NEVADA DEPARTMENT OF TRANSPORTATION

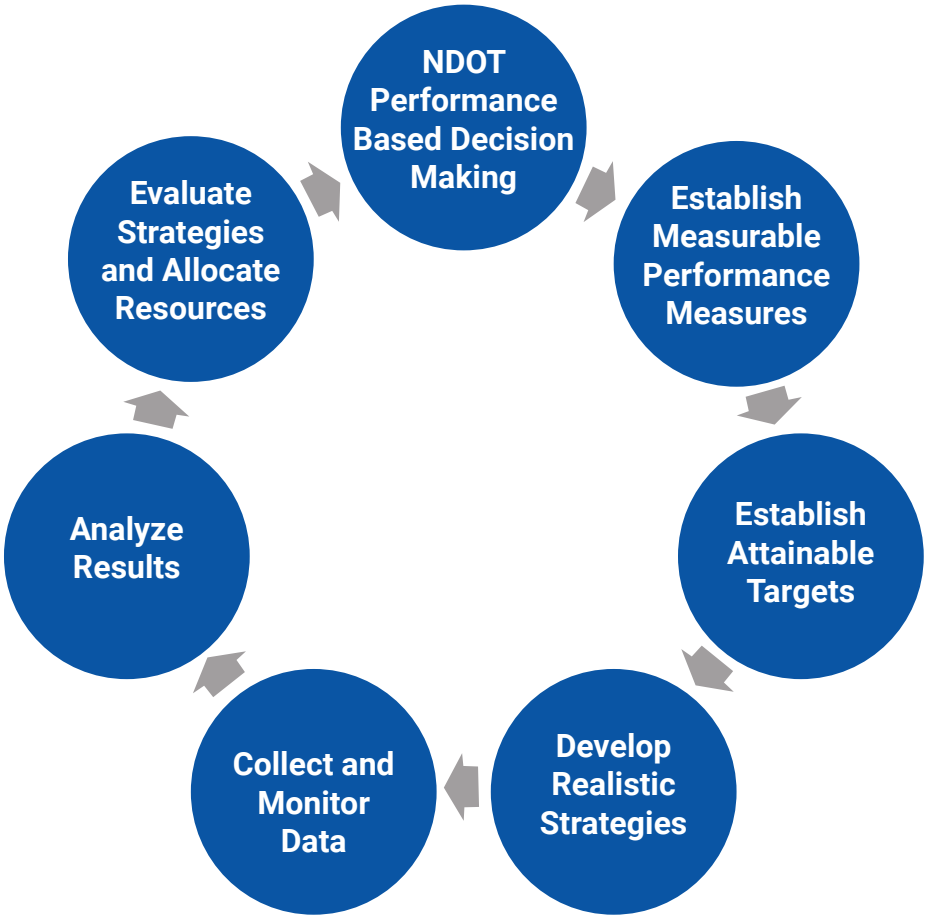
STATE FISCAL YEAR 2022 PERFORMANCE MANAGEMENT REPORT

December 2022

Kristina L. Swallow, P.E.
Director

2022 PERFORMANCE MANAGEMENT REPORT

Steve Sisolak
Governor



Performance Management Cycle

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Jeff Lerud	Deputy Director – Operations & Maintenance
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Jessen Mortensen	Chief Bridge Engineer
Wayne Miller	Equipment Superintendent
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Rod Schilling	Chief Traffic Operations Engineer

DEPARTMENT MISSION, VISION, CORE VALUES AND GOALS

MISSION

Provide, operate, and preserve a transportation system that enhances safety, quality of life and, economic development through innovation, environmental stewardship and a dedicated workforce

VISION

To be a leader and partner in delivering effective transportation solutions for a safe and connected Nevada

MISSION, VISION, CORE VALUES, and GOALS

GOALS

- Safety first
- Cultivate environmental stewardship
- Efficiently operate and maintain the state transportation system
- Enhance internal and external communications
- Enhance organizational and workforce development
- Consistent and effective data management

CORE VALUES

- Respect – Treat others with dignity and value their contribution
- Integrity – Do the right thing
- Accountability - Take pride in our work and be accountable for our actions
- Communication – Communicate with transparency and responsiveness both internally and externally
- Teamwork – Foster collaborative partnerships both internally and externally
- Flexibility – Be responsive to changing conditions and open to new ideas

INTRODUCTION

The Nevada Department of Transportation's (NDOT) Performance Management is a collaborative process in which all major divisions of the Department are involved in monitoring their quarterly, annual, and ultimate performance targets resulting in a customer- oriented, balanced, effective, efficient, and transparent decision-making process. It is a dynamic process, and improvements are incorporated into the performance management process on an ongoing basis. NDOT's performance management plays a vital role in the performance-based decision-making process. It: 1) ensures investment accountability and transparency, 2) tracks and monitors Department-wide performance, 3) helps identify and implement efficient and cost-effective performance-based programs, 4) links projects to the goals of the Department, 5) helps align performance targets with customer expectations, and 6) helps in delivering essential and high-quality projects.

The Department is required to develop a performance management plan which must include performance measures approved by the Transportation Board of Directors. The Department specific requirements are as follows:

1. **Section 47.2 – Annual Report on Performance Measures and General Project Information (NRS 408.133)**
   Prior to December 31 of each year, the Director of the Department of Transportation shall prepare a report as follows:
   - Goals and objectives of the Department and status of meeting those goals
   - Schedule, scope, cost and progress of any current or proposed highway project
   - Funding sources, amount and expenditures of the Department
   - The rationale used to establish priorities
   - Transportation board and legislative directives
   - Recommended plan amendments
2. **Section 47.3 – Annual Report on Benefit-Cost Analysis for capacity projects that cost at least $25 million (NRS 408.3195).**
   The annual report will include the criteria used in the benefit-cost analysis. The resulting benefit/cost ratios will be reported to the Transportation Board. Additionally, a written description of the analysis for any project must be submitted for project construction.
3. **Section 55.3 – Annual Report on projects funded through the Las Vegas Convention and Visitors Authority funding.**
   The report will include funding, descriptions, status, timelines, and information on the completed projects, if any (NRS 244A.638). As these funds have been fully expended, no projects utilized these funds during this period.
4. **Section 55.5 – Quarterly Report on General Project information for the Blue-Ribbon Task Force projects and any proposed super and mega (major) highway projects.**
   The report will include funding, descriptions, status, timelines, and information on the completed projects, if any. Report submitted to the Governor and the Director of the Legislative Counsel Bureau for transmittal to the Interim Finance Committee.

PERFORMANCE MANAGEMENT DASHBOARD (EXECUTIVE SUMMARIES)

EXECUTIVE SUMMARY

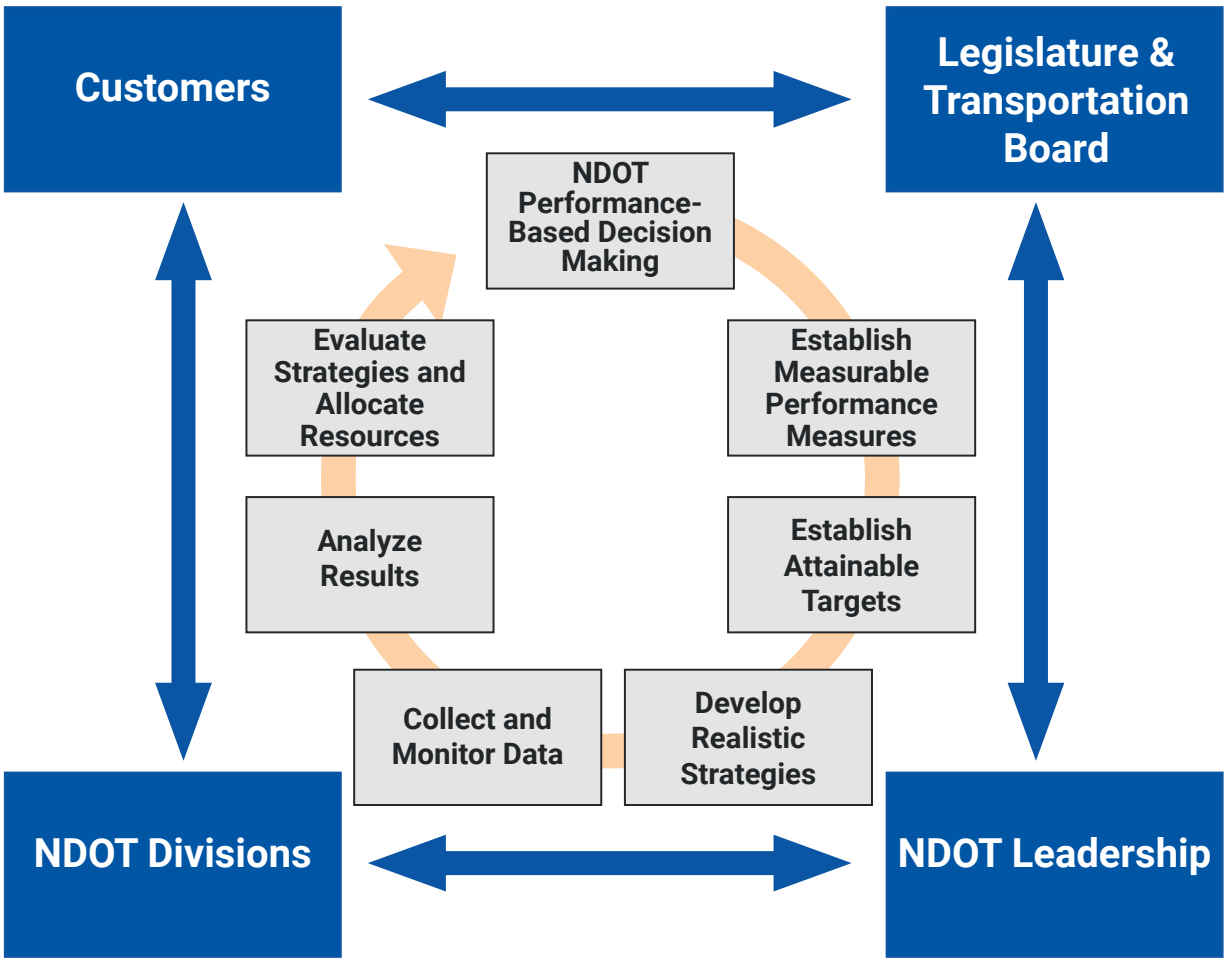
NDOT has established 16 performance goals and performance measures to track, monitor, and report on the major divisions and program areas. NDOT's performance management system focuses on the critical aspects of a cohesive, integrated, and performance-driven approach.

NDOT's Senior Leadership is actively involved in the performance management process and supports the process by conducting quarterly performance updates to help guide the various program areas in meeting their targets. NDOT's performance management system empowers staff to take ownership of the program, holds staff accountable for their division's performance, helps diagnose and address problems faced by the divisions in meeting their targets, and effectively communicates its performance-based decision-making process to the public and legislature.

In Fiscal Year 2022, NDOT continued to monitor its performance-based management process. The performance management dashboard, the performance measures overview, and the detailed data trends section of this report provide further information regarding NDOT's performance in Fiscal Year 2022.

NDOT STRATEGIC PERFORMANCE MANAGEMENT PROCESS

NDOT's Strategic Performance Management process is guided by comprehensive input from: 1) our customers in the form of surveys and direct two-way communication, 2) the State Legislature and decision makers, 3) leadership, commitment, and support from NDOT top management, and 4) collaborative team support from the major divisions and program areas of NDOT. The process is part of the performance-based decision-making cycle that includes identifying realistic and specific performance measures, establishing measurable and attainable targets, developing comprehensive and effective strategies to help achieve the targets, collecting quarterly data and monitoring, and evaluating strategies to help allocate our resources most effectively and efficiently. The following graphic shows the performance management process.



PERFORMANCE GOALS - MEASURES

1. Reduce Workplace Accidents
2. Provide Employee Training
3. Improve Employee Satisfaction
4. Streamline Agreement Process
5. Improve Customer and Public Outreach
6. Improve Travel Reliability & Reduce Delay
7. Streamline Project Delivery - Bidding to Construction Completion
8. Maintain State Highway Pavement
9. Maintain NDOT Fleet
10. Maintain NDOT Facilities
11. Emergency Management, Security and Continuity of Operations
12. Reduce Fatal & Serious Injury Crashes
13. Project Delivery - Schedule and Estimate for Bid Advertisement
14. Maintain State Bridges
15. Streamline Permitting Process
16. Reduce Greenhouse Gas Emissions

PERFORMANCE MEASURES OVERVIEW

Performance Measure		Target	Current Status	Target Met	Trend (5yrs or less)	Desired Trend
Employee						
Reduce Workplace Accidents (1)	Injuries/Illnesses per 100 employees	2% Annual reduction	0.86% Increase			
	Injuries/Illnesses requiring medical attention per 100 employees	2% Annual reduction	0.16% Decrease			
Provide Employee Training (2)	Percentage employees trained according to requirements	85% Compliance annually	83% average compliance			
Improve Employee Satisfaction (3)	Percentage employees satisfied with NDOT	75% Annually	46% Satisfied			
Project Delivery						
Streamline Agreement Process (4)	Percentage agreements processed within 20 days	90% Annually	99% Processed within 20 days			
Streamline Project Delivery – Bid Opening to Construction Completion (7)	Percentage projects completed on schedule and within budget	80% Annually	100% Within budget			
			100% Within schedule			
			66% Change order <3% cost increase			
Project Delivery – Schedule and Estimate for Bid Advertisement (13)	Percentage of scheduled projects advertised within the reporting Year	80% Advertised within the reporting year	78%			
	Percentage of advertised & awarded projects within established construction cost estimate range	80% Delivered within established cost estimate range	37% (Int. vs Award)			
			35% (Final vs Award)			
Streamline Permitting Process (15)	Percentage encroachment permits processed within 45 days	95% Annually	96.0% Processed within 45 days			
Assets						
Maintain State Highway Pavement (8)	State roadways maintained at "fair or better" condition (Road category definition in report)	Category 1: 95%	95.5%			
		Category 2: 90%	90.4%			
		Category 3: 85%	87.8%			
		Category 4: 75%	77.0%			
		Category 5: 50%	40.4%			
Maintain NDOT Fleet (9)	Percentage mobile equipment in need of replacement	1% Annual decrease	2.50% Increase			
	Percentage fleet in compliance with condition criteria	1% Annual increase	0.05% Increase			
Maintain NDOT Facilities (10)	Percentage completion of facilities assessments & priority work	0.66	0.67			
Maintain State Bridges (14)	Percentage bridges on the NHS in good condition	> 35%	49.6%			
	Percentage bridges on the NHS in poor condition	< 7.0%	1.1%			
	Percentage bridges on the non-NHS in good condition	> 35%	52.1%			
	Percentage bridges on the non-NHS in poor condition	< 7.0%	0.7%			

PERFORMANCE MEASURES OVERVIEW

Performance Measure		Target	Current Status	Target Met	Trend (5yrs or less)	Desired Trend
Safety						
Emergency Management, Security and Continuity of Operations (11)	Percentage of emergency management plans implemented	100%Annually	100% Compliance			
Reduce Fatal & Serious Injury Crashes (12)	Number of traffic fatalities	Reduction in the # of traffic fatalities compared to the target of 330.2	329.4			
	Number of serious traffic injuries	Reduction in the # of serious injuries compared to the target of 1,154.7	1035.2			
	Number of traffic fatalities per 100M VMT	Reduction in the rate of fatalities per 100M VMT compared to the target of 1.226	1.203			
	Number of serious traffic injuries per 100M VMT	Reduction in the rate of serious injuries per 100M VMT compared to the target of 3.835	3.854			
	Number of non-motorized fatalities and serious injuries	Reduction in the # of non-motorized fatalities & serious injuries compared to the target of 309.8	282			
Our Partners						
Improve Customer and Public Outreach (5)	Customer satisfaction & public outreach	75% Positive satisfaction level (Annual customer satisfaction survey)	64%			
Improve Travel Reliability & Reduce Delay (6)	Percent of person-miles traveled on Nevada interstate that are reliable	87.0% or higher	88.9%			
	Percent of person-miles traveled on Nevada non-interstate NHS that are reliable	87.0% or higher	93.1%			
	Annual hours of peak-hour excessive delay per capita (Urbanized Areas)	10.0 hours or less	9.1 hours			
	Percent of non-single occupancy vehicle travel in Nevada urbanized areas	21.6% or higher	22.5%			
	Freight trip reliability Index	1.26 or less	1.26			
Reduce Greenhouse Gas Emissions (16)	Percent reduction in greenhouse gas emissions	In alignment with state's goal (2005 baseline), 28% reduction by 2025 and 45% reduction by 2030	Fiscal years (2019, 2020, 2021, 2022) are being evaluated to establish baseline.	N/A		

PERFORMANCE DASHBOARD

The following Performance Management Dashboard provides an executive summary of each of the 16 performance goals and their related performance measures, targets, and the status of each performance measure in relation to established targets for Fiscal Year 2022. Detailed information regarding each performance measure is provided in the "Performance Management Detailed Data Trends" section of this report.

1. Reduce Workplace Accidents

Executive Summary: Two performance measures have been established for this performance goal: percentage of workplace injuries/illnesses per one hundred employees, and percentage of injuries/illnesses requiring medical attention per one hundred employees. The data is tracked per calendar year based on OSHA 300 Log Reporting, and a five-year rolling average is used for analysis. The five-year rolling average (2017 to 2021) for the injuries/illnesses not requiring medical attention increased from 7.34% to 8.20% compared to the previous five-year average, and injuries/illnesses requiring medical attention reduced from 4.46% to 4.30% compared to the baseline. The average claim cost increased from $11,930 to $12,123. For detailed information refer to page 31.

