STATE OF CONNECTICUT



AUDITORS' REPORT DEPARTMENT OF TRANSPORTATION FISCAL YEARS ENDED JUNE 30, 2019 AND 2020

AUDITORS OF PUBLIC ACCOUNTS JOHN C. GERAGOSIAN & CLARK J. CHAPIN

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March 8, 2023

EXECUTIVE SUMMARY

In accordance with the provisions of Section 2-90 of the Connecticut General Statutes, we have audited certain operations of the Department of Transportation (DOT) for the fiscal years ended June 30, 2019 and 2020. Our audit identified internal control deficiencies; instances of noncompliance with laws, regulations, and policies; and a need for improvement in practices and procedures that warrant the attention of management. The significant findings and recommendations are presented below:

<u>Page 14</u>	We reviewed two instances in which DOT hired employees into positions that reported through the chain of command to immediate family members. We did not find any documentation on file describing how DOT addressed the potential conflicts of interest. DOT should thoroughly document its actions taken to identify and mitigate potential conflicts of interest and the risk of nepotism when immediate familial relationships exist between DOT employees. When a DOT employee is in the chain of command of an immediate family member, all personnel actions affecting the employee should be approved by a peer or superior of the higher-ranking employee. (Recommendation 1)
<u>Page 16</u>	DOT's information technology disaster recovery plan only provides a high-level overview that describes the goals of the process. The plan does not include detailed specifications for essential hardware and software. It also does not incorporate procedures for carrying out the recovery process, prioritizing the tasks to be performed, and identifying the individuals who will perform them. DOT should develop and regularly test a comprehensive disaster recovery plan for its information technology functions. (Recommendation 2)
<u>Page 18</u>	Our review of two DOT cost-effectiveness evaluations for engineering consultants revealed that DOT did not consider all potential costs associated with performing the work in-house, including staff supervision, paid leave, actual salaries, salary increases, and indirect costs. DOT should confer with the Office of Policy and Management to ensure that its privatization cost-effectiveness evaluations are accurate and consider all costs associated with competing alternatives. (Recommendation 3)
<u>Page 20</u>	DOT did not promptly address identified potential conflicts of interest involving external business relationships, maintain a control log to track potential conflicts, or periodically remind employees to update their forms when necessary. DOT should periodically remind employees of their obligation to report potential conflicts of interest, establish a control log for reported conflicts, and promptly address them. (Recommendation 4)
<u>Page 21</u>	DOT operates two ferry services on the Connecticut River. The ferries charge per passenger or per vehicle fares. Although pre-numbered tickets incorporating a receipt for issuance to payees are used, a single ticket can be used for up to eight passengers. The employee collecting the fares records the number of passengers on the ticket. The effectiveness of this control is reduced because the employee can record less than the number of fares they collected. DOT should use pre-numbered tickets with fixed values to improve accountability over ferry fares. (Recommendation 5)

STATE OF CONNECTICUT



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March 8, 2023

AUDITORS' REPORT DEPARTMENT OF TRANSPORTATION FISCAL YEARS ENDED JUNE 30, 2019 AND 2020

We have audited certain operations of the Department of Transportation in fulfillment of our duties under Section 2-90 of the Connecticut General Statutes. The scope of our audit included, but was not necessarily limited to, the fiscal years ended June 30, 2019 and 2020. The objectives of our audit were to evaluate the:

- 1. Department's internal controls over significant management and financial functions;
- 2. Department's compliance with policies and procedures internal to the department or promulgated by other state agencies, as well as certain legal provisions; and
- 3. Effectiveness, economy, and efficiency of certain management practices and operations, including certain financial transactions.

Our methodology included reviewing written policies and procedures, financial records, minutes of meetings, and other pertinent documents; interviewing various personnel of the department; and testing selected transactions. Our testing was not designed to project to a population unless specifically stated. We obtained an understanding of internal controls that we deemed significant within the context of the audit objectives and assessed whether such controls have been properly designed and placed in operation. We tested certain of those controls to obtain evidence regarding the effectiveness of their design and operation. We also obtained an understanding of legal provisions that are significant within the context of the audit objectives, and we assessed the risk that illegal acts, including fraud, and violations of contracts, grant agreements, or other legal provisions could occur. Based on that risk assessment, we designed and performed procedures to provide reasonable assurance of detecting instances of noncompliance significant to those provisions.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. The accompanying Résumé of Operations is presented for informational purposes. This information was obtained from various available sources, including but not limited to, the department's management and the state's information systems, and was not subjected to the procedures applied in our audit of the department. For the areas audited, we identified:

- 1. Deficiencies in internal controls;
- 2. Apparent non-compliance with laws, regulations, contracts and grant agreements, policies, and procedures; and
- 3. A need for improvement in management practices and procedures that we deemed to be reportable.

The State Auditors' Findings and Recommendations section of this report presents findings arising from our audit of the Department of Transportation.

COMMENTS

FOREWORD

The Department of Transportation (DOT) operates principally under the provisions of Title 13a, Title 13b and Chapter 249 of the General Statutes. DOT's mission is to provide a safe and efficient transportation network that improves the quality of life and promotes economic vitality for the state and the region. DOT is organized into five bureaus, each administered by a bureau chief, as follows:

- Engineering and Construction Responsible for the implementation of the capital program for Connecticut's transportation network. In addition to these two fundamental activities, the bureau also has broad responsibilities in areas such as the acquisition and management of rights of way, quality assurance, and bridge inspection.
- Finance and Administration Responsible for DOT's financial activities, the bureau is comprised of the Offices of Human Resources; Finance; Operations and Support; Information Systems; Contracts, Agreements, and Contract Compliance; and External Audits.
- **Highway Operations** Responsible for the safe operation and maintenance of the state's highway and bridge system, including snow and ice control, equipment repair, and maintenance.
- **Policy and Planning** Responsible for conducting planning studies for the movement of people and goods for all modes of transportation, preparing highway location plans and conceptual layouts, conducting alternatives analyses, administering DOT's statewide commuter parking lot program, and planning and coordinating the development of bicycle and pedestrian facilities.

• **Public Transportation** – Responsible for the development, maintenance, and operation of a safe and efficient public transportation system for the movement of people and goods, such as bus transit, rail operations, the two Connecticut River ferries, and ridesharing programs.

