation to justify the deviation. The 12-month TAMP Budget amounts and the Actual Investment amounts for four of the five work types, as defined by FHWA (Maintenance, Preservation, Rehabilitation, Construction, and Reconstruction), are compared in Table D-1. Budget amounts for the FHWA work type, Construction, are not presented in the table. This is because new construction of bridge and pavement assets are beyond the scope of asset management investment strategies that focus on the state of good repair for bridge and pavement networks. Similarly, budget amounts for the Reconstruction work type are also not included for pavement in the table since pavement reconstruction locations are typically initiated through system enhancement and expansion projects rather than through the management of the pavement network state of good repair.

Table D-1 also provides explanations for any significant differences between the TAMP budgets, actual budgets, and actual investments. Crosswalks between TDOT's treatment types and the FHWA work types are presented in Table D-2. The planned TAMP investments for pavements and bridges are presented in Tables D-3 and D-4, respectively.

TDOT has continued to use the enhanced data query from PPRM so that details on bridge expenditures included in pavement projects can be identified more easily. This allowed the pavement and bridge obligation adjustments to be calculated within the tabulation spreadsheet, reducing manual adjustments previously required.

How will TDOT's Process Change in the Future?

TDOT is making significant changes to its project delivery process and its organizational structure through the Integrated Program Delivery (IPD) and Empowering People, Influencing Culture (EPIC) initiatives. Together they will create a team-based approach to project delivery by putting a matrix organization into place allowing teams to work more easily across disciplines. Additionally, the Project

Delivery Network (PDN) software will be replacing PPRM to provide consistency, reliability, efficiency, and transparency throughout the project delivery process.

Changes in funding allocations could also affect TDOT's project prioritization, selection, and delivery processes. Governor Lee's proposed FY24 budget recommends providing a general fund transfer of approximately $3.3 billion to the DOT. The proposed additional funding would provide a comprehensive approach to addressing the state's increasing critical challenges to infrastructure including: significant investments in major urban and rural congestion, accelerating *Improving Manufacturing, Public Roads, and Opportunities for a Vibrant Economy* (IMPROVE) Act projects, increasing investments in infrastructure maintenance required to meet the demands of increasing costs and leveraging local participation on projects that connect state highways to local communities.

TDOT has also made a commitment to include a status update on risk mitigation strategies in future consistency determination reports. TDOT will be holding a workshop to update the risk register and risk mitigation strategies in early 2024 once the project selection process has been completed to identify TDOT's 5-year plan reflecting the $ 3.3 billion funding transfer.

TDOT will consider updating its TAMP document to reflect the organizational changes and process changes that are being implemented as a result of the EPIC and IPD.

Table D-1

Fiscal Year 2023	Bridges									Pavement								
Work Type	Budget ($M)				Actual Investment ($M)			Grand Difference (Total Investment - Adjusted Budget) ($M)	Investment Footnotes	Budget ($M)				Actual Investment ($M)			Grand Difference (Total - Adjusted Budget) ($M)	Investment Footnotes
	TAMP Budget ($M)	Adjusted Budget ($M)	Budget Difference (TAMP - Adjusted) ($M)	Budget Footnotes	NHS	Non-NHS	Total			TAMP Budget ($M)	Adjusted Budget ($M)	Budget Difference (TAMP - Adjusted) ($M)	Budget Footnotes	NHS	Non-NHS	Total		
Preservation	8.0	8.0	0.0		4.8	0.3	5.1	-2.9		221.0	327.3	106.3	3	326.8	99.9	426.7	99.4	3
Rehabilitation	45.0	60.7	15.7	1	57.1	39.1	96.2	35.5	1	27.0	34.1	7.1	4	39.1	21.8	60.9	26.8	4
Reconstruction	100.0	100.0	0.0		76.6	45.5	122.0	22.0		N/A	N/A	N/A	5	N/A	N/A	N/A	N/A	5
Construction	N/A	N/A	N/A	2	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	6	N/A	N/A	N/A	N/A	6
Maintenance	4.0	4.0	0.0		2.7		2.7	-1.3		26.0	27.3	1.3		34.2		34.2	6.9	
Total	157.0	172.7	**15.7**		141.1	87.6	226.0	**53.3**		274.0	388.7	**114.7**		400.1	121.7	521.8	**133.1**	