Performance Measure

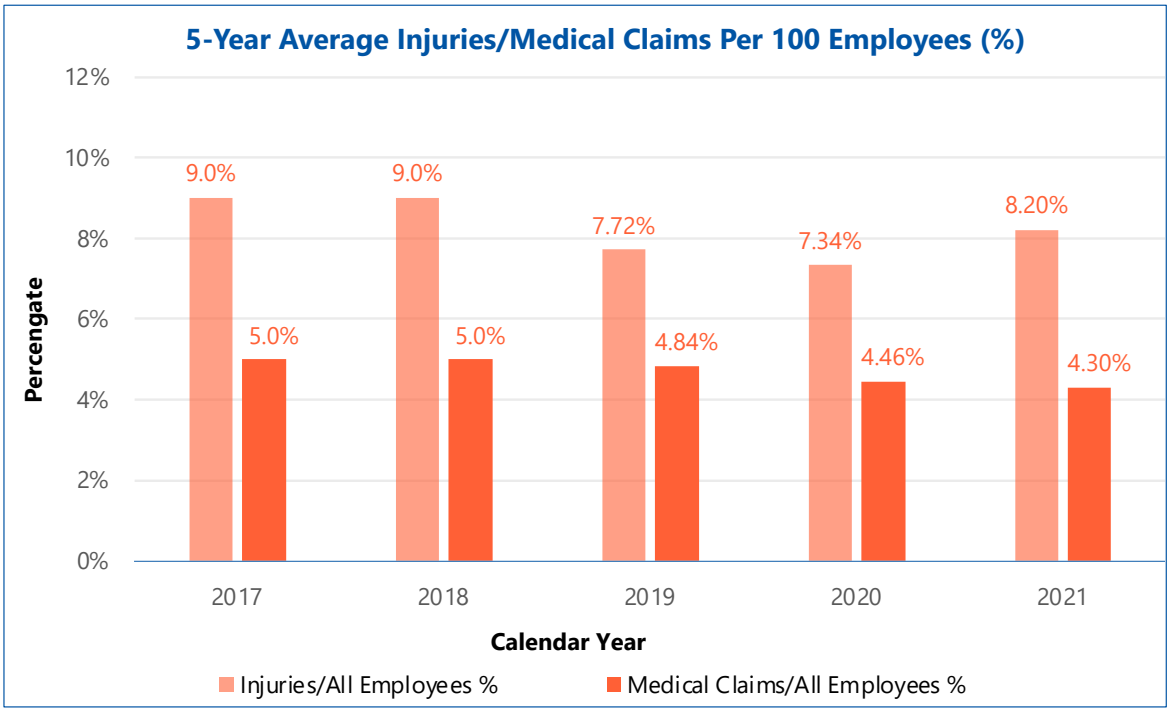
1) Percentage injury/illness per 100 employees
2) Percentage injury/illness requiring medical attention per 100 employees

Target

1) 2% Annual reduction
2) 2% Annual reduction

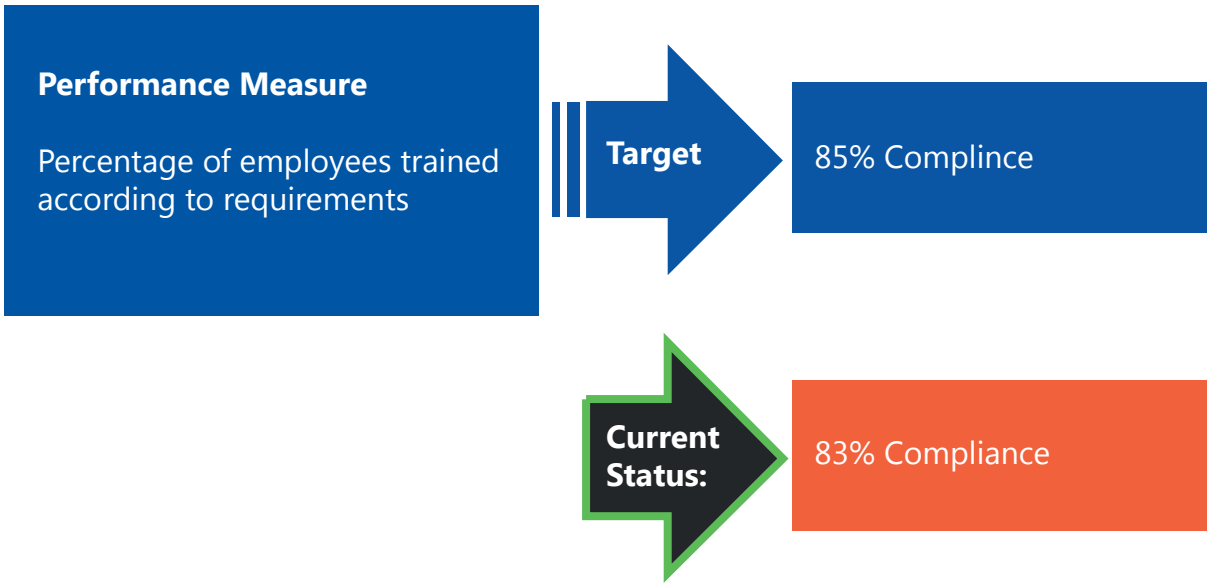
Current Status:

1) 0.86% Increase
2) 0.16% Reduction



2. Provide Employee Training

Executive Summary: The performance measure for this goal is the percentage of employees trained in accordance with prescribed training plans and State statute training requirements. The data is tracked through the State Fiscal Year (SFY). The target for required training in SFY 2022 was set at 85%, and an 83% compliance was achieved which is three percentage points higher than in SFY 2021, but two percentage points lower than the established target for 2022. Based on this level of achievement the target was not met though progress was made. Certain circumstances that occurred in 2022 were responsible for the target not being met. For detailed information about this performance measure refer to page 35.



Requirement	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2022 (Trained)*	FY 2022 (Requiring**)
Alcohol & Drug Program	75%	88%	92%	90%	92%	400	463
Defensive Driving	89%	91%	94%	83%	75%	1,196	1,591
EEO -Online	85%	89%	86%	89%	96%	420	436
Employee Appraisal	76%	84%	88%	86%	79%	344	436
Global Harmonization	91%	93%	96%	71%	78%	1,243	1,591
Grievance Procedures	80%	87%	90%	86%	83%	360	436
Internet Security Awareness	83%	89%	88%	51%	83%	1,328	1,591
Interviewing & hiring	82%	85%	90%	88%	82%	358	436
Progressive Discipline	72%	81%	85%	87%	82%	356	436
Sexual Harassment Prevention	83%	86%	92%	66%	82%	1,308	1,591
Work Performance Standards	78%	85%	90%	88%	77%	336	436
Average	**81%**	**87%**	**90%**	**80%**	**83%**		

*Total number of employees who attended training on this topic
** Total number of employees on 6/30/2022

3. Improve Employee Satisfaction

Executive Summary: The performance measure for this goal is the percentage of employees who are satisfied with the NDOT work environment. The approach for tracking this performance measure is through conducting the annual employee satisfaction survey during the State Fiscal Year. The percentage of employees surveyed who indicated that they are extremely or somewhat satisfied with NDOT in 2022 is 46%. The target was established at 75% satisfaction level, therefore the target was not met. The satisfaction level achieved in 2022 is lower than in 2021. However, the number of respondents in SFY 2022 was significantly higher than in SFY 2021. The decrease in satisfaction level in 2022 could be attributed to the lingering effects of the COVID-19 pandemic as well as the growing pay disparity between the state and other public agencies. For detailed information about this performance measure refer to page 40.

Performance Measure

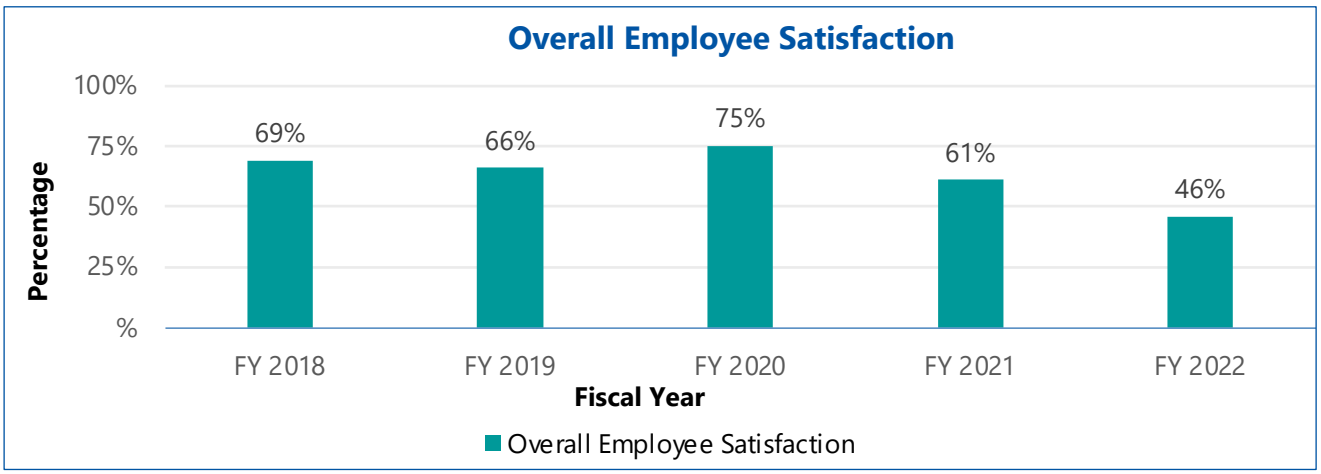
Percentage of employees satisfied with NDOT

Target

75% Annually

Current Status:

46% Satisfied



4. Streamline Agreement Process

Executive Summary: In state fiscal year (SFY) 2022, 99.1% of all agreements submitted to the Agreement Services section were executed within 20 days or less. This exceeds the established target of 90%. The goal to process an agreement was changed from 30 days or less to 20 days or less in 2020 because of prior years' successes.

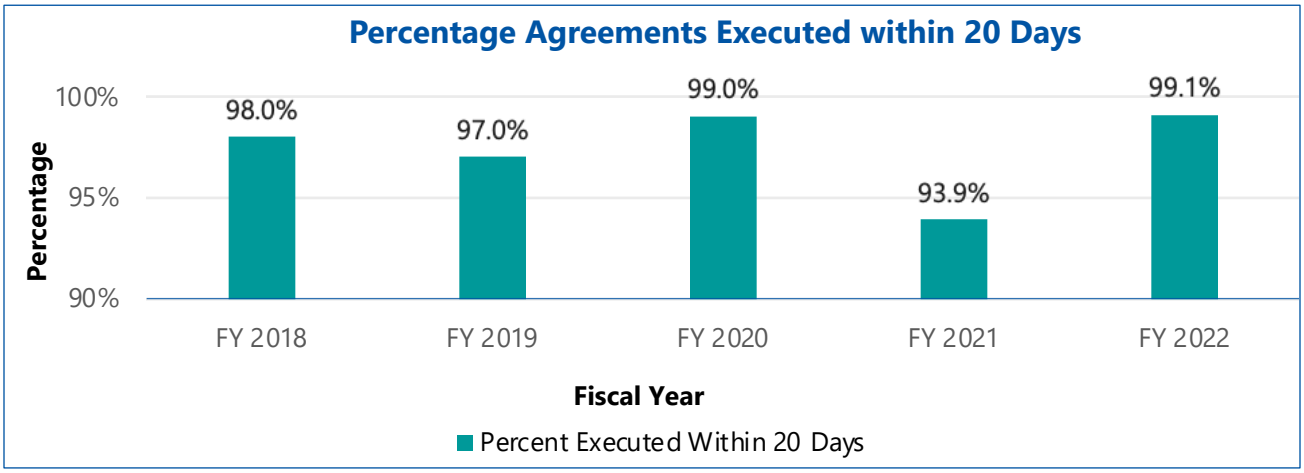
In 2022, it took an average of 6 days to process an agreement excluding weekends and holidays and the time agreements were with second parties or awaiting Transportation Board approval. The 6-day average was significantly less than the maximum 20 days established for the target and was very close to the ultimate target of processing 99% of agreements within 5 days. For detailed information about this performance measure refer to page 43.

Performance Measure

Percentage agreements executed within 20 days

Target → 90% Annually

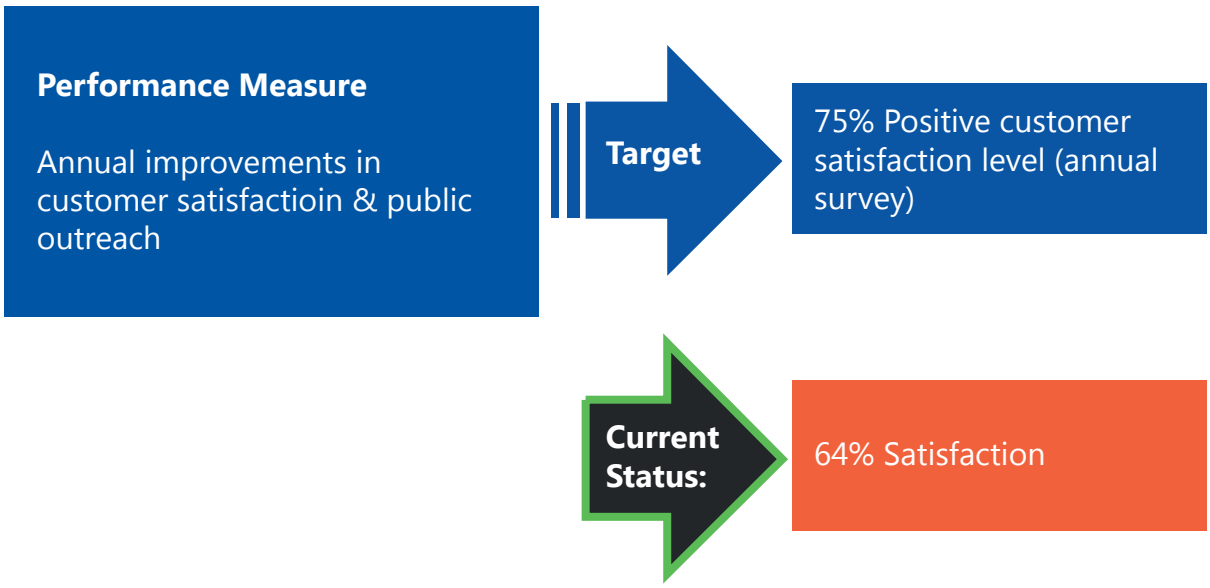
Current Status: → 99.1% Executed



5. Improve Customer and Public Outreach

Executive Summary: This performance measure works toward meeting the NDOT's Strategic Plan goal to enhance internal and external communications. It also aligns with two goals in the NDOT communications Strategic Plan: (1) improve internal and external customer service, and (2) build a cohesive statewide communications program. The metric tracked for this performance measure is the customer service satisfaction rating done through the Annual Customer Service Survey. Also, other performance metrics that are tracked to determine how the Department is doing include the following: Facebook likes, Twitter engagement, and Instagram followers.

In SFY 2022, a customer satisfaction level of 64% was achieved. This performance did not meet the set target of 75%. For more information refer to page 46.

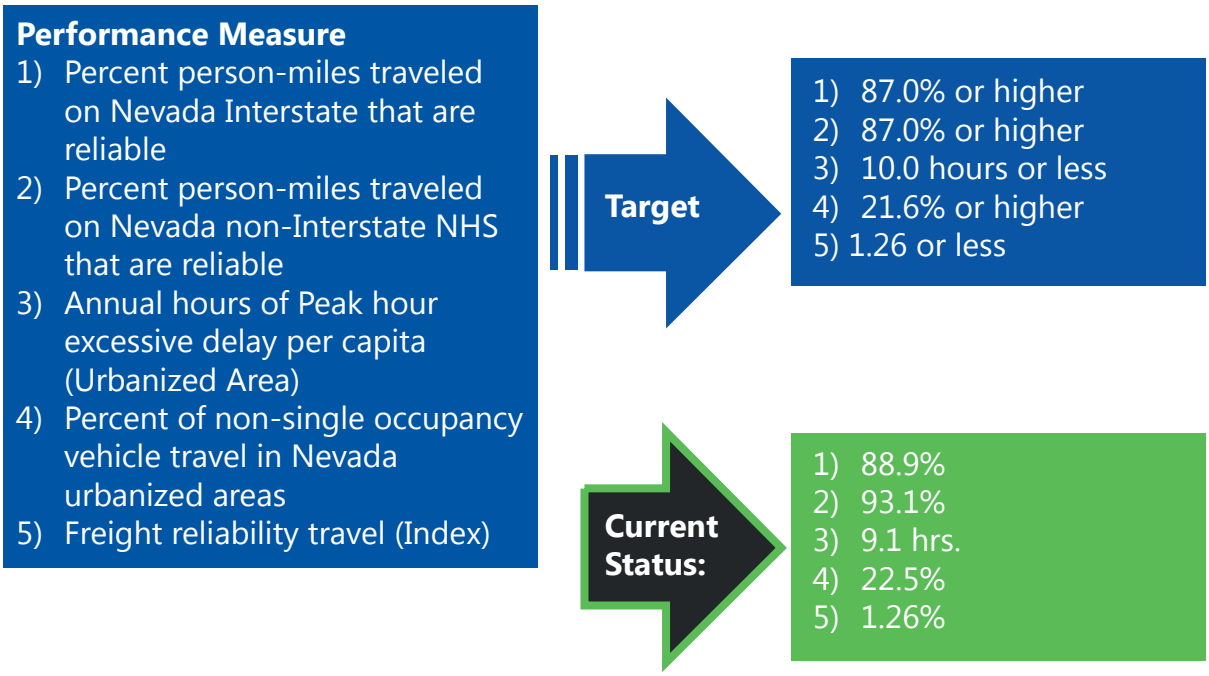


Items	FY2020	FY2021	FY2022	FY2023
Number of Respondents Rating NDOT Good	2,100	349	216	265
Total Number of Surveys	2,636	468	339	353
Percentage (of "good" responses)	80%	75%	64%	75%
Status	Actual	Actual	Actual	Projected

6. Improve Travel Reliability and Reduce Delay

Executive Summary: There are five performance measures related to this performance goal: percent of person-miles traveled on Nevada interstate system that are reliable; percent of person-miles traveled on Nevada non-interstate NHS routes that are reliable; annual hours of peak hour excessive delay per capita; percent of non-single occupancy vehicle travel, and truck travel time reliability index on the interstate system.

The National Performance Measurement Research Data Set (NPMRDS) was used to analyze the performance of Nevada's interstate and non-Interstate NHS roadway systems. Based on the analysis using calendar year (CY) 2021 data, 88.9% of person-miles traveled on Nevada interstate were reliable, exceeding the 87.0% target that was set. The non-interstate NHS roadways had a 93.1% reliability which exceeds the set target of 87.0%. Targets for the annual hours of peak hour excessive delay per capita, percent of non-single occupancy vehicle travel, and truck travel time reliability index were all met. For detailed information about this performance measure refer to page 52.



7. Streamline Project Delivery - Bidding to Construction Completion

Executive Summary: For this performance goal, Design Bid Build and Construction Manager at Risk (CMAR) projects completed during the state fiscal year are evaluated based on cost estimate, change orders, and schedule compared to established targets.

Evaluation does not include projects in progress but only completed projects. In SFY 2022, an average of 100% of completed contracts were within budget, 100% were within schedule, and 66% had change orders of less than three percent cost increase. Budget and schedule performance measures met and exceeded their set targets, while the change order target was not met. For detailed information about this performance measure refer to page 58.