Governor Dannel P. Malloy appointed James P. Redeker transportation commissioner on August 25, 2011, and he served in that capacity through January 31, 2019. Governor Ned Lamont appointed Joseph Giulietti transportation commissioner on February 1, 2019, and he served in that capacity throughout the audited period. Governor Lamont nominated Garrett T. Eucalitto to succeed Commissioner Giulietti and the State Senate confirmed him on January 25, 2023.

Significant Legislation

Noteworthy legislation that took effect during the period under review and presented below:

- Public Act 18-81 (Sections 2, 28, 46, 47, 62 and 63), effective July 1, 2018, adjusted Special Transportation Fund appropriations and accelerated the transfer of dealer motor vehicle sales and use tax revenue to stabilize the fund in the short term. It directed transfers be phased in over five years as follows: 8% in the 2018-2019 fiscal year, 33% in the 2019-2020 fiscal year, 56% in the 2020-2021 fiscal year, 75% in the 2021-2022 fiscal year, and 100% in the 2022-2023 fiscal year.
- **Resolution Act 17-1**, approved by voters on November 6, 2018, amended article third of the Constitution of the State of Connecticut by adding Section 19, which prohibits the transfer of funds from the Special Transportation Fund and mandates that all of the fund's resources be used solely for transportation purposes, including the payment of state transportation debts. However, while the amendment refers to sources of funding, it has been interpreted as protecting only amounts already credited to the fund. The fund does not maintain significant reserves.
- **Public Act 19-117 (Sections 317 and 218)** modified the schedule for motor vehicle sales and use tax revenue transfers to the Special Transportation Fund by reducing the percentage from 33% to 17% and 56% to 25% in the 2019-2020 and 2020-2021 fiscal years, respectively. Additionally, the public act reclassified \$30,000,000 of the fund's 2019-2020 fiscal year resources as revenues in the 2020-2021 fiscal year.

Boards and Commissions

Connecticut Bicycle and Pedestrian Advisory Board

The Connecticut Bicycle and Pedestrian Advisory Board, codified in Section 13b-13a of the General Statutes, is within DOT for administrative purposes only. The board's duties include examining the need for bicycle and pedestrian transportation, promoting programs and facilities for bicycles and pedestrians in Connecticut and advising state agencies on bicycle and pedestrian policies, programs, and facilities. The board must submit a report by January 15th of each year to the Governor, DOT commissioner, and the General Assembly regarding progress on the environment for bicycling and walking in the state, and recommendations for improvements. The

report must also include any related DOT actions in the preceding fiscal year. DOT is required to assist the board in carrying out its responsibilities.

Connecticut Commuter Rail Council

The Connecticut Commuter Rail Council is an independent board that acts as an advocate for rail commuters throughout the state under Section 13b-212c of the General Statutes.

Scenic Road Advisory Committee

Section 13b-31c-2 of the Regulations of Connecticut State Agencies required the Department of Transportation to establish a Scenic Road Advisory Committee, which includes representation from DOT, the Department of Energy and Environmental Protection, and the Department of Economic and Community Development. The committee assists in determining whether state highways, or portions thereof, are appropriate for designation as scenic roads and evaluates projects involving scenic roads to determine whether they will affect their scenic characteristics.

Merritt Parkway Advisory Committee

The Merritt Parkway Advisory Committee advises DOT on all Merritt Parkway matters. The committee is comprised of representatives from the eight towns the parkway traverses, DOT, metropolitan planning organizations, the Federal Highway Administration, the State Police Troop G commander, the Connecticut Chapter of the American Institute of Architects, the Connecticut Chapter of American Society of Landscape Architects, the Connecticut Trust for Historic Preservation, and the Merritt Parkway Conservancy.

RÉSUMÉ OF OPERATIONS

The Department of Transportation has approximately 3,000 employees and expenditures of \$2,239,107,950 and \$2,310,022,835 during the fiscal years ended June 30, 2019 and 2020, respectively. Most of DOT's operations were accounted for in three funds – the Transportation Fund, the Transportation Grants and Restricted Accounts Fund, and the Infrastructure Improvement Fund. The Transportation Fund essentially takes the place of the General Fund for DOT. The Transportation Grants and Restricted Accounts Fund primarily accounts for federal transportation funding provided to the state. The Infrastructure Improvement Fund is used to account for state funding for major capital transportation projects. It is funded by the issuance of special obligation bonds, the debt service on which is paid from the Transportation Fund. These funds are, in the aggregate, commonly referred to as the Special Transportation Fund.

Revenue Receipts

Department of Transportation revenue for all funds for the audited period and the preceding fiscal year are presented below:

Department of Transportation Revenue by Fund				
Fund	2017-2018	2018-2019	2019-2020	
General	\$ 121	\$ -	\$ -	
Transportation	18,372,162	27,512,863	18,564,423	
Public Bus/Rail Operations	40,874,198	43,620,295	33,227,333	
Transportation Grants and Restricted Accounts – Federal	743,742,195	705,203,417	768,324,073	
Transportation Grants and Restricted Accounts				
– Non-Federal	14,768,522	76,014,622	29,261,748	
Total Receipts	\$ 817,757,198	\$852,351,197	\$ 849,377,577	

Transportation Fund revenues shown on this schedule are those deposited by the Department of Transportation. Transportation Fund revenues consist primarily of tax revenues and motor vehicle licenses collected by other state agencies. A schedule of Transportation Fund revenue by source is presented later in this report.

The increase in Transportation Fund revenues in the fiscal year ended June 30, 2019 is due to the \$9,539,000 sale of a parcel of land in Norwalk made in accordance with Section 23 of Public Act 15-1 in the June Special Session.

Federal funding fluctuates from year to year, since most is used for infrastructure improvements and involves multiyear capital projects.

The decrease in Public Bus/Rail Operations revenues in the fiscal year ended June 30, 2020 is due to a drop in public transit ridership during the COVID-19 pandemic.