Table D-1 Footnotes:	
1	**Bridge Rehabilitation Budget & Investment:** The budget for Bridge Rehabilitation in FY2023 was approved at $60.7M, which is $15.7M higher than what was anticipated in the TAMP Investment Strategy, primarily due to historic levels of inflation which outpaced our estimates in the TAMP. Actual investment amounts were $35.5M higher than the adjusted budget primarily due to several additional rehab projects (totaling $36.8M) which were not part of the original $60.7M budget in FY2023 but were funded by other sources (PIN#123145.00 = $27.8M, PIN#132077.00 = $4.4M, PIN#132077.02 = $4.6M).
2	**Bridge Construction Budget & Investment:** Bridge Construction is primarily executed as a part of larger scale legislative projects and is not programmed in an effort to address the state of good repair of our bridge assets. Therefore, TDOT has elected to omit the budgets and investment amounts which are directed toward these projects in our 2022 BIL-Compliant TAMP and subsequently in our 2023 Annual TAMP Consistency Determination report. TDOT is redefining the process used to prioritize all projects which are selected to be included in the 5-Year Program. New criteria are under development currently and will be implemented in the fall of 2023 as TDOT prioritizes the additional $3.3B general fund transfer which was approved with the passing of the Transportation Modernization Act on April 17, 2023. State of Good Repair condition of assets is expected to be among the new criteria for project selection in the new prioritization process. TDOT will update its project selection process documentation in 2024 in an out-of-cycle update of our TAMP document.
3	**Pavement Preservation Budget & Investment:** TDOT's original budget for Pavement Preservation in FY2023 was $263.9M; however, due to severe winter weather which impacted a large portion of the interstates in Middle Tennessee in January 2022, TDOT was forced to perform unanticipated paving during the summer of 2023 to replace the damaged open-graded friction course pavement layers. An additional $63.4M in funding was added to the Pavement Preservation budget to cover the cost of this unanticipated paving work. TDOT's original 2023 budget of $263.9M was quite a bit higher than the projected investment in the 2022 TAMP due to two main factors. 1) Historic levels of inflation, following the COVID-19 pandemic, caused unit prices of paving materials to increase sharply, and 2) because TDOT's State of good repair performance measures have been trending in the wrong direction recently, TDOT directed additional funding toward pavement preservation strategies to improve the condition of our pavement assets.
4	**Pavement Rehabilitation Investment:** TDOT's Pavement Rehabilitation budget in FY2023 was assumed to be approximately 10% of the overall resurfacing budget based on historical information and was determined to be $29.3M. Due to unanticipated significant deterioration of the pavement at the Blue Oval City construction project site, an additional $4.8M was added to the FY2023 Pavement Rehabilitation adjusted budget to cover that additional needed paving work. TDOT's Pavement Rehabilitation Investment in FY2023 exceeds the adjusted budget amount by $26.8M. This is primarily for two reasons, 1) historic levels of inflation following the COVID-19 pandemic, and 2) two unanticipated pavement rehabilitation projects, totaling $5.1M, which were required to address severe pavement damage resulting from the heavy construction vehicle traffic at the Blue Oval City construction site in West Tennessee.
5	**Pavement Construction Budget & Investment:** New Pavement Construction is primarily executed as a part of larger scale legislative projects and is not programmed in an effort to address the state of good repair of our pavement assets. Therefore, TDOT has elected to omit the budgets and investment amounts which are directed toward these projects in our 2022 BIL-Compliant TAMP and subsequently in our 2023 Annual TAMP Consistency Determination report. TDOT is redefining the process used to prioritize all projects which are selected to be included in the 5-Year Program. New criteria are under development currently and will be implemented in the fall of 2023 as TDOT prioritizes the additional $3.3B general fund transfer, which was approved with the passing of the Transportation Modernization Act on April 17, 2023. State of good repair condition of assets is expected to be among the new criteria for project selection in the new prioritization process. TDOT will update our project selection process documentation in 2024 in an out-of-cycle update of our TAMP document.

6	**Pavement Reconstruction Budget & Investment:** With a few rare exceptions, Pavement Reconstruction is primarily executed as a part of larger scale legislative projects and is not programmed in an effort to address the state of good repair of our pavement assets. Therefore, TDOT has elected to omit the budgets and investment amounts which are directed toward these projects in our 2022 BIL-Compliant TAMP and subsequently in our 2023 Annual TAMP Consistency Determination report. TDOT is redefining the process used to prioritize all projects which are selected to be included in the 5-Year Program. New criteria are under development currently and will be implemented in the fall of 2023 as TDOT prioritizes the additional $3.3B general fund transfer, which was approved with the passing of the Transportation Modernization Act on April 17, 2023. State of good repair condition of assets is expected to be among the new criteria for project selection in the new prioritization process. TDOT will update our project selection process documentation in 2024 in an out-of-cycle update of our TAMP document.