Performance Measure

1) Percentage of projects completed within 10% of budget Percentages of
2) projects completed within 10% of working days

3) Percentage of projects completed with cost increase of less than 3% Change Orders

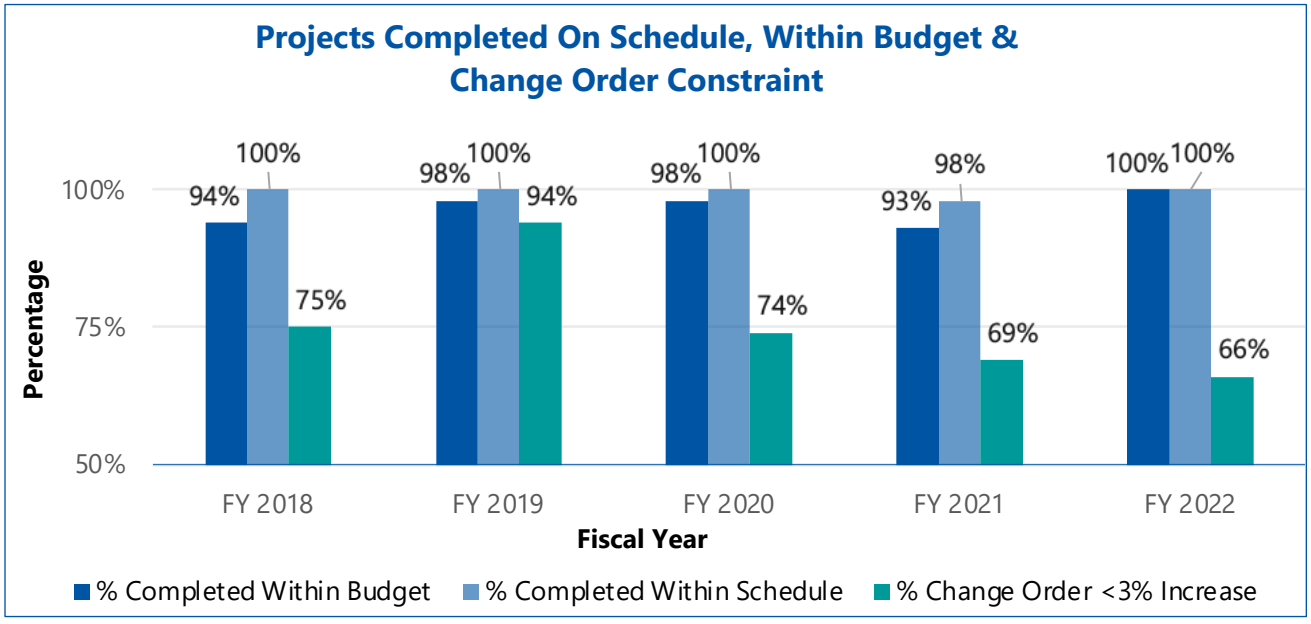
Target

80% Annually

Current Status:

1) 100% within budget
2) 100% within schedule

3) 66% with change orders < 3% cost increase



8. Maintain State Highway Pavement

Executive Summary: In SFY 2022, NDOT was able to meet the performance targets for pavement condition for categories 1, 2, 3, and 4, but was unable to meet the performance target for category 5 roadways. Also, for clarity, category 1 roadways were broken down into Asphalt and Concrete roadways in the analysis.

To maintain the roadway network in fair or better condition, the Department performs rehabilitation work on the roadways each year. To increase the percentage of pavements in "fair or better" condition, rehabilitation work must exceed the rate of deterioration of the pavement on all roads. For detailed information about this performance measures refer to page 61.

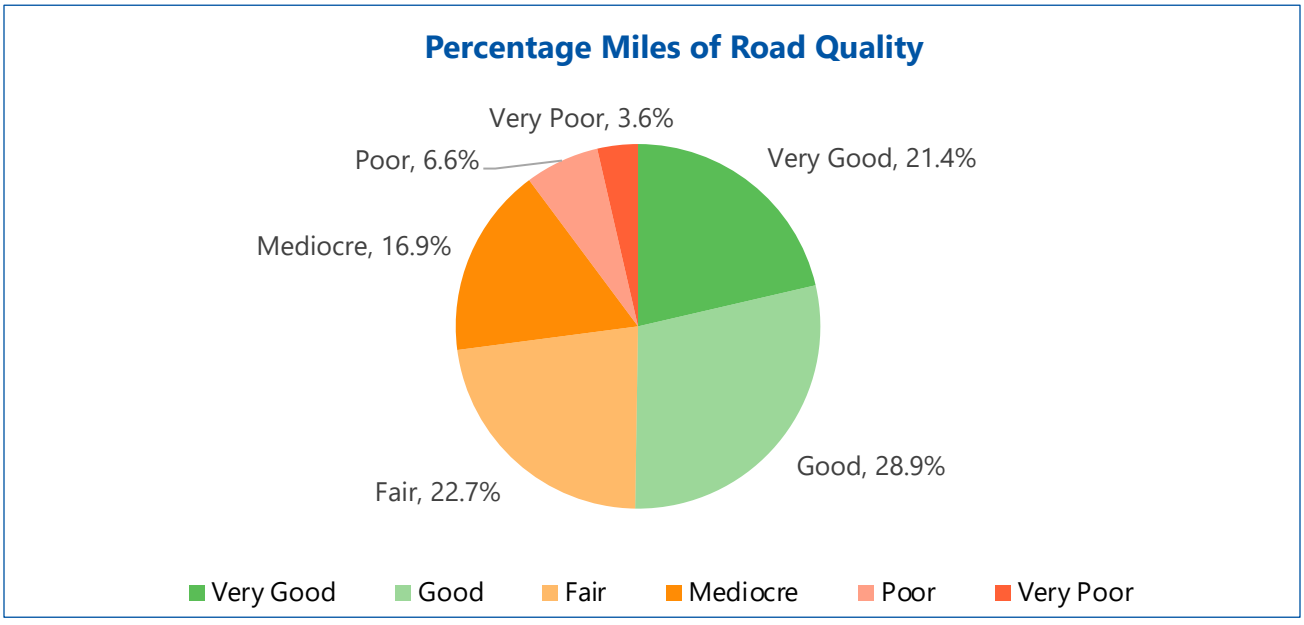
Performance Measure
State roadways maintained at "fair or better" condition

Target

Category 1: 95%
Category 2: 90%
Category 3: 85%
Category 4: 75%
Category 5: 50%

Current Status:

Category 1: 95.5%
Category 2: 90.4%
Category 3: 87.8%
Category 4: 77.0%
Category 5: 40.4%



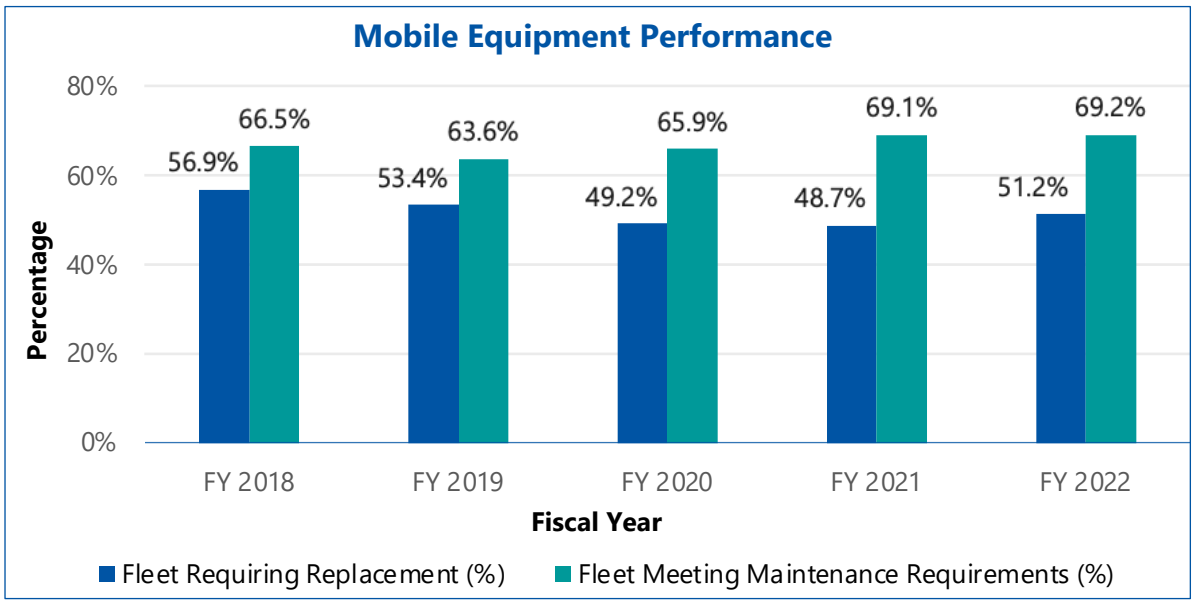
9. Maintain NDOT Fleet

Executive Summary: Two performance measures have been established for this performance goal: percentage mobile equipment in need of replacement, and percentage fleet in compliance with condition criteria. In SFY 2022, NDOT was not able to meet the performance targets for both the percentage of the equipment requiring replacement, and the percentage of vehicles in compliance with the preventive maintenance. Although there was an increase in the percentage of fleet meeting maintenance requirement, it was not high enough to meet the 1% annual increase target set for the measure. For detailed information about this performance measure refer to page 66.

Performance Measure
1) Percentage mobile equipment in need of replacement
2) Percentage fleet in compliance with condition criteria

Target
1) 1.0% or greater annual decrease
2) 1.0% or greater annual increase

Current Status:
1) 2.5% Increase
2) 0.05% Increase



10. Maintain NDOT Facilities

Executive Summary: There are two performance measures evaluated for this performance goal.

1. Percentage of facilities with a current Facility Condition Assessment (FCA). This tracks the percentage of buildings that have a current FCA performed on a seven-year cycle.
2. Overall Condition Composite. This assigns a composite score which represents the overall condition of NDOT buildings.

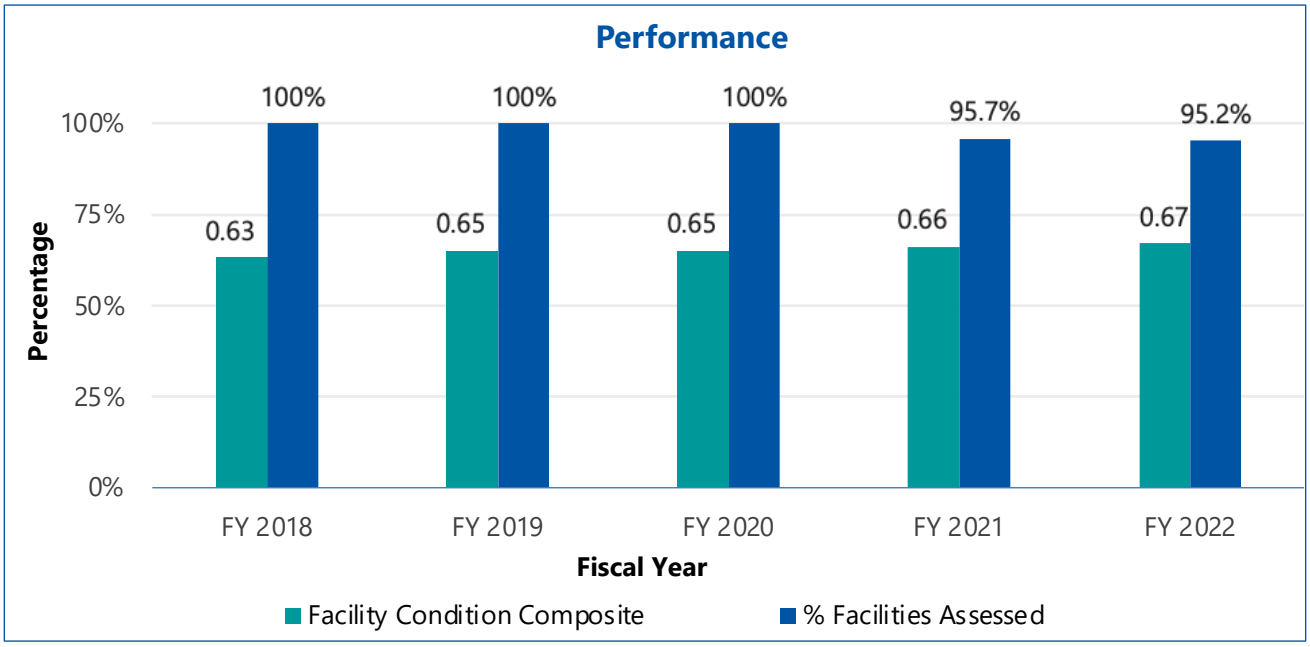
A new methodology for calculating the performance metric was initiated in 2021. In 2022, the target was not met due to certain circumstances as explained in the detailed report section. For detail information about this performance measure refer to page 70.

Performance Measure

Percentage of facility assessments, and priority facilities work

Target 0.66

Current Status: 0.67



11. Emergency Management, Security and Continuity of Operations

Executive Summary: This performance measure involves tracking the percentage of NDOT Emergency Management Plans completed, training and education provided to the appropriate personnel about the plans, tests and emergency exercises performed in executing the plans, and updating the plans. Training, exercises, and plan updates are to be completed within a four-year cycle. This cycle length provides sufficient time to manage staff and attend to real emergencies, as well as focus more attention to the emergency plans.

In state fiscal year 2022, NDOT obtained a 100% compliance level which met the established target. For detailed information about this performance measure refer to page 77.

Performance Measure

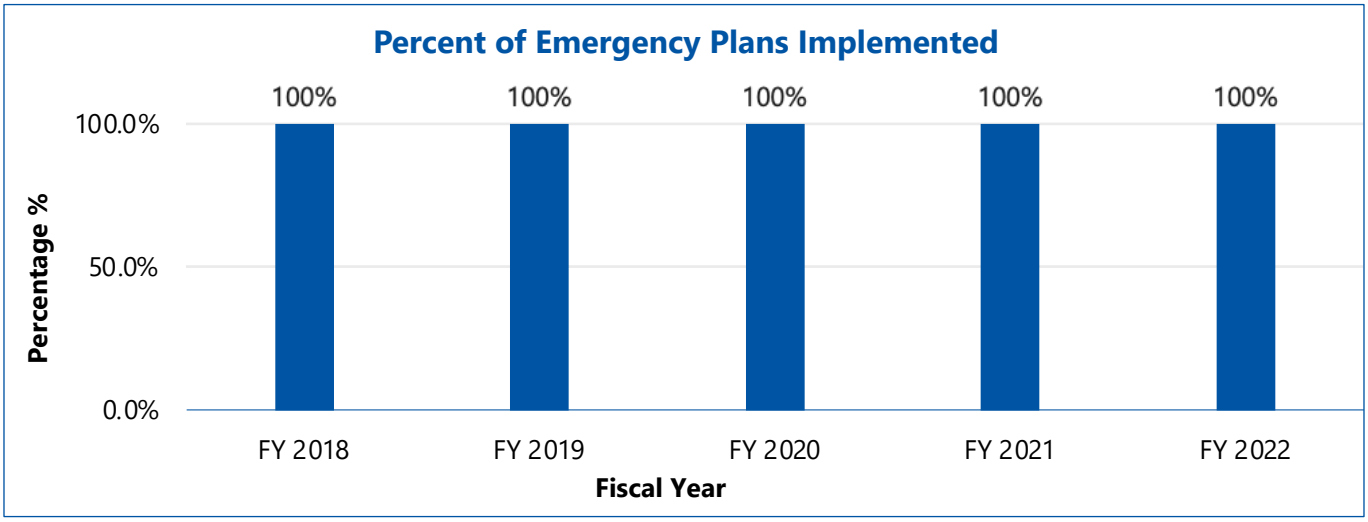
Percentage of emergency management plans implemented

Target

100% Annually

Current Status:

100% Accomplished



12. Reduce Fatal and Serious Injury Crashes

Executive Summary: There are five performance measures under this performance goal. They have been adjusted to align with the reporting requirements by the Federal Highway Administration (FHWA) and the National Highway Traffic Safety Administration (NHTSA).

Targets for the various measures are based on the 2021-2025 Nevada Strategic Highway Safety Plan (SHSP) goal to reduce fatalities and serious injuries. The targets in the Plan were developed using the 2015 to 2019 crash data. Performance targets for all five performance measures were met except for the rate of serious injuries. Data is evaluated on calendar year (CY) basis. For detailed information refer to page 82.

Performance Measure

1) Number of traffic fatalities
2) Number of serious injuries
3) Number of fatalities per 100M VMT
4) Number of serious injuries per 100M VMT
5) Number of non-motorized fatalities & serious injuries

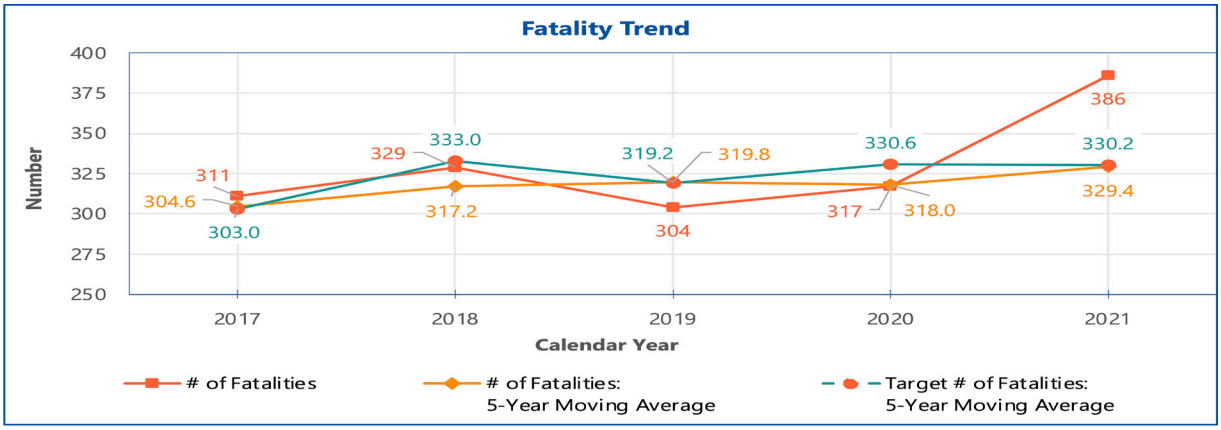
Target

Five year rolling average

1) Reduction in the # of traffic fatalities compared to the target value
2) Reduction in the # of serious # injuries compared to the target value
3) Reduction in the # of traffic fatalities per 100M VMT compared to the target value
4) Reduction in the # of serious traffic injuries per 100M VMT compared to target value
5) Reduction of the # of non\ motoriszed traffic fatalities & serious injuries compared to the target value

Current Status:

	Target	Actual
1)	330.2	329.4
2)	1154.7	1035.0
3)	1.226	1.203
4)	3.835	3.854
5)	309.8	282.0



13. Project Delivery - Schedule and Estimate for Bid Advertisement

Executive Summary: This measure has been established to track project delivery performance within the federal fiscal reporting year (FFY), from October 1, 2021, to September 30, 2022. The measure is quantified by:

1. **Schedule:**
   The percentage of scheduled projects advertised within the established federal fiscal reporting year.