The increase in Transportation Grants and Restricted Accounts Fund non-federal revenue in the fiscal year ended June 30, 2019 primarily reflects new funding from the National Railroad Passenger Corporation (Amtrak) in accordance with the Passenger Rail Investment and Improvement Act of 2008 (PRIIA). These revenues totaled \$64,158,872 and \$23,024,169 in the fiscal years ended June 30, 2019 and 2020, respectively.

The Passenger Rail Investment and Improvement Act of 2008 established a Northeast Corridor Infrastructure and Operations Advisory Commission to, among other things, develop a cost sharing policy for capital costs amongst the multiple users of the Northeast Corridor. It required Amtrak and commuter authorities to enter into agreements to implement the policy. The Amtrak funds received represent its share of certain DOT rail infrastructure costs.

Expenditures

Department of Transportation expenditures for all funds for the audited period and the preceding fiscal year are presented below:

Department of Transportation Expenditures by Fund				
Fund	2017-2018	2018-2019	2019-2020	
Transportation	\$ 651,050,963	\$ 693,011,559	\$ 715,397,251	
Public Bus/Rail Operations	40,416,071	44,637,043	35,814,561	
STEAP – Grants to Local Governments	31,746,914	31,352,463	27,828,025	
Transportation Grants and Restricted Accounts				
– Federal	737,941,154	686,948,737	797,322,205	
Transportation Grants and Restricted Accounts				
– Non-Federal	7,356,075	8,393,746	3,619,166	
Infrastructure Improvement	778,712,561	773,949,073	727,886,808	
Net Other Funds	4,099,274	815,329	2,154,819	
Total Expenditures	\$2,251,323,012	\$2,239,107,950	\$2,310,022,835	

During the audited period, the Transportation Fund directly financed 31% of DOT expenditures. The Infrastructure Improvement Fund provided 33% of DOT funding through the issuance of special obligation bonds, the debt service on which is paid from the Transportation Fund. The Transportation Fund supported 64% of DOT expenditures, either directly or indirectly through the Infrastructure Improvement Fund. Infrastructure Improvement Fund expenditures are funded through the issuance of special obligation bonds. The Transportation Fund is responsible for the debt service payments on these bonds. The remainder of the DOT budget was comprised of 33% in federal grants and 3% from various sources.

These percentages do not include DOT-related expenditures by the Department of Administrative Services (insurance and workers' compensation), Office of the State Comptroller (fringe benefits), and Office of the State Treasurer (debt service). These expenditures are not classified as DOT expenditures in Core-CT or the State Comptroller's statutory basis reports even though they support DOT operations and are charged to the Transportation Fund.

Town Aid Road program expenditures totaled \$30,000,000 annually in the fiscal years ended June 30, 2018, 2019, and 2020. In the fiscal year ended June 30, 2020, they were partially offset by a \$2,744,784 reimbursement from the federal Department of the Army for fiscal year 2016-2017 expenditures associated with dredging North Cove harbor in Old Saybrook. An additional \$30,000,000 was paid each year under the Town Aid Road program in the Infrastructure Improvement Fund.

Transportation Grants and Restricted Accounts Fund (federal portion) and Infrastructure Improvement Fund program activity fluctuates from year to year. These expenditures are primarily for infrastructure improvements and involve numerous multiyear capital projects. There were 1,063 projects with charges that exceeded \$100,000 to one or both funds for the two-year audited period.

Total DOT personal services expenditures increased slightly during the audited period. DOT had 2,897, 2,873, and 3,074 employees as of June 30, 2018, 2019, and 2020, respectively. Total DOT wages and salaries expenditures were \$235,990,632, \$239,301,757, and \$242,114,746 for the fiscal years ended June 30, 2018, 2019, and 2020, respectively.

Transportation Fund Revenue Receipts

Transportation Fund Revenue by Source				
Source	2017-2018	2018-2019	2019-2020	
Motor Fuels Tax	\$ 499,832,662	\$ 509,701,432	\$ 478,192,982	
Taxes on Petroleum Companies	312,505,518	313,050,465	230,356,472	
Sales and Use Tax	327,458,431	370,579,539	400,908,170	
Motor Vehicle Use Tax (Casual)	85,906,190	87,263,153	73,126,233	
Tax Refunds	(10,049,873)	(32,148,704)	(30,397,716)	
Motor Vehicle Licenses	253,073,959	250,361,087	241,642,954	
Net Other Revenue Receipts	161,344,030	189,337,108	122,755,911	
Fund Total	\$1,630,070,917	\$1,688,144,080	\$1,516,585,006	

Transportation Fund revenue from all sources for the audited period and the preceding fiscal year is presented below:

During the audited period, tax revenues and motor vehicle licenses were the primary funding sources for the Transportation Fund, comprising 75% and 15% of the fund's support, respectively.

Connecticut's petroleum products gross receipts tax is calculated as a percentage of gross sale of petroleum products in the state. It is assessed at the wholesale level and is volatile because it is tied to price. This contrasts with the motor fuel tax, which is assessed on a per gallon basis. The petroleum products gross receipts tax remained at 8.1% during the three fiscal years presented above.

The decreases in motor fuels tax revenues and petroleum products gross receipts tax revenues in the fiscal year ended June 30, 2020 were due to a drop in fuel usage and prices in the first year of the COVID-19 pandemic. The motor fuels tax fell by 6% and was only affected by the decrease in fuel usage. The petroleum products gross receipts tax fell by 26%, due to reductions in fuel usage and prices.

Sales and use tax revenue increased during the audited period due to legislative changes to the amount of sales tax diverted to the Transportation Fund. Eight percent of dealer motor vehicle sales and use tax revenue was transferred to the Transportation Fund in the fiscal year ended June 30, 2019. The percentage increased to 17% for the fiscal year ended June 30, 2020. Sales and use tax revenue on casual sales (sales by other than licensed dealers) of motor vehicles are broken out separately in the schedule above.

Total Transportation Fund revenues increased slightly during the fiscal year ended June 30, 2019, but then decreased significantly by \$171,559,074, or 10% during the fiscal year ended June 30, 2020. The decrease reflects the economic fallout from the COVID-19 pandemic and the transfer of \$30,000,000 in revenues to the fiscal year ended June 30, 2021, essentially reclassifying them as revenues in that year.