This Consistency Determination document will be updated and posted on TDOT's website annually. It will also be referenced in the appendix of each version of TDOT's TAMP using the appropriate URL web address. Accompanying the 2023 Consistency Determination document is a link to the spreadsheet that was used to compile the actual investment data from PPRM (shown below). Below are links to the documents on TDOT's website.

TAMP Consistency Determination Document:

- https://www.tn.gov/content/dam/tn/tdot/maintenance/asset-management-office-/tamp/2023_TAMP-Consistency_Determination_v.1.0.pdf

TAMP Consistency Determination Spreadsheet:

- https://www.tn.gov/content/dam/tn/tdot/maintenance/asset-management-office-/tamp/TAMPData_2023_Consistency_Determination_v1.0.xlsx

Table D-2: Crosswalk Between TDOT Treatment Types and FHWA Work Types

Maintenance	**Maintenance Activities, including:** • Shallow patching skin patching • Partial-depth patching • Repair concrete corner breaks • Concrete joint repair • Other thin patching	**Preventive Activities, including:** • Filling potholes in deck • Minor structure repair • Major structure repair • Cleaning structure
Preservation	**Preservation Activities, including:** • Thin asphalt overlay (1.5 in. or less) • Microsurfacing • Chip seals • Cape seals • Crack sealing • Concrete joint sealing • Mill and fill asphalt overlays (1.5 in. or less)	**Preservation Activities, including:** • Repainting structural steel • Sweeping • Deck repairs • Deck waterproofing • Deck epoxy overlay • Polymer modified concrete deck overlay • Cleaning and resealing expansion joints • Scour Prevention (1)
Rehabilitation	**Rehabilitation Activities, including:** • Full-depth patching • Repair/replacing concrete slabs • Hot-in-place recycling with 1.25 in. overlay	**Rehabilitation Activities, including:** • Replacement of expansion joints • Concrete spall repairs • Structural steel repairs • Scour repairs (1) • Bearing replacement
Reconstruction	**Reconstruction Activities, including:** • Rubblization and overlay of concrete pavement • Full-depth replacement of asphalt pavement	**Reconstruction Activities, including:** • Bridge replacement • Bridge widening
Construction	**Construction Activities, including:** • Highway widening • Highway realignments • New highway construction	**Construction Activities, including:** • New bridge construction

Table D-3: TDOT 10-Year Estimated Budget for Pavements by Work Type (Dollars in Millions) (Source: 2022 TAMP Table 7-3)

Year	Construction	Reconstruction	Rehabilitation	Preservation	Maintenance	Total
2023	N/A	N/A	$27	$221	$26	$274
2024	N/A	N/A	$28	$228	$27	$283
2025	N/A	N/A	$29	$234	$28	$291
2026	N/A	N/A	$30	$242	$28	$300
2027	N/A	N/A	$31	$249	$29	$309
2028	N/A	N/A	$32	$256	$30	$318
2029	N/A	N/A	$33	$263	$31	$327
2030	N/A	N/A	$34	$271	$32	$337
2031	N/A	N/A	$35	$279	$33	$347
2032	N/A	N/A	$36	$288	$34	$358
Total	N/A	N/A	$315	$2,531	$298	$3,144

Table D-4: TDOT 10-Year Estimated Bridge Management Budget by Work Type (Dollars in Millions) (Source: 2022 TAMP Table 7-4)

Year	Construction	Reconstruction	Rehabilitation	Preservation	Maintenance	Total
2023	N/A	$100	$45	$8	$4	$157
2024	N/A	$100	$46	$8	$4	$158
2025	N/A	$102	$46	$8	$4	$160
2026	N/A	$103	$47	$8	$4	$162
2027	N/A	$104	$47	$8	$5	$164
2028	N/A	$105	$48	$8	$5	$166
2029	N/A	$106	$48	$8	$5	$167
2030	N/A	$106	$49	$9	$5	$169
2031	N/A	$108	$49	$9	$5	$171
2032	N/A	$110	$50	$9	$5	$174
Total	$N/A	$1,044	$475	$83	$48	$1,648

Table D-2 Footnotes:

1) Table D-2: Crosswalk Between TDOT Treatment Types and FHWA Work Types is based on table 7-2 of the same name in the 2022 TAMP document. However, table D-2 was updated to include Scour Prevention and Scour Repairs which were inadvertently omitted from table 7-2 in the TAMP.