2. **Project Cost:**
   The percentage of engineer's estimate within a range of the awarded contract estimate. The comparison ranges include:

   a. Intermediate (60% Design) Engineer's Estimate is within 15% of the Awarded Contract Estimate

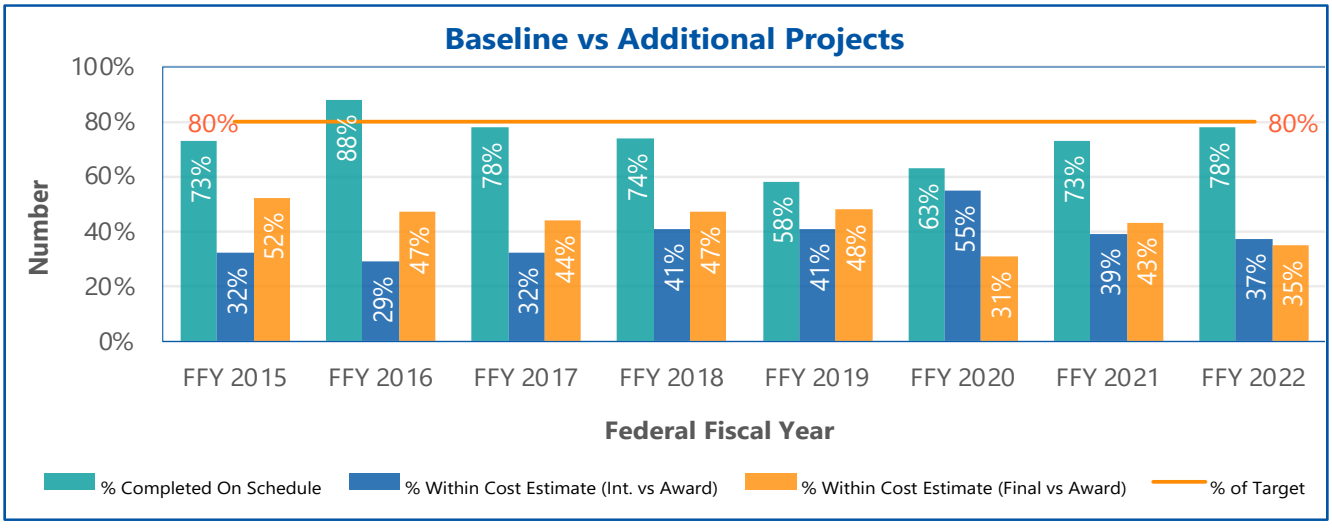
   b. Final (100% Design) Engineer's Estimate is within 10% of the Awarded Contract Estimate

Neither Schedule nor Project Cost metrics met targets. For detail information refer to page 88.

Performance Measure
1) Percentage of scheduled projects advertised within the reporting year.
2) Percentage of advertised & awarded projects within established construction cost estimate ranges

Target
1) 80% Advertised within the reporting year
2) 80% Delivered within established cost estimate ranges

Current Status:
1) 78%
2a) 37% (Intermediate vs Award)
2b) 35% (Final vs Award)



14. Maintain State Bridges

Executive Summary: The Department's performance measure for the maintenance of state bridges is bridge condition ratings which is differentiated between those assets on the National Highway System (NHS) and those not on the system (non-NHS). This performance measure aligns with the established national performance measures which include percentages of bridge inventory considered to be in "good" and "poor" condition.

As part of the NDOT Transportation Asset Management Plan (TAMP), the Department has established performance goals and targets related to the overall condition of the state's bridge inventory. These performance targets include maintaining an inventory that has greater than 35% of bridges in good condition and less than 7% in poor condition.

All performance targets were met and exceeded in 2022. For detailed information refer to page 98.

Performance Measure

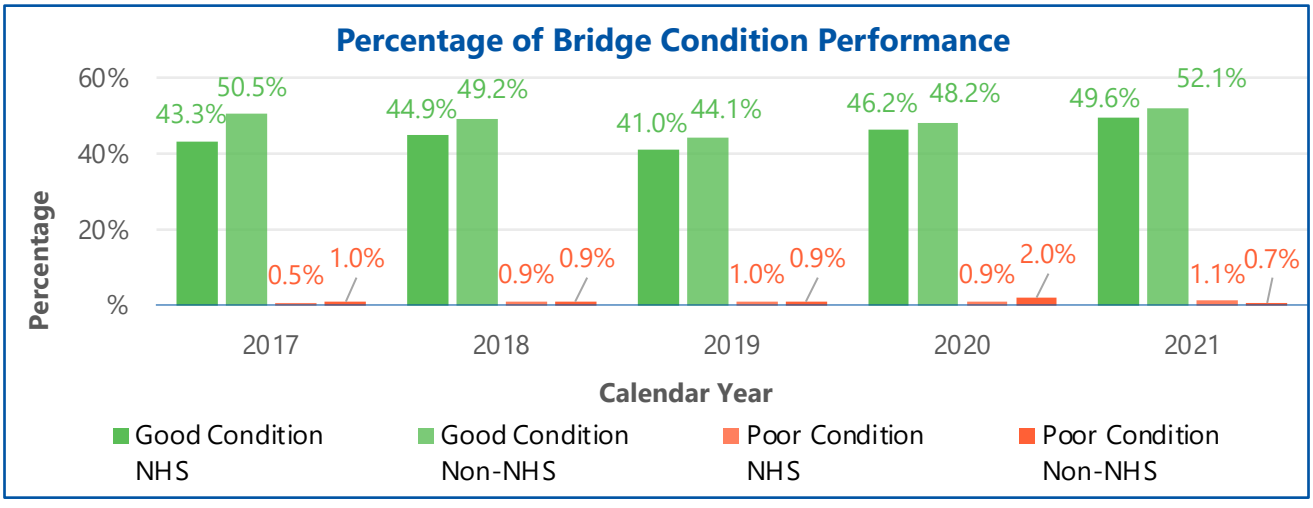
1) Percentage of bridges on the NHS in the bridge inventory in good condition
2) Percentage of bridges on the NHS in the bridge inventory im poor condition
3) Percentage of non-NHS bridges in the bridge inventory in good condition
4) Percentage of non-NHS bridges in the bridge inventory in poor condition

Target

1) 35% or greater
2) 7% or lower
3) 35% or greater
4) 7% or lower

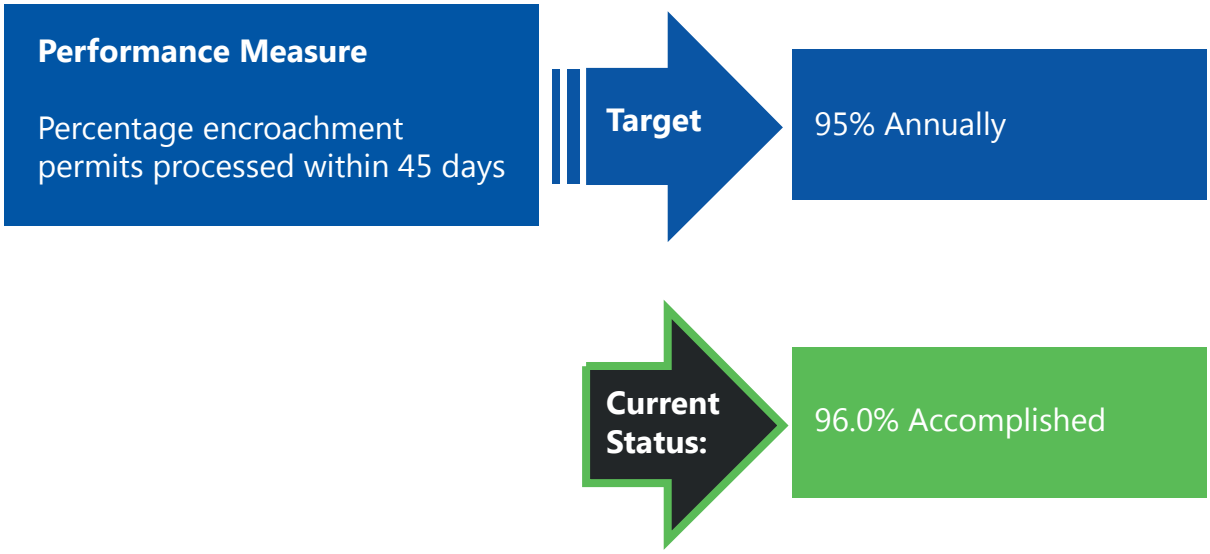
Current Status:

1) 49.6%
2) 1.1%
3) 52.1%
4) 0.7%



15. Streamline Permitting Process

Executive Summary: During state fiscal year 2022, the NDOT Right-Of-Way Division accepted a total of 907 permits of which 780 were processed within 45 days. This translates to a 96.0% performance rating exceeding the performance target of 95%. For detailed information refer to page 108.



Summary of Status	District 1	District 2	District 3	HQ	Summary
Total Permits Accepted	475	341	91	0	907
Total Permits in Processed	442	272	66	0	780
Percentage of Permits Processed less than or equal to 45 days	98.6%	92.3%	93.9%	0.0%	96.0%

16. Reduce Greenhouse Gas Emissions

Executive Summary: This performance measure has been established as the percent reduction in Greenhouse Gas (GHG) emissions within the Department's operations. This measure was added to the annual reporting cycle in April 2020 to support the overall GHG reduction from the transportation sector as reported by the Nevada Annual Greenhouse Gas Inventory Report. The measure is in alignment with the state's goal to reduce economywide GHG emissions by 28% by 2025 and 45% by 2030 compared to a 2005 baseline (2019 Senate Bill 254). NDOT is performing evaluation of the Department's operations beginning with state fiscal years 2019, 2020, 2021 and 2022 to establish a baseline to measure and assess future GHG reduction goals. For detailed information refer to page 110.

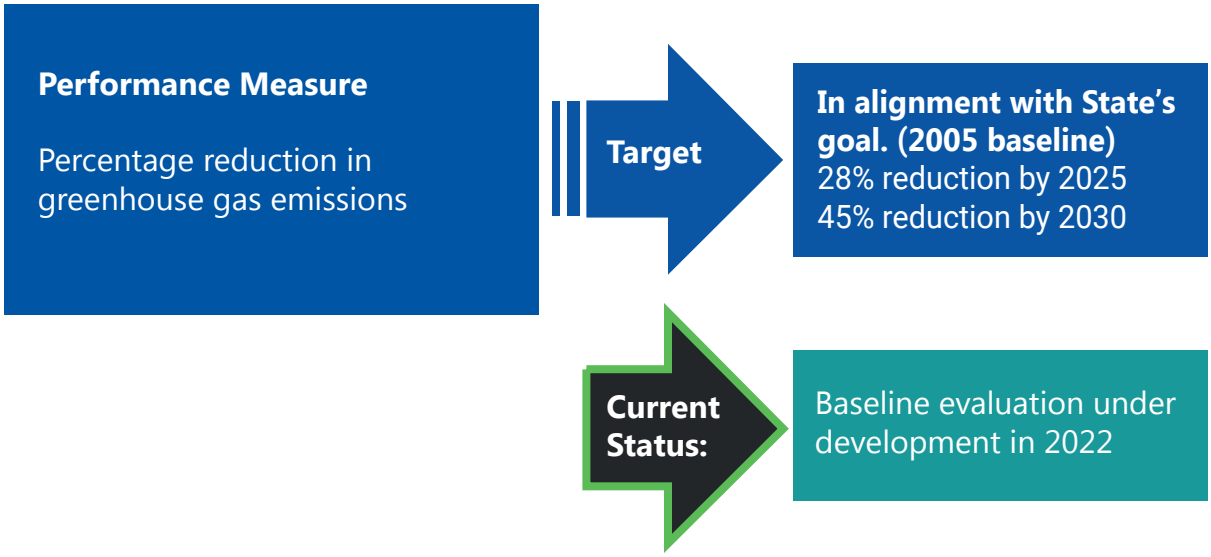


Table 1. GHG emissions baseline for FY 2019 - 2021 in metric tons of CO2 equivalent

Parameters	FY 2019	FY 2020	FY 2021	FY 2022	FY21-22 Change
Stationary source[a]	3,036.9	2,776.2	1,868.0	1,953.0	4.6%
Mobile source	20,385.9	18,183.6	17,410.4	15,710.0	-9.8%
Biofuel[b]	287.3	245.4	23.6	223.0	-24.0%
Refrigeration/AC[c]	389.7	389.7	1,360.3	1,453.0	6.8%
Electricity purchase	6,011.4	5,870.0	5,834.7	5,244.5	-10.1%
Business travel	163.3	130.7	14.5	94.0	548.3%
Commuting	6,170.8	4,442.5	2,808.2	3,537.0	26.0%
Waste generation	1,445.3	1,445.3	1,905.6	1,534.0	-19.5%
Sum of Mt CO2e	**37,603.3**	**33,238.0**	**31,201.7**	**29,525.5**	**-5.4%**

Notes:
a. Natural gas and electricity data for FY 2021 and FY 2022 were unavailable for several District 2 facilities.
b. Emissions from biofuel fractions (E85, B20) are quantified but are not included in the total GHG emissions.
c. Inventory for refrigeration and AC equipment is an ongoing effort for District facilities. AC units from Department's vehicles and mobile equipment were added in FY 2021 and FY 2022.

DETAILED PERFORMANCE MANAGEMENT DATA

1. Reduce Workplace Accidents

Performance Measures:
The percentage injury rate and percentage claim rate are reported per calendar year. The percentage injury rate is the number of reported workplace injuries and illnesses (i.e., number of C-1 forms filed) per 100 employees. The percentage claim rate is the number of injuries and illnesses requiring medical attention (i.e., number of C- 3 forms filed) per 100 employees. Data is based on annual OSHA 300 Log Reporting per federal reporting requirements. The CY 2021 calculation formula to determine the percentages is as follows:

1. Total number of Injuries (179) divided by total number of employees 1605 x 100 = 11.15% - Injuries/All Employees.

2. Total number of medical claims (68) divided by total number of employees 1605 x 100 = 4.24 % - Medical/Employees.

Current year target:
2% Reduction

Ultimate target:
Zero accidents

Performance Champion/Division:
Safety/Loss Control Section Manager, Human Resources Division (HRD)

Support Divisions:
All NDOT Divisions

Overview and plan support:
Safety extends to all aspects of the Department from the roadways to the office. Identifying and reducing risk to the department, employees, and the traveling public is an ongoing endeavor. This performance measure works towards meeting the following Department of Transportation strategic plan goals (1) safety first and (2) enhance organizational and workforce development.

Measurement and supporting data:
Claim costs include all medical expenses. The five-year ending CY 2021 average claim cost was higher by $193 per claim compared to the (2016-2020) baseline. The injury rate for CY 2021 shows an increase of 0.86% compared to the baseline. The target of reducing the injury rate by 2% annually compared to the baseline was not met. Also, serious injury rate, which is the rate of injuries/illnesses requiring medical attention per every 100 employees did not meet the 2% annual reduction target. The rate of the five-year average ending CY 2021 was 4.30% compared to the baseline rate of 4.46%.

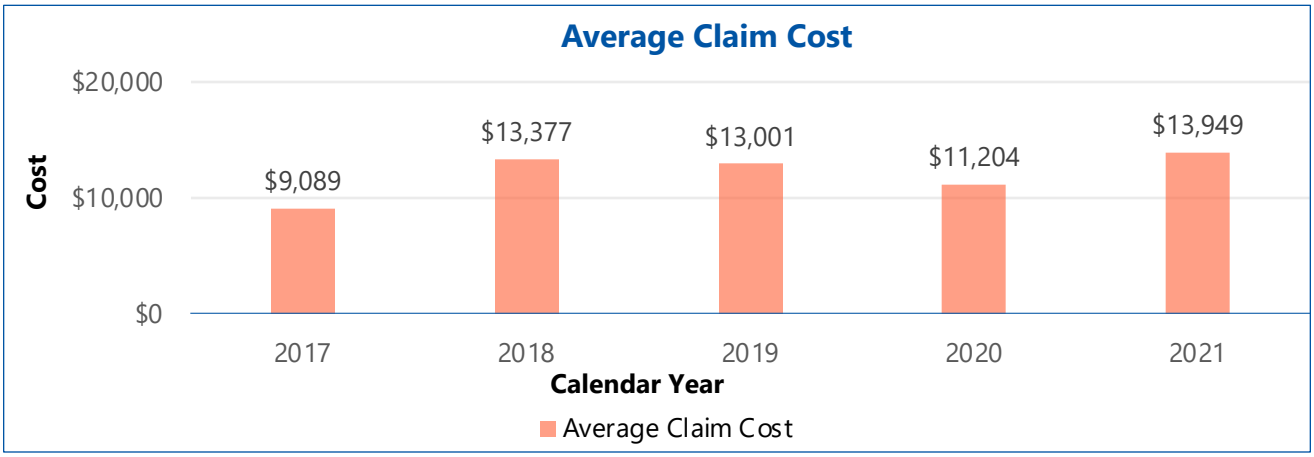
The annual Baseline is the prior five-year average of (2016 through 2020). Data is reported on a calendar year pursuant to federal OSHA reporting and average number of employees during any given year. This data is used to calculate the percentage injury and percentage severity rates.

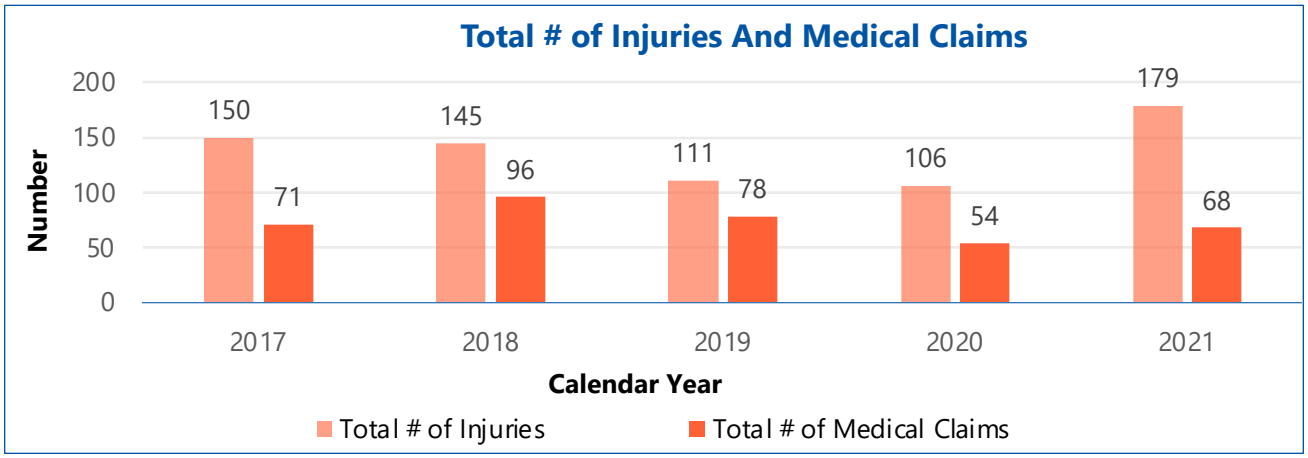
Most of the injuries sustained in CY 2021 were due to strains, sprains, and fractures. Body parts injured were neck, shoulder, head, face, and knee. Cause of injuries were due to lifting, struck by, and stepping on nails or sharp objects. The number of shoulder claims went from 3 in CY 2020 up to 10 in CY 2021. Leg injury claims went from 4 in CY 2020 up to 10 in CY 2021.

Leg injury claims went from 4 in CY 2020 up to 10 in CY 2021.

Calendar Year	2016	2017	2018	2019	2020	2021
Total # of Injuries	122	150	145	111	106	179
Injuries/All Employees	7.11%	8.61%	8.23%	6.36%	6.37%	11.15%
Total # of Medical Claims	87	71	96	78	54	68
Medical Claims/All Employees	5.07%	4.07%	5.45%	4.47%	3.24%	4.24%
Average Claim Cost	$12,978	$9,089	$13,377	$13,001	$11,204	$13,949
# All Employees	1,717	1,743	1,762	1,746	1,665	1,605
Total Calendar Year Cost	$1,329,390	$1,430,173	$1,938,795	$988,141	$605,037	$948,520

Calendar Year	2016-2020 Average	2021	2017-2021 Average
Total # of Injuries	126.8	179	138.2
Injuries/All Employees	7.34%	11.15%	8.20%
Total # of Medical Claims	77.2	68	73.4
Medical Claims/All Employees	4.46%	4.24%	4.30%
Average Claim Cost	$11,930	$13,949	$12,123





Evaluation of Performance Measure:

Annual Target Met:
No. for measure 1. Increased by 0.86%
No. for measure 2. Reduced by 0.16%

Which strategies were in place during the data reporting period?
- Workers' Compensation training.
- Safety and health safety inspections.
- Safety and health training.
- Ergonomic evaluations.