Transportation Fund Expenditures

Transportation Fund Expenditures by Agency				
Agency	2017-2018	2018-2019	2019-2020	
Department of Transportation	\$ 651,050,963	\$ 693,011,559	\$ 715,397,251	
Department of Administrative Services	13,170,483	14,663,182	14,634,837	
Department of Energy & Environmental				
Protection	2,691,973	2,795,795	2,704,283	
Department of Motor Vehicles	64,147,923	63,704,208	63,677,733	
Office of the State Treasurer	574,994,975	642,214,572	651,264,370	
Office of the State Comptroller	177,655,289	192,704,262	222,089,544	
Fund Total	\$ 1,483,711,606	\$ 1,609,093,578	\$ 1,669,768,018	

Transportation Fund expenditures for all agencies for the audited period and the preceding fiscal year are presented below:

Although over half of the expenditures charged to the Transportation Fund were recorded under other state agencies, most of these expenditures funded DOT operations. In the table above, expenditures for the Department of Administrative Services consisted primarily of DOT employee insurance and workers' compensation, the Office of the State Comptroller reflected DOT employee fringe benefits, and the Office of the State Treasurer involved debt service payments on bonds used to fund the Infrastructure Improvement Fund, which are almost entirely for DOTadministered projects.

Transportation Fund expenditures exceeded revenues by \$74,132,509 during the audited period due to the decrease in revenues in the fiscal year ended June 30, 2020. The decrease in revenues was caused by the economic fallout from the COVID-19 pandemic. The net decrease during the audited period was reflected in the change in Transportation Fund balance, as shown in the State Comptroller's statutory basis reports, from \$274,363,961 at the beginning of the audited period to \$230,233,943 as of June 30, 2020. The Transportation Fund does not have significant reserves. The fund balance as of June 30, 2020 is only sufficient to fund less than two months of average expenditures.

New Bonds Issued to Support the Infrastructure Improvement Fund						
Fiscal Year Ended June 30,		Principal		Premium		Total
2013	\$	502,290,000	\$	100,561,994	\$	602,851,994
2014		600,000,000		73,252,613		673,252,613
2015		600,000,000		105,603,926		705,603,926
2016		700,000,000		114,572,807		814,572,807
2017		800,000,000		152,914,080		952,914,080
2018		800,000,000		109,887,037		909,887,037
2019		750,000,000		73,785,536		823,785,536
2020		850,000,000		150,742,426		1,000,742,426
2021		875,000,000		221,754,137		1,096,754,137

Additionally, the amount of debt issued each year to support expenditures of the Infrastructure Improvement Fund, which is serviced by the Transportation Fund, increased steadily in recent years. Aggregate principal and interest due on outstanding bonds increased from \$4,578,023,000 as of June 30, 2012 to \$9,204,833,000 as of June 30, 2020.

Increased mandatory debt service payments reduce the amounts available for discretionary spending in future years. The following chart compares the increase in outstanding Transportation Fund debt service payments (principal and interest) at the end of each fiscal year with Transportation Fund revenue receipts for the year.



Section 3-21 of the General Statutes provides that no bonds, notes, or other indebtedness payable from the General Fund may be issued or outstanding if the total amount of indebtedness exceeds 1.6 times the total estimated General Fund tax receipts for the current fiscal year (the statutory debt limit). The following chart compares the ratio of the outstanding special tax obligation bond principal at the end of each fiscal year with Transportation Fund revenue receipts for the year.



Auditors of Public Accounts

Transportation Fund debt is not limited by statute. As a result, the ratio of Transportation Fund debt to the fund's revenues has significantly exceeded the maximum permitted for the General Fund. The Transportation Fund bond principal outstanding as of June 30, 2021 was 3.91 times the total Transportation Fund annual revenues for the fiscal year ended June 30, 2021.

Transportation infrastructure costs are anticipated to increase in the future. The Transportation Fund's debt load cannot increase indefinitely without additional revenue to ensure the fund's solvency.

Transportation Fund expenditures for DOT for the audited period and the preceding fiscal year are presented below.

Transportation Fund Expenditures for DOT by Special Identification Code*				
Special Identification Code	2017-2018	2018-2019	2019-2020	
Personal Services	\$ 164,129,284	\$ 168,405,322	\$ 164,115,769	
Other Expenses	53,406,018	56,524,787	53,007,564	
Highway Planning and Research	2,244,609	2,583,016	2,838,478	
Rail Operations	210,083,476	209,480,248	230,430,467	
Bus Operations	166,104,980	195,934,741	200,948,745	
ADA Para Transit Program	39,039,427	39,089,034	40,971,360	
Pay-As-You-Go Transport Projects	11,240,905	15,625,124	18,529,419	
Net Other Expenditures	4,802,264	5,369,287	4,555,449	
Fund Total	\$ 651,050,963	\$ 693,011,559	\$ 715,397,251	

* The special identification code identifies budgeted fund appropriations and the source and use of funding in non-appropriated funds.

Personal services expenditures were stable during the audited period. Fluctuations in project activity affect the level of Transportation Fund personal services expenditures. DOT allocates personal services costs to the Transportation Fund unless employees are working directly on projects accounted for in other funds. Therefore, the level of personal services costs charged to the Transportation fund varies inversely with the level of project activity.

Rail operations expenditures increased in the fiscal year ended June 30, 2020, due to larger operating subsidy payments to Metro-North Commuter Railroad. Metro-North Commuter Railroad operates the New Haven Line for DOT via a bi-state agreement. Similarly, bus operations expenditures increased in the fiscal year ended June 30, 2019, due to larger operating subsidy payments to CTtransit, the DOT bus service operated by its contractor.

Transportation Grants and Restricted Accounts Fund – Federal Expenditures

Transportation Grants and Restricted Accounts Fund federal expenditures for the audited period and the preceding fiscal year are presented below:

Transportation Grants and Restricted Accounts Fund – Federal by Program				
Federal Program	2017-2018	2018-2019	2019-2020	
Highway Planning and Construction	\$ 505,709,638	\$ 534,552,409	\$ 611,503,550	
Federal Transit Capital Investment Grants	28,708,905	41,965,834	58,800,205	
Federal Transit Formula Grants	143,803,035	61,919,335	81,119,821	
Bus and Bus Facilities Formula Program	405,831	-	9,008,112	
Public Transportation Emergency Relief				
Program	15,099,068	20,855,044	16,965,074	
Net Other Expenditures	44,214,677	27,656,115	19,925,443	
Fund Total	\$ 737,941,154	\$ 686,948,737	\$ 797,322,205	

Federal expenditures vary based on federal awards and vary during the project period based on the length and circumstances of each project. During the audited period, there were 635 projects that exceeded \$100,000 with charges to the Highway Planning and Construction, Federal Transit Capital Investment Grants, or Federal Transit Formula Grants programs.