Which strategies applied during the current data reporting period were successful?
All strategies support the Safety/Loss Control Section efforts to reduce workplace accidents and injuries. The strategies support the prevention of injuries. Safety training was conducted throughout the year which accounted for reducing injuries.

Which strategies were not successful and why?
While the Safety Team did conduct trainings and inspections, more efforts are needed to meet our target of reducing the rate of injury. The Safety Team is still adjusting to the new hybrid workplace and assessing how to best train the NDOT team members.

Strategies for improvement planned for next reporting period:

Short Term Strategies
- Meet with Districts, Divisions, and Sections to explain new and existing Safety/ Loss Control Section functions, so they understand how we can help them with their safety needs.
- Schedule safety and health fairs throughout NDOT.
- Train supervisors on how to create and implement a job hazard analysis for their employees to determine the appropriate personal protective equipment.

Long Term Strategies
- Create a Safety Training Academy.
- Create an Ergonomic Evaluation Station for employees.
- Work with the Executive Leadership to create a Safety Division.

Does this performance measure effectively measure what is desired?
Yes.

Does monitoring and evaluating this performance measure improve your business process?
Yes.

Is there a more effective performance measure that should be considered? If so, explain.
Yes. The current measure is "injury rate" determined by the number of C-1 Forms submitted. C-1 Forms track every injury that occurs. Employees are encouraged to submit C-1 Forms for the most minor injuries. The information on these forms allows the Safety/Loss Control Section to plan and improve safety programs. A reduction in C-1 Forms is not the best way to measure improvement. The "serious rate" determined by C-3 Forms is a better measure. C-3 Forms are completed when medical attention is sough. If the serious injury rate is reduced, it is a better

indicator of success of safety programs and measures. The recommended annual target for CY 2022 is .05% reduction rate instead of 2%.

Changing the target percentage injury rate calculation (number of C-1 Forms) to the percentage serious rate calculation (medical claims C-3 Forms) will measure cost and better indicate if the strategies were effective to reduce workplace injuries.

Will meeting the yearly target have a fiscal impact? If so, explain.
No

Next year's target:
Reduction of .05%

2. Provide Employee Training

Performance Measures:

Percentage of employees trained in accordance with prescribed training plans and State statute training requirements.

SFY22 Target:
An average compliance rate of 85% for all required training.

Ultimate Target:
100% compliance for all required training.

Performance Champion/Division:
Chief of the Human Resources Division, Employee Development Manager, Training Section, supervisory and managerial employees, and division training coordinators.

Supporting Divisions: All NDOT Divisions

Overview and Plan Support:
The classes listed in the performance measures are required by Nevada Administrative Code 284, the State Administrative Manual, or a specific NDOT Transportation Policy. The classes apply to the entire department and are either required for all employees or all supervisory and managerial employees.

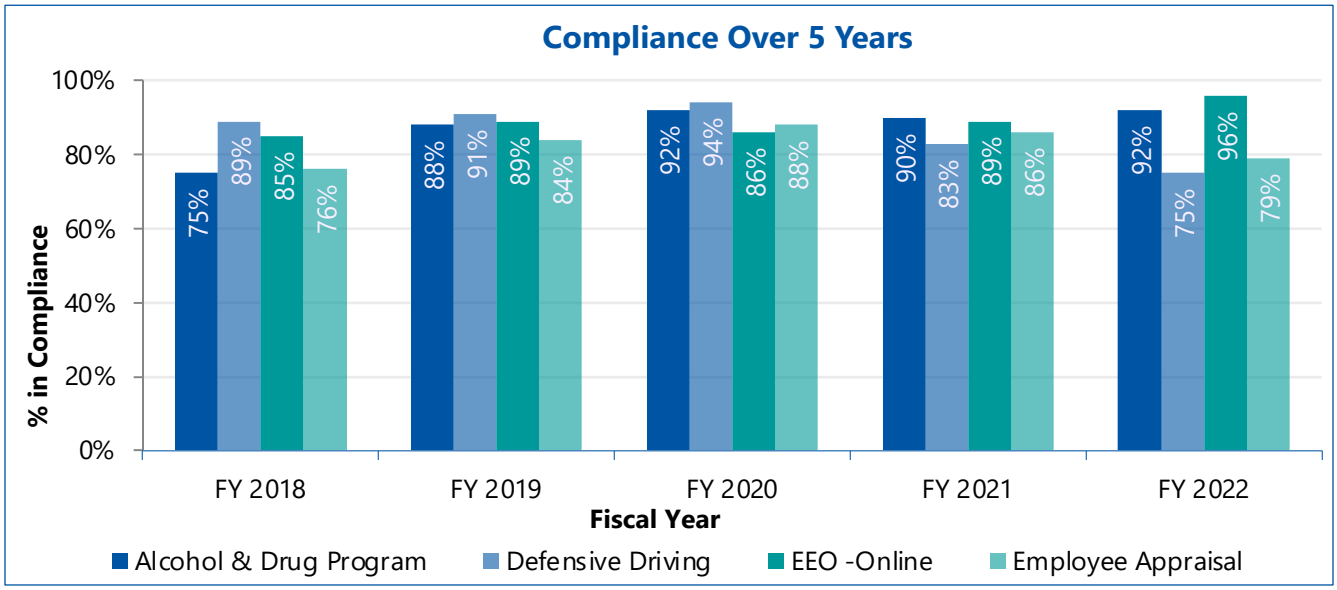
The annual target is the average compliance rate of all required training. The compliance percentage for each class is calculated by the number of employees or supervisory and managerial employees who were required to take the class by those who have successfully completed the class within the designated fiscal year.

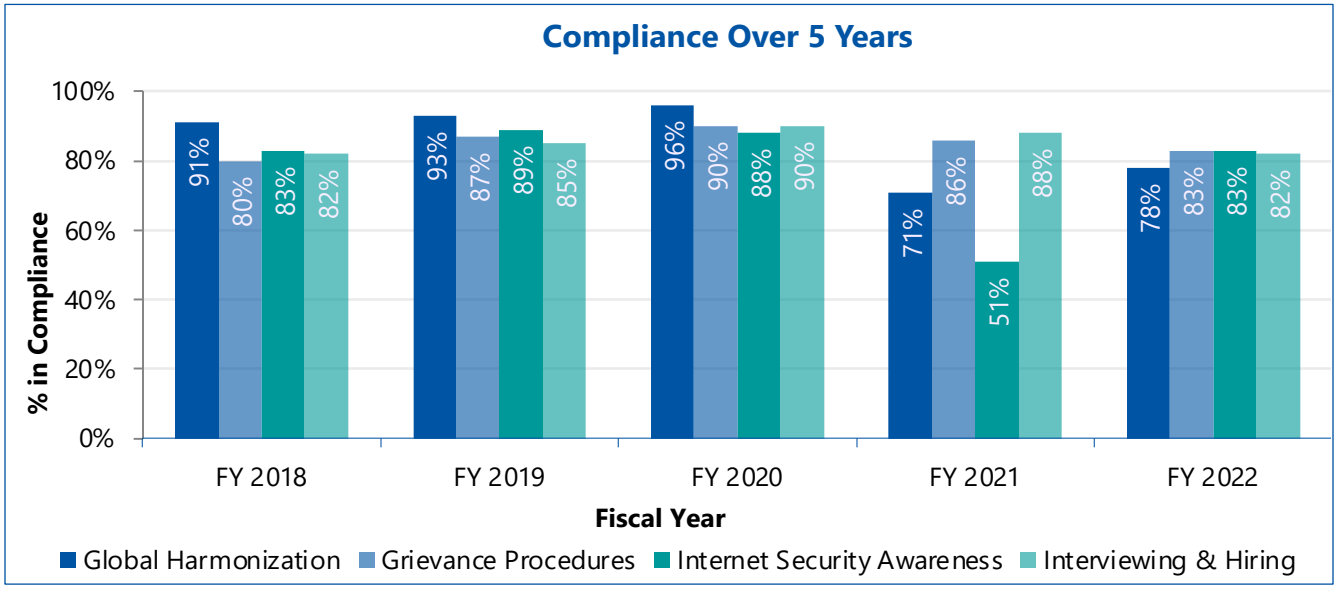
% in Compliance for Fiscal Year

Requirements	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2022 (Trained)*	FY 2022 (Requiring)**
Alcohol & Drug Program	75%	88%	92%	90%	92%	400	463
Defensive Driving	89%	91%	94%	83%	75%	1,196	1,591
EEO -Online	85%	89%	86%	89%	96%	420	436
Employee Appraisal	76%	84%	88%	86%	79%	344	436
Global Harmonization	91%	93%	96%	71%	78%	1,243	1,591
Grievance Procedures	80%	87%	90%	86%	83%	360	436
Internet Security Awareness	83%	89%	88%	51%	83%	1,328	1,591
Interviewing & hiring	82%	85%	90%	88%	82%	358	436
Progressive Discipline	72%	81%	85%	87%	82%	356	436
Sexual Harassment Prevention	83%	86%	92%	66%	82%	1,308	1,591
Work Performance Standards	78%	85%	90%	88%	77%	336	436
Average	**81%**	**87%**	**90%**	**80%**	**83%**		

*Total number of employees who attended training on this topic

** Total number of employees on 6/30/2022


Compliance Over 5 Years
100%
80%
60%
40%
20%
0%
% in Compliance
75%
89%
85%
76%
88%
91%
89%
84%
92%
94%
86%
88%
90%
83%
89%
86%
92%
75%
96%
79%
FY 2018
FY 2019
FY 2020
FY 2021
FY 2022
Fiscal Year
Alcohol & Drug Program
Defensive Driving
EEO -Online
Employee Appraisal


Compliance Over 5 Years
100%
80%
60%
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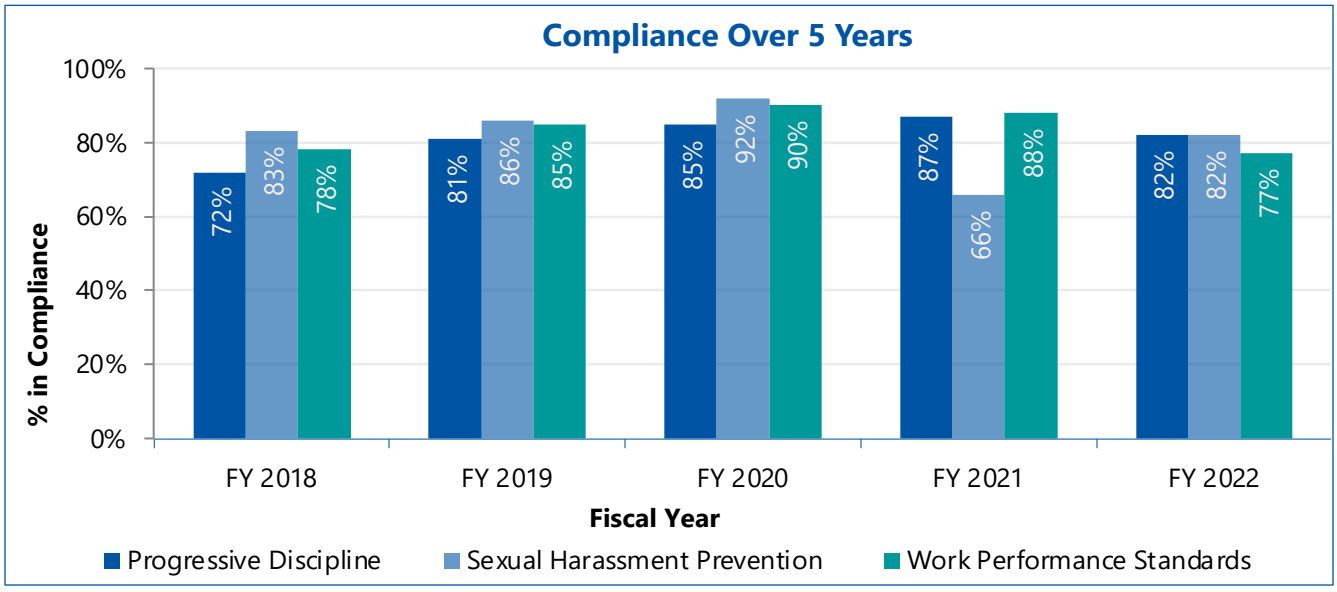
FY 2018
FY 2019
FY 2020
FY 2021
FY 2022
Fiscal Year
Global Harmonization
Grievance Procedures
Internet Security Awareness
Interviewing & Hiring


Compliance Over 5 Years
100%
80%
60%
40%
20%
0%
% in Compliance
72%
83%
78%
81%
86%
85%
85%
92%
90%
87%
66%
88%
82%
82%
77%
FY 2018
FY 2019
FY 2020
FY 2021
FY 2022
Fiscal Year
Progressive Discipline
Sexual Harassment Prevention
Work Performance Standards

The annual training target is 85% of NDOT employees will be in-compliance with their required training, with an ultimate target of 100% compliance.

For FY22 we achieved an;

- 83% in-compliance rate for the eleven required classes. Which was a 3% increase in compliance from FY21 average of 80%.
- 84% in-compliance rate for the seven Supervisory and Managerial required classes. Which was a 4% increase, from FY21 average of 80%.
- 80% in-compliance rate for the four All-employee required classes. Which was a 12% increase from FY21 average of 68%.

Evaluation of Performance Measure:

Annual Target Met:
No

Which strategies were in place during the data reporting period?

Short term strategies

- Market classes directly to the employees.
  - Focus our marketing efforts on headquarters' employees because they have a low compliance rate, are close to multiple training rooms and have the most flexibility in their schedule.

Long term strategies

- Directing employees to the NVeLearn platform for the Supervisory and Managerial training.
- Directing employees to the Success Factors portal for the All-employee required training.
- Continuing and professional development of the training staff.
- Work with Division of Human Resource Management-DHRM and SMART21 project to redesign class evaluations to include more appropriate questions, provide reporting options for programs as well as classes, and provide timely feedback to the instructor.
- Embed leadership principles in all required classes. These principles should reinforce the strategic plan.
- Learn and implement technology like videoconferencing, webinars, and Skype to keep classes when we have low enrollment, and plane is cancelled or there is a higher priority for the meeting room.
- Send trainers to the EMC for deeper/broader understanding of state policies. Dedicate time for reading EMC decisions.

Which strategies were successful?

- Directing employees to the NVeLearn platform for the Supervisory and Managerial training.
- Directing employees to the Success Factors portal for the All-employee required training.

Which strategies were not successful and why?

Short term strategies

- Partial launch of Success Factor as the State's new Learning Management System (LMS).

When Success Factor launched on January 1, NDOT's stopped pulling training data from HR Data warehouse to update the NDOT eHR's training tracker system. Without eHR's compliance tracking and automatic email reminders was no longer updating eHR compliance data for NDOT.

- Success Factor as the State's new Learning Management System (LMS). The delay in the full implementation of the LMS resulted, in employees, supervisors and training coordinators having to struggle to find out if an employee was following their training requirement.
- The Division of Human Resource Management-DHRM not moving all their required training content from the old NVeLearn online training platform to the new LMS in Success factors. This caused confusion with training and where employees where to go to get the required training they need, which contributed to the negative affect.
- Vacancy of the two Training Officer, and the Employee Development Managers and the continuing effects of the COVID 19 pandemic, we did not have training staff on hand to implement a blended learning strategy.
- We did not have any Training Officers available to implement to Cross-train.
- We did not have any Training Officers to send to the EMC for deeper/broader understanding of state policies

Strategies for improvement planned for next reporting period:

Short term strategies

Having filled the two vacant Training officers' positions and Administrative Assistant positions. We are now fully staffed.

Adding the names of the required classes and the location of where to take the required classes to the back of the training staff business cards. We hope this will lead to less confusion on which classes are required and where to go to take the classes.

New Training Officers and Administrative Assistants are learning the nuances of the Success Factors LMS. New Training staff will need to lean the new process, and possibly change some internal process to work within the limitation of SuccessFactors.

Continue to track compliance using NVeLearn and HR Data warehouse until DHRM fully transfers the required training class to the SuccessFactors LMS.

Long term strategies

Work with Western Nevada College (WNC) to review NDOT's current training curriculum and develop a plan to have all NDOT Training Section accredited with college credits that would be transferable to WNC. We hope that with accreditation this will encourage employees to complete their required training and lead them to continuing their college education.

New Training staff will need to become proficient with SuccessFactors LMS to help the NDOT's employees enroll in training.

New Training staff will need to lean the new process, and possibly change some internal process to work with the limitation of SuccessFactors.

New Training staff will need to learn how to track promotion and start dates so that we can see which employees are within the one-year grace period for taking supervisory classes.

Does the performance measure effectively measure what is desired?
Yes.

Does monitoring and evaluating this performance measure improve your process?

Yes. Monitoring and evaluating this performance measure is key to keeping the priority of completing all required training for our employees. This measures along with the capabilities in SuccessFactors will aid in scheduling the required classes and monitoring completion rates. It will allow the section to better target our direct marketing of the required training to the employees in need of the training.

Is there a more effective performance measure that should be considered? If so, explain

Currently no. With the transition to Success Factor's LMS the training staff will be learning the capabilities of the LMS system and in the future may find a more effective Performance Measure that better meets the goal of enhancing organizational and workforce development by completing required training.
NDOT is continuing to work on a strategic plan.

Has the Covid-19 pandemic affected your performance measure or the ability to meet your targets? If so, explain.

Yes. While at the beginning of the work at home order had positive effect on our compliance because employees were urged to complete the online required training, while the organization worked on rolling out remote working procedures and policies.

We are now seeing a negative effect of the extend and every changing Covid-19 policy, and virtual meetings overload. With more and more of the everyday activities going remote in an 8hr, 9hr or 10hr work shift, we are finding that many employees find it especially difficult to remain focused and engaged when taking the required training in an online platform setting.

Will meeting the yearly target have a fiscal impact? If so, explain.

No.

3. Improve Employee Satisfaction

Performance Measure:
Employee Satisfaction

Current year target:
Overall rating 75%

Ultimate target:
Overall rating 80%

Performance Champion/Division:
Human Resources Manager, Human Resources Division (HRD)

Support Divisions:
All NDOT Divisions

Overview and plan support:

Positive employee morale is critical to the success of the workplace. It is the backbone of a skilled and dedicated workforce and essential in attracting and retaining quality team members. A satisfied workforce will excel at their duties, and this benefits the people of Nevada, our visitors, and others traveling through our state. This performance measure works toward meeting NDOT's strategic plan goals including promote a safety-first culture, efficiently operate, and maintain the state transportation system, enhance internal and external communication, and enhance organizational and workforce development.

Measurement and supporting data:

Overall Employee Satisfaction

Fiscal Year	% Of Satisfaction
2018 FY	69%
2019 FY	66%
2020 FY	75%
2021 FY	61%
2022 FY	46%

Historical Level of Employee Engagement Participation (Respondents)

Year of Survey	Launch Date	Closing Date	# of Employee Respondents
2018	29-Jun	10-Aug	969
2019	15-Apr	21-Jun	872
2020	13-Apr	13-Jul	823
2021	20-Apr	23-Jul	662
2022	24-May	12-Aug	800

Employee Satisfaction Survey Results

Key Question Response Comparison From 2021 - 2022			
Survey Category	**2021**	**2022**	**Increase/Decrease**
Satisfaction of workplace safety	77%	69%	-8%
Satisfaction of workplace physical conditions	72%	70%	-2%
Satisfaction with ability to express concerns to their immediate supervisor	72%	74%	2%
Satisfaction with ability to communicate effectively with their immediate supervisor	72%	74%	2%
Satisfaction with their immediate supervisor recognizing when they go above and beyond their normal duties	70%	70%	%
Satisfaction with management applying policy decisions consistently	53%	44%	-9%
Satisfaction with ability to express concerns to their management	59%	51%	-8%
Satisfaction with flexibility of employees work hours	85%	80%	-5%
Percentage of Employees who would recommend NDOT to a friend	55%	38%	-17%

Evaluation of Performance Measure:

Annual target met?

No. 46% indicated that they were satisfied or very satisfied with NDOT overall.

Which strategies applied during the current data reporting period were successful?

2021 Strategies included:

- NDOT's ELT will continue to progress and implement the 10 strategies listed from the last reporting period which were:
  - Develop and implement NDOT Team Safety Plan:
  - Develop building and facility maintenance and repair plan
  - Improve internal and external customer service
  - Build a cohesive state-wide communications program
  - Evaluate and update communication structure and policies
  - Conduct proactive organizational change process to address emerging trends
  - Ensure business and operational continuity
  - Administer Department policies and procedures consistently
  - Retain and enhance mid-career talent
  - Consolidate and transform Department data systems
- NDOT's ELT will continue to work diligently to foster a healthy working environment while managing the complex challenges presented by the COVID-19 pandemic.

- The NDOT ELT and Senior Leadership Team's (SLT) commitment to supporting and executing the NDOT strategic plan will ensure success.

  The NDOT Executive Leadership Team (ELT) met throughout the year to track the progress of the strategic plan goals listed above. Each goal is in progress and will foster overall satisfaction of employees statewide.

Which strategies were not successful and why?

The failure to complete the strategies contributed to lower satisfaction.

Strategies for improvement planned for next reporting period:

Short Term Strategies

- NDOT's ELT will continue to progress and implement the 10 strategies listed from the last reporting period.
- NDOT implemented an internal partnering program to foster communication among the divisions and districts.

Long Term Strategies

The NDOT ELT and Senior Leadership Team's (SLT) commitment to supporting and executing the NDOT strategic plan will ensure success.

Does this performance measure effectively measure what is desired?

Yes.

Does monitoring and evaluating this performance measure improve your business process?

Yes, the detailed breakdown of employee satisfaction provided by the annual survey identifies areas of success and deficiency. Areas of success are replicated, and areas of deficiency are evaluated for improvement. The survey provides support and guidance for the creation of specific goals and programs linked to the NDOT strategic plan.

Is there a more effective performance measure that should be considered? If so, explain.

No. Overall employee satisfaction is a critical factor for NDOT to execute the mission, vision, and goals of the Department.

Has the Covid-19 pandemic effected this performance measure or your ability to achieve the targets? If so, explain.

Yes. Based on the survey results, it is likely the COVID-19 pandemic continues to effect overall job satisfaction. The department is still working out the best way, post-pandemic, to recruit, retain, and engage team members. The pandemic contributed to the current labor shortage. The labor shortage is negatively affecting the overall work environment. Respondents continue to express high dissatisfaction rates regarding wages and benefits.

Will meeting the yearly target have a fiscal impact? If so, explain.

No. An increase in pay would offset and likely reduce the costs currently associated with contracted staff augmentation due to the current vacancy rates.

Next year's target:

50%

Calculation notes: Next year's target is to increase the current overall satisfaction by 4%. Formula: this year's overall satisfaction (46%) plus 4% = Next year's target (50%)

4. Streamline Agreement Process

Performance Measure:

Percentage of Agreements executed within 20 days from when division submits agreement with all supporting documents to the date when it is fully executed, excluding time the agreement is with the second party for signature or awaiting Transportation Board approval.

Current year Target: 90% within 20 days

Ultimate Target: 99% within 5 days

Performance Champion/Division:

Administrative Services Division, Deputy Chief

Overview and Plan Support:

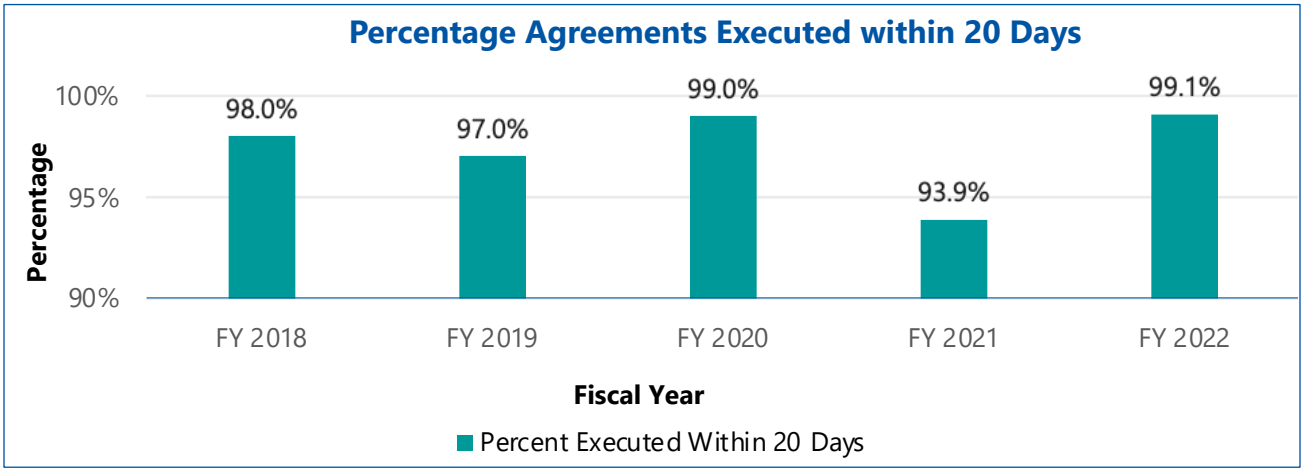
An agreement is an instrument used to procure a variety of services for NDOT. The Agreement Services Section ensures that NDOT procures these services in accordance with established laws, rules and regulations. Delays in executing agreements have a tremendous impact on the operations, delaying what can often be critical services, or services that impact the timely delivery of projects. Agreements for services and interlocal agreements with Universities over $300,000.00 require the approval of the Transportation Board; agreements less than $300,000.00 and certain services exempt from Board approval, such as right of way acquisitions and interlocal agreements, can be executed with approval from the NDOT Director.

This performance measure supports the Nevada Department of Transportation Strategic Plan Goal 3: Efficiently Operate and Maintain the State Transportation System, by delivering timely and beneficial projects and programs; being responsive to our customers; effectively preserving and managing our assets; and efficiently operating the transportation system.

Measurement and supporting data:

For fiscal year 2022, the average number of calendar days to execute agreements, measured from the time they were submitted to the Agreement Services Section until the time of agreement execution, but excluding weekends and holidays and time the agreement was with the second party or awaiting Transportation Board approval, was 6 days. During fiscal year 2022, the Department executed 548 agreements, of which 543 were executed in 20 days or less. This translates to 99.09% of all agreements being executed within 20 days, exceeding the target of 90%.

Fiscal Year	FY 2022
Number of Agreements Executed	548
Number Executed Within 20 Days	543
Percent Executed Within 20 Days	99.1%
Average Number of Days to Execute	6



Evaluation of Performance Measure:

Annual target met?

Yes

Which strategies applied during the current data reporting period were successful?

All current strategies have been successful. Agreement Services Section staff understands the performance measure, what is measured, and how each stage of processing an agreement affects the measure. The Section Manager provides quarterly feedback to staff about the current processing time, tracking and discussing strategies for improving execution of all agreements, including LPA agreements, if applicable.

Which strategies were not successful and why?

All strategies implemented have been successful.

Strategies for improvement planned for next reporting period:

Short Term Strategies:

Continue reporting the number of "workdays" to execute an agreement, excluding days with the second party, weekends, holidays, and waiting for the Transportation Board. This method of measuring days accurately calculates percentage and average days NDOT took to execute an agreement. With electronic processes in place, Agreement Services has consistently exceeded the 20-day agreement execution with higher than the 90% target.

Long term Strategies:

Continuing to assess the relevance of performance measure data and revising this measure, as necessary, to accurately reflect the time it takes to process an agreement. Additionally, mandating that all agreements be processed via DocuSign is critical to maintaining the success of this performance measure. Currently Agreement Services is developing a new Masterworks system that we hope will create even more efficiencies in the processing of agreements. We'll review the Performance Measures at that time to determine if strategies are reflecting an accurate measure of performance.

At this time, Agreement Services will improve the designated target from 20-day agreement execution to 10-day agreement execution.

Does this performance measure effectively measure what is desired?

Yes

Does monitoring and evaluating this performance measure improve your business process?

Yes - All staff is made aware of the goals of a performance measure.

Is there a more effective performance measure that should be considered? If so, explain.

No – The efficiencies put into place have been successful on reducing the time to execute an agreement.

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

No – with the technology that we have it hasn't slowed the time it takes to execute an agreement.

Will meeting the next yearly target have a fiscal impact? If so, explain.

Yes. Procuring services more expediently will make Department operations more efficient, resulting in faster delivery of projects, more timely maintenance of facilities, and an overall higher standard of service provided. Collectively, this will result in overall cost savings.

Next year's target:

90% within 10 days

5. Improve Customer and Public Outreach

Performance Measure:

Improve Customer and Public Outreach

Current year target:

The Communications Division undertook a more rigorous tracking program in the past year to ensure NDOT is not only communicating with the public but doing so in a way that reaches the greatest number of people across Nevada.

Customer Service

- Satisfaction: Maintain 75% rating

Social Media

- Total Audience Growth: +10%
- Engagement Rate per Impression: +20%
- Impression Growth: +20%
- Engagement Growth: +20%
- Link Clicks: +10%

Public Involvement

- Total Events: +10%
- Hybrid (In-Person + Livestream) Events: +20%
- Virtual (Website): +10%

Ultimate target:

Customer Service

Overall goal: Increase customer satisfaction by responding promptly and constructively to questions and concerns.

Satisfaction Goal: 75%
Response Time (future measurable goal)[a]

Notes:
a - While response time will be measurable in the future, some questions and concerns inherently require more time to answer. Additionally, other factors can skew this figure, such as extreme events (e.g., snowstorms) that result in a spike in inquiries or complaints that temporarily overload our small staff and may not be answered promptly (or at all).

Social Media

Overall goal: Reach as many Nevadans and travelers as possible with information about transportation and traffic safety issues, and constructively engage users with increasing frequency to further that reach. More specifically, consistently increase the number of followers and constructive interactions with users on our social media channels.

Audience Growth: +5-10% per year
Engagement Rate per Impression: 3-6% average across all social media platforms

Public Involvement

Overall goal: Reach as many Nevadans as possible with information and meetings about an upcoming project, program, or study. To the extent possible, meetings should be demographically representative of the impacted area, offer virtual or livestream options, and place special emphasis on any environmental justice community members.

Total Meetings: +10%
Hybrid (In-Person + Livestream) Events: +20%
Virtual (Website Meeting): +10%

Meeting Audience Growth (future measurable goal)

Performance Champion/Division:

Customer Service

Debbie Binggeli, Customer Service Manager

Social Media

Public Information Office

Public Involvement

Cassie Mlynarek, Public Involvement Specialist

Support Divisions:

Everyone in the Customer Service division supports each other in achieving these goals. Additionally, we work closely with Planning, Project Management, and other divisions that have a public outreach component.

Overview and plan support:

This performance measure aligns with two goals in our Strategic Plan: (1) improve internal and external customer service, and (2) build a cohesive statewide communications program. Customer service and public outreach (social media and public involvement) are critical aspects of strengthening NDOT's brand and ensuring we're delivering an effective program.

Measurement and supporting data:

Customer Service

Data collected by NDOT's customer service management system, Zendesk, is used to assess customer satisfaction. Specifically, since August 2020, data presented below is based on surveys collected by Zendesk from customers who contacted NDOT via e-mail, phone, social media, or the NDOT website. For FY22, Customer Service achieved a 64 percent satisfaction rate based on the 216 surveys (2,835 total) completed by customers.

Items	FY 2020	FY 2021	FY 2022	FY2023
# of Respondents Rating NDOT Good	2,100	349	216	265
*Total Number of Surveys	2,636	468	339	353
Percentage of "good" responses	80%	75%	64%	75%
Status	Actual	Actual	Actual	Projected

Social Media

Since bringing on a consultant to assist with social media management and analysis, NDOT has substantially increased performance on the major platforms (Facebook, Twitter, and Instagram), increasing followers by more than triple and engagement (like, comment, click, etc.) per view by 52 percent.

Totals [b]

- Impressions: 4.5M
- Engagements: 168K
- Link Clicks: 12K
- Audience Growth: 219%
- Engagement Rate Per Impression Growth: +52% overall

Platform	Twitter	Facebook	Instagram
Impressions	2.2m	2.3m	157k
Engagements	29k	168k	7
Link Clicks	4k	7k	N/A
Audience Growth	+10%	+11%	+42%
Engagement Rate per Impression (Growth)	1.3% (+63%)	5.9% (+2%)	4.3% (+42%)

Notes:
b - These totals do not include the three NDOT regional Twitter accounts.

Platform-Specific Findings

- Instagram
  In the last year, NDOT has significantly increased its presence on Instagram, resulting in the largest percentage increase of all three platforms.
- Twitter
  While Twitter's overall impressions dropped by 50 percent, the engagement per impression increased by 63 percent. That means that people are engaging significantly more with our Twitter content despite seeing a lower volume of tweets. This is likely attributable to the decision to create three new regional Twitter accounts that now maintain all the FAST alerts that used to overwhelm the main NDOT Twitter account.
- Facebook

  Facebook leads the other platforms in raw numbers and is the most established platform. Reno has the most active Facebook following. Las Vegas has the second largest Facebook followership by population and second highest reach, but it doesn't make it into the top five for engagement.

Public Involvement

From June 2021 to June 2022, NDOT held 23 public meetings and conducted more livestreams in one year than in all other years combined. With our new triple-cam setup and wireless microphones, we are able to expand our reach to those who are unable to attend meetings in person but wish to do so remotely. Additionally, the livestream allows for real-time feedback for anyone who wishes to have their question(s) answered by a live presenter.

Meeting Type	# Of Meetings
In-Person (no livestream)	4
Hybrid (In-Person+ Live-Stream)	5
Virtual (Website)	12
Telephonic	2
Total	23

Other metrics that will be gathered moving forward: attendees/visits (in-person, livestream, virtual).

Evaluation of Performance Measure:

Annual target met?

Customer Service

The Customer Service satisfaction rating of 75 percent was not met for FY22. The 64 percent rating represents an 11 percent drop from FY2021. Anecdotally, this decrease appears to be attributable to two factors: (1) the number of Zendesk customer support tickets increased by more than 25 percent between FY21 and FY22, and (2) extreme weather events may have played a role in the inability of staff to respond promptly, as indicated by an anecdotal review of customer feedback.

Social Media

All performance targets were met and exceeded across social media platforms. We have more than tripled our social audience in one year and increased engagement substantially.

Public Involvement

All performance targets were met and exceeded with respect to public involvement meetings. Additionally, new technology (livestreaming and virtual meetings) is being utilized more regularly and strategically to accommodate those who wish to have alternative means of participation.

Which strategies applied during the current data reporting period were successful?

Customer Service

We continue to fine-tune Zendesk, out customer service management system, to ensure the increased caseload doesn't overwhelm our staff of two. Creating triggers that automatically route certain tickets to the appropriate staff member, and continuously training staff on Zendesk functionality has helped us respond to customers more effectively.

Social Media

Utilizing a consultant to help build out our social media calendar and track analytics has greatly improved our reach and engagement. Additionally, as noted above, the engagement per impression increased by 63 percent, which means that people are engaging significantly more with our Twitter content despite seeing a lower volume of tweets. This is likely attributable to the successful decision to create three new regional Twitter accounts that now maintain all the FAST alerts that used to overwhelm the main NDOT Twitter account.

Public Involvement

The Public Involvement team made it a priority, particularly as in-person events were challenging or impossible, to increase the number of livestreamed and virtual meetings. We

also purchased new equipment that allows for multiple camera angles and cleaner audio. We are in the process of compiling attendee and viewer data (and will do so more consistently going forward) but offering alternative participation options undoubtedly increased our reach.

Which strategies were not successful and why?

Customer Service

Centralizing customer inquiries with Customer Service invariably means more work for our small team to handle. We will need to think creatively about how we can continue to use one platform while acknowledging the restraints of a small staff.

Social Media

We have begun to explore other social media platforms like TikTok, Nextdoor, and LinkedIn. However, staff limitations make it challenging to branch out further. Establishing a presence that isn't continuous can inadvertently harm the brand as it creates more channels to monitor with limited staff.

Public Involvement

We were initially planning on mandating that I-15 Tropicana consultants utilize our new CRM to better capture contacts and data surrounding e-mail blasts on large projects. However, that plan fell through as we lose two PIOs that were going to assist us with the onboarding process.

Other Efforts

The Communications Division launched a new blog and external newsletter earlier in the year, with plans to create at least one internal newsletter. Unfortunately, our division lost two PIOs shortly thereafter and had to put those efforts on hold.

Strategies for improvement planned for next reporting period:

Short Term Strategies

Customer Service

Continue building strong relationships with the districts to ensure we're providing consistent and timely responses to customers throughout the state. Bring on a new Customer Service representative in the next two months that will take our team to another level, including better assisting with producing data-driven reports to inform agency decision-making.

Social Media

Continue tracking metrics cross platforms to tailor content and calendars to high-performing content and other goals. We will also be creating a Social Media strategy guide in the near future to better articulate our communication goals. The NDOT Blog, once it restarts, will be integrated into this effort. Hire a new Social Media Manager contractor to better manage our program.

Public Involvement

Continue tracking public meeting efforts and conversations with NDOT staff in preparation of creating a new on-call agreement to assist with unanticipated public outreach needs as well as the creation of a new toolkit and planner to standardize and improve efforts.

Long Term Strategies

Customer Service

Build out the online chat function for the website and continue improving Zendesk integration with NDOT.

Social Media

Utilize new Social Media Manager to identify more specific goals and metrics across platforms. Build out TikTok, Nextdoor, and LinkedIn accounts as more capacity is added through consultant augmentation.

Public Involvement

Identify new software to better centralize public involvement efforts across the Department. Work with divisions to standardize outreach.

Does this performance measure effectively measure what is desired?

Yes.

Does monitoring and evaluating this performance measure improve your business process?

Yes.

Is there a more effective performance measure that should be considered? If so, explain.