The most expensive project spent \$122,158,455 during the audited period for the reconstruction of state and local roads associated with the realignment of I-84 in Waterbury (Project 151-273). This amount included \$86,109,408 previously charged to the Infrastructure Improvement Fund that were transferred to the Transportation Grants and Restricted Accounts Fund in the fiscal year ended June 30, 2020. Other high-cost projects included:

- \$60,991,197 for the construction of a universal interlocking for the tracks between the Norwalk River in Norwalk and the Saugatuck River in Westport (Project 301-181)
- \$52,128,813 for the rehabilitation of bridges in the Route 8/I-84 Interchange area in Waterbury (Project 151-326)
- \$38,082,975 for 80% of the three-year startup operating costs of the Hartford Line commuter rail services (Project 320-007)
- \$33,402,700 for safety improvements, resurfacing, enhancements, and bridge improvements on the Merritt Parkway (Project 158-211)
- \$32,503,553 for bridge rehabilitation (Project 630-699)

The Department of Transportation charges only direct costs to federal funds. Federal funds available to DOT and current Special Transportation Fund revenues are not sufficient to fund ongoing transportation projects. The amount of debt issued each year to fund ongoing transportation projects increased steadily during the audited period and thereafter. If DOT charged

state facilities and administrative costs to its federal funds, the state would have to issue additional long-term debt to make up the difference.

The decrease in the other expenditures category above reflects the ending of DOT's participation in the High-Speed Rail Corridors and Intercity Passenger Rail Service – Capital Assistance Grants program, included in that category, during the fiscal year ended June 30, 2018. There were no expenditures under this program in succeeding fiscal years.

Infrastructure Improvement Fund Expenditures

Infrastructure Improvement Fund expenditures for DOT for the audited period and the preceding year are presented below:

Infrastructure Improvement Fund by Special Identification Code [*]				
Special Identification Code	2017-2018	2018-2019	2019-2020	
Capitol Resurfacing Related Improvements	\$ 67,729,953	\$ 79,294,923	\$ 82,325,421	
Improve Construction Facilities	26,388,662	22,770,749	20,966,692	
Salt Storage & Maintenance Facility	11,015,528	7,275,664	11,101,157	
Improvements				
Bus/Rail Facilities & Improvements	134,488,750	145,928,105	164,584,036	
Urban Systems	12,261,821	14,272,654	9,542,723	
Improve State Bridge/Railroads	46,610,260	42,851,659	41,683,389	
Interstate Highway Projects	10,212,483	12,264,689	(58,274,812)	
Intrastate Highway Projects	50,213,530	72,306,123	41,216,271	
Roadmap for CT Economic Future	67,288,887	43,475,319	26,873,541	
Fix It First – Repair State Roads	52,848,196	43,345,598	49,983,797	
Fix It First – Repair Bridges	49,437,087	61,610,325	61,618,992	
Local Road & Bridge Projects	7,879,151	3,226,531	21,014,831	
Town Aid Road – STO	30,000,000	30,000,000	30,000,000	
Local Transport Capital Program	35,455,032	31,416,777	32,230,083	
Highway & Bridge Renewal	6,076,503	15,192,145	11,530,776	
Let's Go Ct Ramp-Up Program	129,216,176	135,172,574	165,951,375	
Net Other Expenditures	41,590,542	13,545,238	15,538,536	
Fund Total	\$ 778,712,561	\$ 773,949,073	\$ 727,886,808	

* The special identification code identifies budgeted fund appropriations and the source and use of funding in nonappropriated funds.

Expenditures in this fund vary, depending on the volume of construction and other activities. Fluctuations during the audited period reflected the net effect of changes in many individual projects. There were 597 projects with charges to the Infrastructure Improvement Fund that exceeded \$100,000 for the two-year period.

The most expensive project spent \$ 72,845,761 during the audited period for the relocation of 1-91 North Bound Interchange 29 and the widening of I-91 North Bound and Route 5/15 North Bound to I-84 East Bound (Project 63-703) in the Infrastructure Improvement Fund. Other high-cost projects included:

- \$60,000,000 for payments to towns and boroughs under the Town Aid Road grant program (Project 170-3005)
- \$52,225,068 for the upgrade of the New Haven Line's dockyard property along the Danbury Branch rail line in South Norwalk (Project 301-180)
- \$51,097,551 for the reconstruction of railroad bridges in Stamford to help reduce congestion and eliminate bottlenecking (Project 135-301)
- \$47,012,095 for the construction of a universal interlocking for the tracks between the Norwalk River in Norwalk and the Saugatuck River in Westport (Project 301-181)
- \$40,859,597 for the replacement of the New Haven Line signal system (Project 301-154)

STATE AUDITORS' FINDINGS AND RECOMMENDATIONS

Our examination of the records of the Department of Transportation disclosed the following five recommendations, of which four have been repeated from the previous audit:

Controls Over Nepotism

Criteria:

The Code of Ethics for Public Officials and State Employees prohibits an individual who is in a superior position from taking any action that furthers the financial interest of an immediate family member. The Office of State Ethics provides guidance for the application of this rule to situations in which an employee can hire or assign a family member to a paid position. The supervisory family member cannot take any action regarding a relative's hiring and evaluation process. The matter must be reassigned to a peer or to a superior of the employee who is not subject to the control or influence of the employee with the potential conflict.

DOT Policy No. EX.O.-26 states that relatives of current employees may be considered for employment provided that the relative would not be directly supervised by the employee or be in a position where the employed relative would be able to influence personnel actions. DOT Personnel Memorandum No. 2006-2 states that department employees shall not be employed in any position that places them above or under the chain of command, direct or functional, of any immediate family member. Any such situations shall be brought to the attention of Human Resources, who will consider and recommend whether to implement corrective action, which may include transfer to another work assignment and/or location.

Condition: We reviewed two instances in which DOT hired employees on different dates into positions that reported through the chain of command to immediate family members. One was two intermediate supervisory layers removed from the immediate family member and the other was four intermediate supervisory layers removed. We did not find any indication that their immediate family members influenced their hiring or other personnel actions. However, we noted the following internal control deficiencies.

The personnel file of the first employee hired contained a signed copy of Policy No. EX.O.-26 disclosing the relationship, but the other employee's file did not contain such a copy. Our comparison of the employment processing checklists DOT used when the employees were hired indicated that the department eventually stopped using the checklist to identify potential conflicts.

	There was no documentation on file in either instance describing how DOT addressed the potential conflicts of interest. Identifying potential conflicts of interest is important, but it is critical that management document that it evaluated the potential conflict and took mitigating action when necessary.
	One employee's personnel file contained eight DOT performance appraisals. Three were approved by peers or superiors of the higher- ranking family member, but the remainder were approved by intermediary supervisors reporting directly or indirectly to the higher- ranking family member.
	The other employee's personnel file contained two DOT performance appraisals. Both were approved by intermediary supervisors reporting directly or indirectly to the higher-ranking family member.
Context:	We could not readily determine how many DOT employees had immediate family members also employed by DOT.
Effect:	The control deficiencies noted increase the risk that personnel actions could be unduly influenced by immediate family members.
Cause:	Department of Transportation managers appeared to be aware of the need to mitigate potential conflicts of interest. However, DOT has not implemented procedures to adequately document that the department evaluated the potential conflict and took necessary action.
Prior Audit Finding:	This finding has not been previously reported.
Recommendation:	The Department of Transportation should thoroughly document its actions to identify and mitigate potential conflicts of interest and the risk of nepotism when immediate familial relationships exist between DOT employees. When a DOT employee is in an immediate family member's chain of command, all personnel actions affecting the employee should be approved by a peer or superior of the higher-ranking employee. (See Recommendation 1.)
Agency Response:	"Human Resources is in the process of reviewing the issue to determine whether there are any gaps in the wording or enforcement of the anti- nepotism policy to ensure that actions taken to identify and mitigate the risk of nepotism when immediate familial relationships exist between DOT employees are thoroughly documented. Legal will assist as needed."

Information Technology Disaster Recovery Plan Deficiencies

Criteria:	A comprehensive information technology (IT) disaster recovery plan is an essential part of an organization's plan for the continuity of operations in the event of a disaster or other interruption in IT systems. The disaster recovery plan should include detailed specifications to ensure the recovery of essential hardware and software items. It should also incorporate systematic procedures for carrying out the recovery process that prioritize the tasks to be performed and identify the people that will perform them.
	A disaster recovery plan must be tested regularly. Otherwise, it could fail to execute as expected.
Condition:	The Department of Transportation's disaster recovery plan defines the department's data backup procedures but otherwise provides only a high-level overview that, for the most part, describes the goals of the process. The plan does not include detailed specifications for essential hardware and software items to be recovered. It also does not incorporate procedures for carrying out the recovery process, prioritizing the tasks to be performed, or identifying the individuals who will perform them.
Context:	The Department of Transportation relies on its IT systems to perform agency administration and project management.
Effect:	The lack of a comprehensive and tested disaster recovery plan will hamper DOT efforts to promptly restore information technology functionality when a disaster occurs.
Cause:	The Department of Transportation informed us that it is in the process of developing a more detailed disaster recovery plan.
Prior Audit Finding:	This finding has been previously reported in the last two audit reports covering the fiscal years ended June 30, 2013 through 2018.
Recommendation:	The Department of Transportation should develop and regularly test a comprehensive disaster recovery plan for its information technology functions. (See Recommendation 2.)
Agency Response:	"In 2021, DOT completed the review and procurement of the new technology required to host agency applications and data in the Microsoft Azure Cloud. The transition to the cloud environment included:

- The creation of virtual machines, database servers and applications servers. The virtual servers were built and implemented in two environments: production and staging.
- Data communication line connectivity to the Microsoft Azure Cloud was configured, installed and network failover was designed and implemented.
- Data backup processes were developed, implemented, and data restore processes were tested.
- Production environment for database servers was implemented as a high availability cluster. High availability was tested.

The Microsoft Azure Cloud environment where the agency's applications and data are hosted supports compliance with a broad set of industry specific laws and meets broad international standards. Microsoft Azure has ISO 27001, ISO 27017, ISO 27018, ISO 22301, and ISO 9001 certifications such as those promulgated by the International Organization for Standardization (ISO).

Microsoft Azure provides infrastructure redundancy and data durability. Azure mitigates the risk of outages due to failures of individual devices, such as hard drives or even entire servers through the following:

- Data durability of Azure Storage (blobs, tables, queues, files and disks), facilitated by maintaining redundant copies of data on different drives located across fully independent physical storage subsystems. Copies of data are continually scanned to detect and repair bit rot.
- Cloud Services availability, maintained by deploying roles on isolated groupings of hardware and network devices known as fault domains. The health of each compute instance is continually monitored and roles are automatically relocated to new fault domains in the event of a failure.
- Network load balancing, automatic operating system and service patching is built into Azure. The Azure application deployment model also upgrades customer applications without downtime by using upgrade domains, a concept similar to fault domains, which helps ascertain that only a portion of the service is updated at a time.

In addition to the core data durability built into Azure, Azure provides customers with a feature to capture and store point-in-time backups of their stored Azure data. This allows customers to protect their applications from an event of corruption or unwanted modification or deletion of its data.

We believe the transition to the Microsoft Azure Cloud environment, with its many disaster recovery protections and procedures, has largely addressed the disaster recovery needs of the agency. The agency will document response procedures, recovery roles and recovery drill schedule for cloud and on-premises infrastructure. The Department's disaster recovery plan will be considered a living document. Enhancements and adjustments will be added over time to overlay and supplement the extensive Microsoft disaster recovery features."