Eventually, "public outreach" should grow to encompass government affairs metrics as well. Also, internal communications metrics will be measurable once our CRM is up and running again. At that point, it should also be added to this performance measure.

Has the Covid-19 pandemic effected this performance measure or your ability to achieve the targets? If so, explain.

Public involvement has seen significant fluctuations in in-person outreach and participation as a result of the pandemic winding down in 2021 and early 2022.

Will meeting the yearly target have a fiscal impact? If so, explain.

No.

Next year's target:

Stated above.

6. Improve Travel Reliability & Reduce Delay

Performance Measure:

1. Interstate Travel Time Reliability (Interstate TTR) Measure: Percent of person-miles traveled on the interstate system that are reliable
2. Non-Interstate Travel Time Reliability (Non-Interstate TTR) Measure: Percent of person-miles traveled on the non-interstate NHS that are reliable
3. Freight Reliability Measure: Truck travel time reliability (TTTR) index on the interstate system
4. Percent Non-Single Occupancy Vehicle (Non-SOV) Travel Measure: Percent of Non-single occupancy vehicle travel
5. Peak Hour Excessive Delay (PHED) Measure: Annual hours of peak hour excessive delay per capita

(See: "Measurement and supporting data" below for definitions of these performance measures.)

Current and Ultimate Targets:

2021 Reporting Period - Calendar Year	Current Targets	Ultimate Targets
Interstate TTR	87.0% ≥	87.2%≥
Non-Interstate NHS TTR	87.0% ≥	87.4%≥
Interstate Truck TTER (Index)	≤ 1.26	≤ 1.24
Las Vegas Non-SOV Travel	21.6% ≥	21.8% ≥
Las Vegas PHED Per Capita (Annual Hrs.)	≤ 10.0	≤ 9.8

Performance Champion/Division:

Traffic Operations

Support Divisions:

Performance Analysis
Roadway Systems

Overview and plan support:

NDOT in coordination with the Federal Highway Administration (FHWA) and the Metropolitan Planning Organizations (MPO's), selected these performance measures to align with the US DOT's Moving Ahead for Progress in the 21st Century (MAP-21) Act passed by Congress on July 6, 2012, the Fixing America's Surface Transportation (FAST) Act passed by Congress on December 4, 2015, and the Department's Transportation System Management and Operations (TSMO) Program Plan executed on May 13, 2020. The Department leverages the Regional Integrated Transportation Information System (RITIS) to analyze the federal National Performance Management Research Data Set (NPMRDS), as well as INRIX data obtained from mobile phone devices, connected vehicles, portable navigation devices, and on-board fleet management systems. Moreover, the measures described herein are an indication of the level of efficiency on Nevada's state-maintained transportation system.

Measurement and supporting data:

The following are simplified definitions for the performance measures utilized to evaluate the mobility and reliability of Nevada's state-maintained transportation system.

- **Interstate Travel Time Reliability (Interstate TTR) Measure:**
  Interstate TTR is the percentage of total roadway segments, weighted by the roadway length, the annual average number of daily trips (AADT), and average number of persons in a vehicle (vehicle occupancy), that are reliable over a given year. A trip is considered reliable by the US DOT if the travel time is below 1.5 times the 50th percentile for a given evaluation period (morning, afternoon, evening, and weekend). If the 80th percentile or more of trips through a roadway segment in all evaluation periods are found to be reliable, the roadway segment is considered reliable.
- **Non-Interstate Travel Time Reliability (Non-Interstate TTR) Measure:**
  Non-Interstate TTR is the percentage of person-miles traveled on non-interstate segments of the National Highway System (NHS) that are reliable. This measure is used and calculated in the same manner as Interstate TTR with the exception that all calculations are specific to non-interstate segments on the NHS.
- **Freight Reliability (TTTR) Measure:**
  TTTR is calculated as an index to assess the reliability of travel time for freight trucks on the interstate system. To determine the reliability of an individual segment, the Truck Travel Time Reliability (TTTR) is calculated as the ratio of the "longer travel" time (95th percentile) to the "normal" travel time (50th percentile). The TTTR's of interstate segments are then used to calculate the TTTR Index for the entire interstate system using a weighted aggregate calculation for the worst performing times of each segment. Moreover, the closer the TTTR Index is equal to 1.0, the more reliable the interstate system is for truck travel times.
- **Las Vegas Non-Single Occupancy Vehicle (Non-SOV) Travel Measure:**
  Non-SOV Travel is the percentage of the population in urbanized areas that are commuting to work by means other than utilizing a single occupancy vehicle, such as carpool, van, public transportation, commuter rail, walking, or bicycling, as well as telecommuting. The percent of Non-SOV Travel was obtained in coordination with the Regional Transportation Commission of Southern Nevada (RTC-SNV) utilizing the American Community Survey (ACS) Commuting (Journey to Work) data from the U.S. Census Bureau.
- **Las Vegas Peak Hour Excessive Delay (PHED) Measure:**
  PHED indicates the annual hours of excessive delay per capita. Excessive delay is defined as the extra amount of time spent in congested conditions defined by speed thresholds that are lower than a normal delay threshold. For the purposes of this rule, the speed threshold is 20 miles per hour (mph) or 60 percent of the posted speed limit for each segment, whichever is greater during 15-minute intervals. The total excessive delay metric is also weighted by vehicle volumes and occupancy. For Nevada specific calculation purposes, the peak traffic periods are defined as weekday mornings from 6 a.m. to 10 a.m. and 3 p.m. to 7 p.m. for weekday afternoons.

The table below depicts the results of the performance measures up to the current 2021 reporting period.

Reporting Period Calendar Year	2015	2016	2017	2018	2019	2020	2021	Current Target
Interstate TTR	98.8%	88.5%	86.8%	87.0%	85.1%	94.4%	88.9%	87.0% ≥
Non-Interstate NHS TTR	92.0 %	66.0%	86.8%	86.3%	86.8%	92.4%	93.1%	87.0% ≥
Interstate Truck TTR (Index)	n/a	n/a	n/a	1.27	1.28	1.23	1.26	≤ 1.26
Non-SOV Travel	n/a	n/a	21.5%	21.3%	21.4%	21.5%	22.5%	21.6% ≥
PHED Per Capita (Annual Hrs.)	n/a	n/a	11.0	11.6	7.4	4.6	9.1	≤ 10.0

Evaluation of Performance Measure

Annual target met?

Yes.

Which strategies were in place during the current data reporting period?

NDOT has several programs which aim to improve system reliability by mitigating recurring and non-recurring congestion, improving traffic safety, and reducing secondary incidents. These programs include:

- The Reno and Las Vegas Freeway Service Patrol (FSP) Program improves safety and reliability on the freeway systems by removing crashed or disabled vehicles from travel lanes and promptly restoring traffic congestion to the normal traffic flows.
- The Emergency Response Hazmat Program improves reliability on all state-maintained roadways by quickly and safely mitigating hazardous spills impacting travel lanes.
- The 511 Traveler Information Program improves reliability on all state-maintained roadways by informing motorists of real-time traffic conditions, which enables users to make informed and reliable trip decisions.
- The Traffic Incident Management (TIM) Program is a planned and coordinated process by various public agencies and private sector partners to detect, respond to, and remove traffic incident to restore traffic capacity as safely and quickly as possible. Nevada TIM Coalition provides a forum for discussions, incident debriefings, state and regional policies and procedures to enhance cooridinated response time for safe, quick removal of incidents from the roadway.
- The Traffic Incident Management platform system is a web-based application that enables traffic management center staff and first responders to share real-time incident information for enhance accuracy, proactive response, and interoperable communications.
- The Transportation Systems Management and Operations (TSMO) Program optimizes the deployment of non-capacity improvement projects by implementing performance-based metrics and strategically prioritizing them.
- A cooperative and innovative partnership with RTC Freeway and Arterial System of Transportation (FAST) to manage the Southern Nevada Traffic Management Center (TMC) which operates both the arterials and the freeway networks from one centralized facility in coordination with Nevada State Police Highway Patrol Dispatch.

- The Department launched Nevada's first Active Traffic Management (ATM) System in March 2020 on the Las Vegas I-15 and US-95 freeways, which provides the ability to dynamically manage congestion based on prevailing and predicted traffic conditions.
- The Department is currently studying the HOV Hours of Operation to evaluate the effectiveness of the 24-hour enforcement. This study seeks to determine the most effective times, if any, to open the HOV lanes to General Purpose without restriction.

Which strategies applied during the current data reporting period were successful?

- The Reno and Las Vegas Freeway Service Patrol (FSP) Program improved reliability on the interstate by mitigating 49,751 roadway incidents such as: crashes, disabled and abandoned vehicles, roadway debris, providing incident scene safety, and addressing other situations that disrupt traffic flows.
- The 511 Traveler Information System had 3,179, 959 sessions on the NVRoads website and 145,531 calls to the 511NV IVR system.
- The Statewide Hazmat Emergency Response Program improved reliability by mitigating 49 roadway related hazardous material incidents ranging from diesel spills, biohazardous releases, illegal dump and/or spill removals, and addressing other hazmat situations that the Department does not have the manpower and expertise to perform.
- Nevada ranks 11th in the nation for percent of first responders trained in Strategic Highway Research Program 2 (SHRP2) Traffic Incident Management training. First responders include law enforcement, fire/rescue, towing and recovery, EMS, and transportation/public works. Nevada trained 418 first responders in 2021 and the TIM Coalition's goal is to train 700+ in 2022, which is currently on track.
- The FAST TMC provides traffic alerts via #FASTAlert on Twitter, Freeway Traffic Alerts (via text messages and e-mail distributions), and Waze. These messages include crash information, travel times, construction alerts, weather alerts, and special event details. In 2021, more than 10,500 messages were sent out via text message, email distribution, and Waze. The FAST TMC also assisted in proactively managing 8,179 traffic incidents, which included 41 secondary incidents.

Which strategies were not successful and why?

All strategies were successful.

Strategies for improvement planned for next reporting period

Short Term Strategies:

- In October 2022, the TIM Coalition will conduct its annual training and crash demonstration at the Nevada Safety Summit. The crash demonstration features real crashed vehicles, and volunteer victim actors that allow first responders to demonstrate how they conduct incident management in the field. For the 2022 Crash Responder Safety Week (CRSW), NDOT will again request the Governor's proclamation and work with our partners for various media blasts.
- NDOT has released the Automated Vehicle Location (AVL) Request for Proposal (RFP), which will equip maintenance vehicles with AVL technology. This new system is required to send vehicle status (such as hazard lights on) to 3rd party map providers such as Waze. including the transmission of the vehicle's light bar on/off status.

- NDOT has also released and procured an RFP for a Towing Recovery Incentive Program (TRIP). TRIP is a quick clearance incentive program that partners DOTs with heavy-duty recovery companies and pays a monetary bonus for clearing commercial vehicle wrecks within 90 minutes. TRIP's key objective is to standardize towing response and facilitate the safe and quick clearance of commercial vehicle crashes on the interstate system. The Pilot will be in Las Vegas and should be operational at the beginning of 2023.

- The Travel Time Reliability Performance Index (TTRPI) is a developing supplemental evaluation of travel time reliability and speed reductions observed during peak hours of operation utilizing RITIS, INRIX, and the NPMRDS. Traffic Operations is incorporating TTRPI methodologies to help identify segments that can be improved through non-capacity focused projects in the Clark County and Washoe County metropolitan areas, such as ITS solutions, Active Traffic Management (ATM) solutions, striping, etc. The procedures will be used to evaluate the TTR effectiveness of the ATM System in August 2022 following the inclusion of July data into NPMRDS.
- NDOT is in the process of implementing and new Traveler Information System (511) that will launch in fall 2022. The new 511 system allows users to view crowdsource data from Waze. Additionally, if NDOT chooses to enable the feature, the app will also allow users to report roadway issues to NDOT.
- The Advanced Transportation Congestion Management Technology Deployment (ATCMTD) Project kicked off in early 2022, which includes developing a model deployment site for a large-scale installation, operation, and integration of advanced transportation technologies to improve safety, efficiency, and system performance on the US 95 corridor from I-15 to Summerlin Parkway. The Project includes additional ATM sites, Wrong Way Driver Detection and Warning Systems (WWDWS), Strategic Traffic Management Sites (STMS), and High-Occupancy Vehicle (HOV) Detection.

Long Term Strategies:

- NDOT recently completed a Strength, Weakness, Opportunities and Threat (SWOT) analysis, which identified that a public facing performance measure dashboard depicting real time measures for Pavement, Bridge, and Roadway Conditions will make trips more reliable. Therefore, the NDOT Executive Leadership Team is in the early discussions phase of implementing a project for this task.
- NDOT has initiated the development of the Nevada Statewide ITS & ATM Master Plan recognizing there is a need to leverage resources and capabilities through application of a wide range of strategies to improve safety, reliability, mobility, and overall performance of Nevada's surface transportation system. The ITS & ATM Master Plan will provide a thorough evaluation to assess the current systems in rural and urban areas, determine future needs, and outline future ITS and ATM strategies to advance NDOT's capabilities. The plan will also provide NDOT with a clear understanding of how to plan for, implement, operate, and maintain ITS & ATM strategies at a statewide level. The master plan is scheduled to be completed in summer 2023.

Does this performance measure effectively measure what is desired?

Yes. These measures effectively measure the reliability of the transportation system and align with FHWA MAP-21 performance measures allowing for consistency across the nation.

Does monitoring and evaluating this performance measure improve your business process?

Yes. These measures are an indication of how successful program strategies have been at improving the mobility and reliability of the transportation system.

Is there a more effective performance measure that should be considered? If so, explain.

Possibly. NDOT is in the process of requesting two new staff positions that will be able to identify more effective performance measures (if any). The two new staff positions are a Data Specialist and a TSMO Modeling Specialist. The positions have been approved by the NDOT Executive Leadership Team and we are now in the process of justifying the positions to the Nevada Legislature.

Has the Covid-19 pandemic affected this performance measure or your ability to achieve the targets? If so, explain.

TIM Training has been difficult to conduct due to the COVID-19 pandemic and its impact on agency staffing levels. Due to the vast number of vacancies and turn over, there are difficulties with ensuring we have trainers for the scheduled classes. NDOT continues to supplement the lack of TIM trainers with consultant support in 2021, and we have been able to increase the number of trainees due to the online FHWA Train the Trainer courses. Overall, a TIM Performance subcommittee is still in the process of being re-established and TIM training continues to be an emphasis in 2022.

Will meeting the yearly target have a fiscal impact? If so, explain.

Yes, the targets cannot be met without the aid of the program strategies described above such as: FSP, TIM, Hazmat, 511, ATM, HOV, IST SDP, and TSMO. Each program strategy plays a vital role in meeting the performance target. The Department also needs to continue providing access to software programs such as RITIS and continue purchasing traffic data. Lastly, the new Data Specialist and TSMO Modeling Specialist positions will be vital to identifying, meeting, and maintaining new targets.

Next year's target:

In 2021, Non-SOV Travel and PHED reporting requirements were applicable to urbanized zones exceeding 1 million people; however, as of 2022, the measures will be revised to include urbanized zones exceeding 200,000 people in accordance with FHWA standards.

2022 Reporting Period - Calendar Year	Current Targets	Ultimate Targets
Interstate TTR	87.0% ≥	87.2% ≥
Non-Interstate NHS TTR	87.0% ≥	87.4% ≥
Interstate Truck TTR (Index)	≤ 1.26	≤ 1.24
Reno Non-SOV Travel	23.0% ≥	23.2% ≥
Las Vegas Non-SOV Travel	21.6% ≥	21.8% ≥
Reno PHED Per Capital (Annual Hrs.)	≤ 12.0	≤ 10.0
Las Vegas PHED Per Capita (Annual Hrs.)	≤ 10.0	≤ 9.8

7. Streamline Project Delivery - Bidding to Construction Completion

Performance Measure:

Schedule and estimate from award opening to construction completion in State Fiscal Year 2022 (July 1, 2021, to June 30, 2022).

Budget Measure = Percentage of completed contracts within 10% of budget.

Schedule Measure = Percentage of completed contracts within 10% of working days.

Change Order Measure = Percentage of completed contracts with a cost increase of less than 3% in Change Orders.

Current year target:

80% of completed contracts within Budget Measure, Schedule Measure, and Change Order Measure. Projects were evaluated and met the measure if they were under 110% of the original programmed budget and schedule.

Ultimate target:

80% of completed project contracts within budget measure, schedule measure, and Change Order measures.

Performance Champion/Division:

Construction Division

Support Divisions:

Engineering Divisions (Project Management; Environmental; Right of Way; Location; Roadway Design; Structures; Hydraulics)
Operation Divisions (Materials; Traffic Operations; Maintenance and Asset Management; District I; II; III)

Overview and plan support:

This performance measure aligns with the goals of the Nevada Department of Transportation's Strategic Plan to prioritize safety, cultivate environmental stewardship, and efficiently operate and maintain the state highway transportation system.

Measurement and supporting data:

FY 2022	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Yearly Totals
Number of Completed Contracts	3	8	7	11	29
Percentage of Completed Contracts Within 10% of Budget	100%	100%	100%	100%	100%
Percentage of Completed Contracts Within 10% of Working Days	100%	100%	100%	100%	100%
Percentage of Completed Contracts with a Cost Increase of Less Than 3% in Change Orders	67%	50%	71%	73%	66%

Evaluation of Performance Measure:

Annual target met?

Budget Measure - Yes
Schedule Measure - Yes
Change Order Measure – No

Which strategies applied during the current data reporting period were successful?

1. Thorough plan and specification review process to ensure intent is clear and contract documents provide for the highest quality possible for each construction project.
2. Consultation with Supporting Divisions to ensure proper scope and specifications are incorporated.
3. Budgets are developed and tracked closely to ensure fiscal responsibility.
4. Contract schedules are developed to complete the contract work with minimal impacts to traffic and public and providing adequate time for the contractor to provide a quality job.
5. Bid Review Analysis Team performs an in-depth analysis of every contract bid to identify potential quantity or plan errors and potential vague or conflicting specifications.
6. Detailed tracking of quantities during construction for accurate payment.
7. Change Order review process in place to ensure a detailed analysis and well documented accounting of changes to the contract.

Which strategies were not successful and why?

None. Strategies will be continually monitored and revised as necessary to improve. Although we did not meet the performance measure of 80% of completed contracts with a cost increase of less than 3% in Change Orders, this is a very high standard to achieve. The national Change Orders average is approximately 6%.

Strategies for improvement planned for next reporting period:

Short Term Strategies

Continued coordination during project development to ensure quality plans, specifications, and accurate quantities are produced for every construction project.

Long Term Strategies

Continue to strive to meet the 80% of completed contracts with a cost increase of less than 3% in Change Orders. Review of Change Order measure and completed contracts to better identify specific areas that may need improvement. Review of the specific Divisions/Districts requesting the Change Orders and identify areas for improvement. Review strategies and refine if necessary.

Does this performance measure effectively measure what is desired?

Yes. It assists in determining ongoing efforts and is effective and an appropriate approach to evaluating the data. The data demonstrates the Department's overall construction program performs at or above performance measures and is a strong indicator of the success of the overall program.

Does monitoring and evaluating this performance measure improve your business process?