Cost-Effectiveness Evaluations Should be Refined

- *Background:* The Department of Transportation utilizes engineering consultants when it needs to temporarily increase its capacity in response to fluctuating workloads. The consultants may work alongside DOT employees and are similarly supervised. DOT exercises control over engineering consulting charges by requiring annual audits to verify that billings are supported by actual costs and to ensure consultants do not exceed contractually agreed-upon profit margins.
- *Criteria:* Section 4e-16(p) of the General Statutes requires state agencies to perform a cost-effectiveness evaluation before entering or renewing a privatization contract to determine whether the contract is the most costeffective method of delivering the service. The Office of Policy and Management (OPM) provides guidance to state agencies on such evaluations.
- *Condition:* We reviewed two DOT 2019 cost-effectiveness evaluations for engineering consultants. The evaluations implied that it is considerably more expensive to utilize consultants rather than having DOT employees perform the work. However, we found that DOT's evaluations did not consider all potential costs.

The evaluations included all the costs associated with outsourcing the work but did not take into consideration a significant portion of the cost of DOT performing the work. Specifically, the evaluations assumed:

- DOT incurs substantial costs for contract oversight by DOT employees. However, the DOT evaluations did not provide for equivalent costs of overseeing DOT employees. Furthermore, the DOT estimation method appeared arbitrary, and the calculations reflected a significant mathematical error.
- State employees would be paid for the same number of hours billed by the consultants. The evaluations did not include the effect of paid leave and other potential costs.
- State employees would be paid, on average, near the midpoint of the applicable salary schedule. Our review of current DOT salaries indicated that actual salaries were slightly higher.

	• State employee salary levels would conform to pay plans effective July 1, 2015. However, most of the payments on the two evaluated consultant contracts were made after a 3.5% cost of living increase effective July 1, 2019, and they continued after an additional 3.5% cost of living increase effective July 1, 2020.
	• DOT would be able to significantly expand its workforce without an associated increase in indirect costs.
	Additionally, DOT did not consider that its employees could be idle during slower periods if it increased staffing levels to cope with peak workloads.
	The Department of Transportation responded that it would correct the mathematical error in future evaluations. However, DOT implied that it was otherwise constrained by the guidance provided in the OPM Cost Effectiveness Evaluation Manual.
Context:	The Department of Transportation's consultant expenditures under the Engineer/Architect Services account code totaled \$203,093,458 and \$192,332,110 during the fiscal years ended June 30, 2019 and 2020, respectively.
Effect:	Inaccurate cost-effectiveness evaluations can adversely influence decision makers that rely on them.
Cause:	These are complex evaluations that inevitably reflect a degree of subjectivity. It appears that those performing the evaluations used assumptions they felt were reasonable in the context of the guidance provided by OPM.
Prior Audit Finding:	This finding has been previously reported in the last audit report covering the fiscal years ended June 30, 2017 through 2018.
Recommendation:	The Department of Transportation should confer with the Office of Policy and Management to ensure that its privatization cost- effectiveness evaluations are accurate and consider all costs associated with competing alternatives. (See Recommendation 3.)
Agency Response:	"We agree with this finding. The Office of Finance has formally shared this finding to OPM and have offered to work with OPM to develop a methodology that will consider all associated costs when creating the CEEs and CBAs. Statutorily, it is OPM's responsibility to revise the template utilized by all agencies."

Delays in Addressing Potential Conflicts of Interest

Criteria:	The Code of Ethics for Public Officials states that employees have a potential conflict of interest when they or their close family members are able to derive a financial or other benefit from employees' actions or decisions in their official capacity. If a potential conflict of interest exists, an employee must provide a written statement describing the conflict to the immediate supervisor, who will assign the matter to another employee.
	One of the ways the Department of Transportation addresses potential conflicts of interest involving external business relationships is by requiring all employees to disclose situations in which the employment of a family member could conflict with the employee's DOT responsibilities. All employees must complete, and update as necessary, a form identifying all family members employed by contractors doing business with, or seeking to do business with, DOT.
Condition:	DOT did not promptly address potential conflicts of interest involving external business relationships identified in our previous audits. Additionally, DOT was not able to provide us with a control log to track potential conflicts and did not periodically remind employees to update their conflict-of-interest forms when necessary.
Context:	Managing conflicts of interest is a key concern for governmental organizations, as they must ensure that the public's interest is paramount. DOT is a large complex agency with over 3,000 employees. Proper operation of these control procedures is necessary to ensure the department addresses all potential conflicts.
Effect:	The failure to promptly address potential conflicts of interest could allow employees or their close family members to derive financial or other benefit from the employees' actions or decisions in their official capacity.
Cause:	DOT has not conducted its planned update of governing policies due to personnel turnover and the state's centralization of its human resources function.
Prior Audit Finding:	This finding has been previously reported in the last two audit reports covering the fiscal years ended June 30, 2013 through 2018.
Recommendation:	The Department of Transportation should periodically remind employees of their obligation to report potential conflicts of interest, establish a control log for reported conflicts, and promptly address them. (See Recommendation 4.)

Agency Response:	"We agree with this finding. This has been resolved. The Department
	has established a control log and addresses issues that pose the greatest
	risk first. Additionally, the Bureau of Finance and Administration has
	reviewed and updated the Memorandum FA-10 and FA-10A in June of
	2022. Further, the disclosure form will also be part of the promotion
	process and has always been part of the initial hiring process."

Flaw in Control Intended to Provide Accountability for Ferry Fares

- *Criteria:* The State Accounting Manual establishes policies and procedures for all state agencies and requires them to create internal control over cash receipts to minimize the risk of loss. The manual recommends the use of pre-numbered tickets, where appropriate, to facilitate the preparation of accountability reports. However, the effectiveness of this control is reduced when the tickets do not have a fixed value.
- Condition: The Department of Transportation operates two ferry services on the Connecticut River. The ferries charge per passenger or per vehicle fares. Although pre-numbered tickets incorporating a receipt for issuance to payees are used, a single ticket can be used for up to eight passengers. The employee collecting the fares records the number of passengers on the ticket. The effectiveness of this control is reduced, because the employee can record less than the number of fares they collected.
- *Context:* Revenues from ferry operations totaled \$183,283 and \$161,043 during the fiscal years ended June 30, 2019 and 2020, respectively. These revenues included the sale of discount coupon books in addition to cash fares.
- *Effect:* Internal control over the collection of fares is compromised.
- *Cause:* This control was not properly designed. The use of pre-numbered tickets is a standard control, but its effectiveness is reduced when the tickets do not have a fixed value.
- *Prior Audit Finding:* This finding has been previously reported in the last three audit reports covering the fiscal years ended June 30, 2011 through 2018.
- *Recommendation:* The Department of Transportation should use pre-numbered tickets with fixed values to improve accountability over ferry fares. (See Recommendation 5.)
- *Agency Response:* "We will implement a three tier tickets system: one for vehicles, one for weekend vehicles and one for pedestrians and cyclists. Each ticket tier will be a different color with a fixed value and pre-numbered.

Examples:

- A vehicle ticket would be florescent green in color with a value of \$5.00 and pre-numbered, also the ticket would include passenger numbers on it so the 1st Mate can punch the number for ridership data.
- A weekend vehicle ticket would be florescent yellow in color with a value of \$6.00 and pre-numbered, also the ticket would include passenger numbers on it so the 1st Mate can punch the number for ridership data.
- A pedestrian and cyclist ticket would be florescent orange with a value of \$2.00 and pre-numbered.

We believe this new ticketing system will address the Auditor's concerns. Having the tickets a different color will help the crew distinguish between the tickets and the florescent color will draw attention to the ticket. Draft prototype tickets have been developed and approved for production. Cost estimates have been received and a vendor has been selected for production. A purchase order will be submitted next month at the beginning of the new fiscal year. Tickets have a 20 day lead time dependent on paper availability. Tickets are on schedule to be implemented in the 2022 Ferry operating year."

RECOMMENDATIONS

Status of Prior Audit Recommendations:

Our prior audit report on the Department of Transportation contained nine recommendations. Five have been implemented or otherwise resolved, and four have been repeated or restated with modifications during the current audit.

- The Department of Transportation should develop and regularly test a comprehensive disaster recovery plan for its information technology functions. This recommendation is being repeated. (See Recommendation 2.)
- The Department of Transportation should limit information technology server room access to those who require regular access for legitimate operational purposes. This recommendation has been resolved.
- The Department of Transportation should consider all costs associated with competing alternatives and ensure that its privatization cost-effectiveness evaluations are accurate. This recommendation is being restated and repeated. (See Recommendation 3.)
- The Department of Transportation should promptly report matters to the Auditors of Public Accounts and State Comptroller as required under Section 4-33a of the General Statutes as soon as the department reasonably suspects that a reportable incident occurred. This recommendation has been resolved.
- The Department of Transportation should ensure that any concerns raised in police accident reports are documented and addressed when the department reviews accidents involving state vehicles. This recommendation has been resolved.
- The Department of Transportation should periodically remind employees of their obligation to report potential conflicts of interest, establish a control log for reported conflicts, and promptly address them. This recommendation is being repeated. (See Recommendation 4.)
- The Department of Transportation should use pre-numbered tickets with fixed values to improve accountability over ferry fares. This recommendation is being repeated. (See Recommendation 5.)
- The Department of Transportation should periodically verify that required mileage reports are completed and approved. This recommendation has been resolved.
- The Department of Transportation should improve its overtime and compensatory time approval processes. This recommendation has been resolved.

Current Audit Recommendations:

1. The Department of Transportation should thoroughly document its actions to identify and mitigate potential conflicts of interest and the risk of nepotism when immediate familial relationships exist between DOT employees. When a DOT employee is in an immediate family member's chain of command, all personnel actions affecting the employee should be approved by a peer or superior of the higher-ranking employee.

Comment:

We reviewed two instances in which DOT hired employees into positions that reported indirectly to immediate family members. There was no documentation on file in either instance describing how DOT addressed the potential conflict of interest. Furthermore, we noted that seven of ten of the two employees' performance appraisals were approved by intermediary supervisors reporting directly or indirectly to the higher-ranking family member.

2. The Department of Transportation should develop and regularly test a comprehensive disaster recovery plan for its information technology functions.

Comment:

The Department of Transportation's disaster recovery plan defines the department's data backup procedures but otherwise provides only a high-level overview that, for the most part, describes the goals of the process. The plan does not include detailed specifications for essential hardware and software. It also does not incorporate procedures for carrying out the recovery process, prioritizing the tasks to be performed, or identifying the individuals who will perform them.

3. The Department of Transportation should confer with the Office of Policy and Management to ensure that its privatization cost-effectiveness evaluations are accurate and consider all costs associated with competing alternatives.

Comment:

Our review of two DOT 2019 cost-effectiveness evaluations for engineering consultants revealed that DOT did not consider all potential costs, including staff supervision, paid leave, actual salaries, salary increases, and indirect costs.

4. The Department of Transportation should periodically remind employees of their obligation to report potential conflicts of interest, establish a control log for reported conflicts, and promptly address them.

Comment:

We noted previously that DOT did not promptly address identified potential conflicts of interest. Additionally, DOT was not able to provide us with a control log to track potential conflicts and did not periodically remind employees to update their forms when necessary. During our current audit, we found that DOT still has not implemented the recommended controls over potential conflicts of interest.

5. The Department of Transportation should use pre-numbered tickets with fixed values to improve accountability over ferry fares.

Comment:

The Department of Transportation operates two ferry services on the Connecticut River. The ferries charge per passenger or per vehicle fares. Although pre-numbered tickets incorporating a receipt for issuance to payees are used, a single ticket can be used for up to eight passengers. The employee collecting the fares records the number of passengers on the ticket. The effectiveness of this control is reduced, because the employee can record less than the number of fares they collected.

ACKNOWLEDGMENTS

The Auditors of Public Accounts wish to express our appreciation for the courtesies and cooperation extended to our representatives by the personnel of the Department of Transportation during the course of our examination.

The Auditors of Public Accounts also would like to acknowledge the auditors who contributed to this report:

Marcin Baran Jacob Rocco Tatsiana Sidarau Patrick Tierney

We want to especially acknowledge Principal Auditor James Carroll, who served as the lead auditor on this audit until his retirement.

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Approved:

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