Yes. The performance measures will demonstrate if there are issues within areas of the program which would need to be addressed and works towards meeting the goals of the Nevada Department of Transportations' Strategic Plan.

Is there a more effective performance measure that should be considered? If so, explain.

No. The continued evaluation of these measures will be monitored as there have been a significant number of promotions and changes to personnel in many divisions, as well as retirements and therefore the Department has many vacant positions which may reflect in future evaluations.

Has the Covid-19 pandemic effected this performance measure or your ability to achieve the targets? If so, explain.

No.

Will meeting the yearly target have a fiscal impact? If so, explain.

Yes. By continually improving and striving to reach the goal of 80% of completed contracts with a cost increase of less than 3% in Change Orders will directly relate to additional available funding for future projects.

Next year's target:

80% of projects within Budget Measure, Schedule Measure, and Change Order Measure

8. Maintain State Highway Pavement

Performance Measure: Percentage of state-maintained roadways in fair or better condition.

Current year target:

Category 1: 95% Minimum fair or better condition
Category 2: 90% Minimum fair or better condition
Category 3: 85% Minimum fair or better condition
Category 4: 75% Minimum fair or better condition
Category 5: 50% Minimum fair or better condition

Ultimate target:

Perform annual preservation as necessary to maintain the condition of the roadway network in conformance with the established goals and additional preservation as necessary to eliminate the accumulated backlog.

Performance Champion/Division: Materials

Support Divisions: Maintenance and Asset Management

Overview and plan support:

This performance measure supports the Department's Mission to effectively preserve and maintain NDOT's pavement assets. For the Department to maintain the roadway network in fair or better condition, maintenance and preservation work is performed on the roadways each year. To increase the percentage of pavements in fair or better condition, this work must be constructed on all roads faster than the rate of deterioration of the pavement.

The Department's Pavement Management System (PMS) assists NDOT with maintaining and improving the condition of the entire state-maintained roadway network. This network consists of a 5,378-centerline mile (13,774 lane mile) inventory that is classified into five separate road prioritization categories. These road categories are primarily based on average daily traffic (ADT) and federal guidelines for highway classification descriptions. Because traffic levels are a primary input in pavement design, each road prioritization category consists of pavements that share similar rates of deterioration and require similar timing for maintenance and preservation repair work.

NDOT uses a pavement condition rating system called the Present Serviceability Index (PSI) to objectively measure important roadway attributes such as travelers' responses to motion and appearance as demonstrated by a smooth riding surface that is without cracking, rutting, patching, or potholes. The PSI pavement condition rating system uses a value that is calculated using pavement roughness measurements and mathematical formulas that quantify pavement distresses such as cracking and rutting. These measurements and formulas are combined and standardized into an objective rating scale numbered from zero to five. Pavement rated from four to five is interpreted as pavement in new or very good condition with a smooth surface that is without distress or irregularities. Pavement rated less than two is interpreted as pavement in very poor or failed condition with the roughest of surface conditions and no longer navigable at the posted speed limit. The PSI pavement condition rating system is used to quantify the pavement condition for each road within the state-maintained roadway network.

Funding for improvements is generally administered as part of either the maintenance or preservation programs. Maintenance funds are typically used for traditional maintenance work such as chip seals, filling pothole and patching. Preservation funds are typically used for repair strategies often classified elsewhere as rehabilitation - such as asphalt overlays, mill and fills, and recycling methods. The cost and construction timing for the various repair strategies are significantly different and contingent on the pavement condition at the time of the repair. There is a significant cost savings when pavement is proactively rehabilitated in fair condition as compared to reactively reconstructed in very poor condition.

Measurement and supporting data:

Current Pavement Condition of the State-Maintained Road Network

Each category of road has a pavement condition minimum fair or better target that represents a reasonable condition in which the road should be maintained. It also represents a balance between condition and expense. Smoother roads in better condition are generally less expensive to maintain and rehabilitate. However, when roads become rough, cracked, or rutted, more money must be spent to bring them back to acceptable condition.

TABLE 1 illustrates the current condition of the roadway network for which NDOT is responsible and includes the annual targets that have been established for the condition of the roads. For the 2021 data collection period, the NDOT pavement management system contains 5,229 centerline miles (13,436 lane miles) that were surveyed and are reported on in this table. Most of the un-surveyed network consists of dirt/aggregate surfaced routes and roadway segments under construction during the time the data was collected. Category 1 is further broken down into Asphalt (A) and Concrete (C) surfaces for clarity.

TABLE 1. Pavement Condition versus Annual Target by Road Category

Condition	PSI Rating Scale	Road Category 1 - A	Road Category 1 - C	Road Category 2	Road Category 3	Road Category 4	Road Category 5	Road Network Totals
Very Good	5.00 to 4.00	74.0%	6.2%	40.2%	21.6%	5.7%	0.2%	21.4%
		401.9	5.9	427.4	235.0	46.6	2.6	1,119.3
Good	3.99 to 3.50	21.0%	30.2%	37.0%	44.0%	37.5%	11.5%	28.9%
		113.8	29.0	393.5	478.2	308.4	185.3	1,508.2
Fair	3.49 to 3.00	4.4%	37.2%	13.1%	22.2%	33.9%	28.8%	22.7%
		23.7	35.6	139.5	240.9	278.9	465.7	1,184.5
Mediocre	2.99 to 2.50	0.6%	22.7%	6.0%	9.7%	17.0%	33.9%	16.9%
		3.4	21.8	64.0	104.9	140.1	547.6	881.9
Poor	2.49 to 2.00	0.02%	3.4%	2.6%	2.1%	4.9%	15.5%	6.6%
		0.1	3.2	27.3	22.6	40.6	251.4	345.2
Very Poor	< 2.00	0.0%	0.4%	1.0%	0.4%	1.0%	10.2%	3.6%
		0.0	0.3	10.9	4.6	8.6	164.9	189.3
Total Miles:		639		1,063	1,086	823	1,618	5,229
Condition Goal: Percentage of Roads in Fair or Better Condition		95%		90%	85%	75%	50%	
Current Condition: Percentage of Roads in Fair or Better Condition		95.5%		90.4%	87.8%	77.0%	40.4%	72.9%
Does the current condition meet the condition goals?		Yes		Yes	Yes	Yes	No	

Pavement Preservation Repair Work for the State-Maintained Road Network

During state fiscal year 2022, NDOT advertised approximately $149.9 million worth of contract maintenance and preservation pavement repair work. These expenditures addressed the needs for approximately 430 centerline miles (1002 lane miles) of roads. TABLE 2 contains a financial summary of the contracted maintenance and preservation pavement repair work that was accomplished on the state-maintained roadway network during state fiscal year 2022 along with the corresponding amount of mileage that was improved.

TABLE 2. Contracted Pavement Repair Work for Fiscal Year 2021

Fiscal Year	Contract Maintenance Repair Work Expenditure and Mileage	Contract Preservation Repair Work and Expenditure and Mileage	Total
2022	$25,295,520	$121,555,624	$146,851,144
	290 Centerline Miles 632 Lane Miles	140 Centerline Miles 370 Lane Miles	430 Centerline Miles 1002 Lane Miles

Future Pavement Needs

TABLE 3. Project and Funding Distribution to Meet Targets

County	Category	Centerline Miles	Performance Target	Performance 2020	Yearly Project Miles	Yearly Cost ($M)
CL	1	928	95%	95.0%	63.1	27.1
CL	2	1,499	90%	79.9%	78.6	38.8
CL	3	229	85%	76.9%	11.3	4.7
CL	4	188	75%	59.1%	11.8	3.2
CL	5	120	50%	28.6%	8.0	1.2
CL	All	2,963			172.9	75.0
	% Of Total	22.1%				36.7%
WA	1	408	95%	82.7%	36.2	15.6
WA	2	282	90%	86.1%	11.3	5.6
WA	3	141	85%	86.9%	4.2	1.7
WA	4	133	75%	73.3%	4.6	1.2
WA	5	133	50%	26.1%	9.5	1.4
WA	All	1,096			65.8	25.5
	% Of Total	8.2%				12.5%
All Others	1	1,501	95%	98.7%	94.4	40.6
All Others	2	1,655	90%	95.6%	35.1	17.3
All Others	3	1,890	85%	88.9%	48.3	19.9
All Others	4	1,332	75%	79.9%	28.6	7.7
All Others	5	2,989	50%	41.5%	122.0	18.3
All Others	All	9,377			328.3	103.8
	% Of Total	69.8%				50.8%
Total	All	13,436			566.9	204.4

Keeping the pavement network maintained at an acceptable level requires consistent funding and proper project selection. TABLE 3 shows the performance of the network relative to target for different areas of the State. Additionally, it shows the distribution of preservation funding necessary to either maintain the network at target levels where it currently meets them (identified with green) or bring the network up to the target level within five years where it does not (identified with pink).

The differences identified in the table show that the projects needs are different for different parts of the State. Washoe and Clark Counties – where the population is most concentrated – have relatively more Category 1 and 2 roadways, which are in relatively worse condition compared to the rest of the State. As a result, these two counties have a little over 30 percent of the lane miles but require nearly half of the funding.

TABLE 3 also highlights the need for consistent investment in the entire state road network – even in those areas where the pavement is currently performing at a relatively high level. The continuous preservation effort is necessary to ensure that the network does not fall below the targets in the future.

Evaluation of Performance Measure:

Annual target met?

The annual target was met for roads in Categories 1, 2, 3, and 4. Category 5 did not meet the targets.

Which strategies were in place during the current data reporting period?

- Include Category 4 and 5 roads in the preservation program.
- Re-evaluate the assignment of prioritization categories across the network.
- Incorporate the expected performance of candidate projects with respect to these performance measures directly into the project selection process.
- Monitor and evaluate the performance of the network with respect to the targets and distribute projects as necessary to keep it performing at the desired level.

Which strategies applied during the current data reporting period were successful?

- Include Category 4 and 5 roads in the preservation program.
  The approved 2022 preservation program includes more than 150 lane miles of Category 4 and 5 roads. Previous programs generally included Category 4 and 5 roads only as a part of a larger project on a higher category route.
- Re-evaluate the assignment of prioritization categories across the network. Prioritization Categories were re-assigned across the network based on updated category definitions using traffic levels and NHS status. The resulting new category assignments are more consistent with how the roads were already perceived, and as a result, measured category performance shifted closer to expectation for all categories except category 5.

Which strategies were not successful and why?

None of the strategies included in the 2021 report were unsuccessful. Short-term strategies were measurably successful, and the success of the long-term strategies cannot be determined yet. Pavement projects take several years from conception to completion, and the effectiveness of long- term strategies will not be evident until completion of the projects that originated after these strategies were implemented.

Strategies for improvement planned for next reporting period:

Short Term Strategies

- Target low performing Category 5 roads for additional rehabilitation work beyond the approved 2022 preservation program list.

- Incorporate recommendations from the NDOT Pavement Process Project into the project selection process

Long Term Strategies

- Incorporate the expected performance of candidate projects with respect to these performance measures directly into the project selection process. The development and implementation of the NDOT Enterprise Asset Management System should allow future expected performance to be more easily established and usable for project selection.
- Monitor and evaluate the performance of the network with respect to the targets and distribute projects as necessary to keep it performing at the desired level.

To keep the network performing at the targeted levels, the targets themselves, and the network performance relative to them, must be used to help guide the project selection process. These goals are a continuation of previous long-term goals, which have not been in place long enough to be fully incorporated into the project selection processes

Does this performance measure effectively measure what is desired?

Yes. Based on the deterioration rates of state-maintained roadways, the annual and ultimate targets represent what is realistic, cost effective and acceptable.

Does monitoring and evaluating this performance measure improve your business process?

Yes. Monitoring and evaluating the pavements with respect to these metrics is necessary to determine the effectiveness of the performed rehabilitation and maintenance. Only through the evaluation can progress be determined.

Is there a more effective performance measure that should be considered? If so, explain.

Other performance measures exist and have been investigated by the Department. This measure accurately portrays the experience of the traveling public and what condition is reasonable for the roadway network.

Has the Covid-19 pandemic effected this performance measure or your ability to achieve the targets? If so, explain.

The ability to collect and process the data used for this performance measure was hampered both by the many covid based restrictions still in place in 2021, and the hiring difficulties that have been present during the pandemic. This does not directly affect the performance measure, but it does affect the ability to monitor it and evaluate progress.

Will meeting the yearly target have a fiscal impact? If so, explain.

Yes. Meeting these targets requires significant and continual spending on maintenance and preservation projects. However, this can be weighed against the results of underfunding the annual needs of the system, which will lead to an increased deterioration of the entire roadway network. Proactively applying maintenance and preservation strategies to the state-maintained roadway network can extend pavement service life and reduce costly reconstruction projects that not only impact the Department's budget but also impact the traveling public for longer periods of time due to construction projects that take longer to complete.

Next year's target:

The targets for next period are unchanged from the previous reporting period:
Category 1: 95% Minimum fair or better condition
Category 2: 90% Minimum fair or better condition
Category 3: 85% Minimum fair or better condition
Category 4: 75% Minimum fair or better condition
Category 5: 50% Minimum fair or better condition

9. Maintain NDOT Fleet

Performance Measure:

There are two performance measures for the maintenance of the Department's fleet of mobile equipment:
Percentage of fleet requiring replacement.

1. This measure is the percentage of the fleet that has reached the age or mileage that has been established for replacement.

   A lower percentage is desired, indicating the fleet is being replaced in a timely manner and expensive rebuilds and breakdown repairs are being avoided.

2. Percentage of fleet that complies with scheduled maintenance requirements.

   This measure is the percentage of the fleet that is maintained as per Department preventive maintenance requirements. Preventive maintenance allows the vehicle to perform over expected life without breakdown. As the fleet is maintained per the manufacturer's recommendations based on mileage or accrued hours of operation, compliance is achieved.

   A higher percentage is desired, indicating the fleet is being maintained as recommended to gain the maximum performance life.

Current and Ultimate Targets:

2022 Reporting Period	Current Target	Ultimate Target
Fleet Requiring Replacement (%)	Decrease of 1% per year	10% maximum
, Fleet Meeting Maintenance Requirements (%)	Increase of 1% per year	95% minimum

Performance Champion/Division:

Equipment Division

Supporting Divisions:

Districts I, II, and III support both performance measures by performing scheduled vehicle preventive maintenance at their repair facilities.

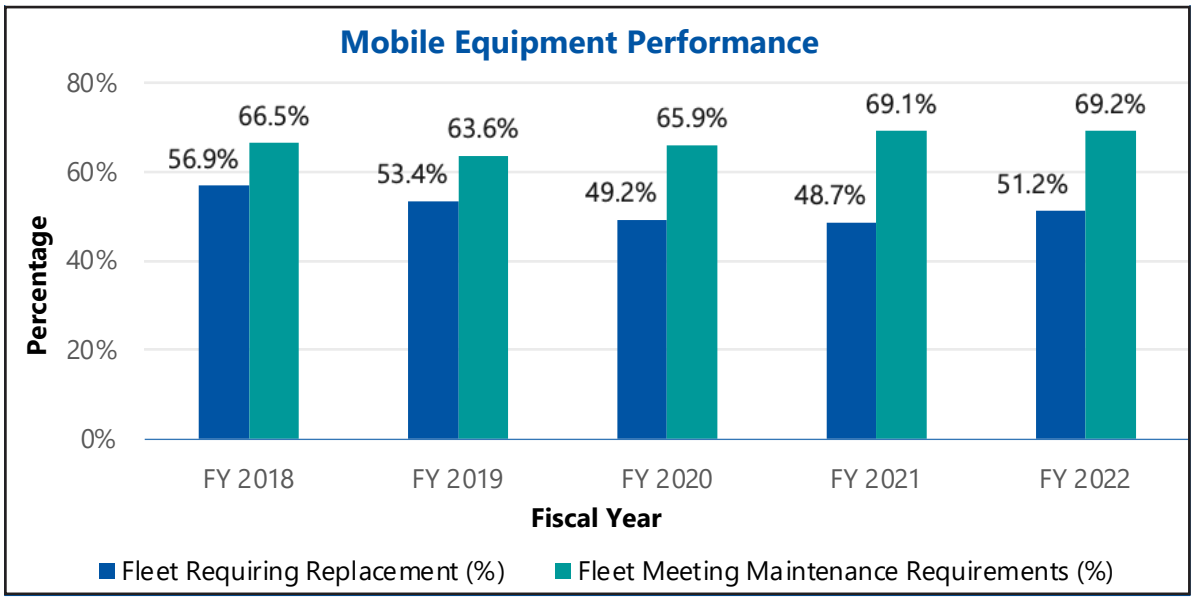
Overview and Plan Support:

In state fiscal year 2022, the Equipment Division continued to purchase new replacement equipment based on funding. The Rebuild Program will be continued on a limited basis for specialty equipment. The Rebuild program was initiated in 2010 due to lack of funding for replacement equipment. This program extends the life of specified equipment that has reached or exceeded replacement criteria and is rebuilt to like-new condition which assists in assuring that the NDOT is adequately equipped for its work efforts in maintaining public safety.

The vehicles in the fleet are important to deliver projects, operate, and maintain a safe highway system. These performance measures help ensure the equipment is in good condition and helps meet NDOT's Mission, Vision, Core Values, and Goals.

Supporting Data:

Fiscal Year	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Current Target
Fleet Requiring Replacement	56.9%	53.4%	49.2%	48.7%	51.2%	
Change from Previous Year	-4.21%	-3.45%	-4.24%	-0.45%	2.50%	Decrease of 1% per year
Fleet Meeting Maintenance Requirements	66.5%	63.6%	65.9%	69.1%	69.2%	
Change from Previous Year	2.24%	-2.87%	2.31%	3.15%	0.05%	Increase of 1% per year



Evaluation of Performance Measure:

Annual Target Met

1. No. The percentage of fleet requiring replacement increased by 2.5% not meeting the target of a 1% decrease.

Fleet Requiring Replacement

	SFY 2022	SFY 2023
	As of 7/1/2022	As of 7/1/2023
Total NDOT Fleet (unit)	2,738	2,738
Vehicles Meeting Age and Use Replacement Criteria (unit)	1,334	1,402
Requiring Replacement	48.72%	51.21%

During state fiscal year 2022, 92 units were replaced; however, during this same period, 160 different units met the age and use criteria and require replacement. The fleet is aging, and with the current

funding levels, NDOT is barely keeping up with little progress toward the ultimate performance measure. Based on age and current use/mileage projections, more than half the fleet meets replacement criteria in state fiscal year 2023.

2. N/A. this target is calculated in whole at the end of the fiscal Year. However, from the fourth quarter 2022 compared to the first quarter 2023 PM Service increased 5.3%. During the FY22 Audit, auditors were able to provide alternative solutions to staffing issues. Shop is starting to hire Fleet Service Workers. We feel these two factors has contributed to the increase.

Which strategies were in place during the data reporting period?

1. Fleet requiring replacement
   a. Revise replacement criteria by increasing usage criteria in selected class code. Improved technology has created longer lasting vehicles. Usage criteria was increased for sedans, SUVs, pick-ups, 1-ton trucks, most trailers, street sweepers, excavators, and snow cats based on OEM.
   b. Increase age criteria in other specified class codes. Selective replacement based on condition and usage that meet one of the replacement criteria. For example, a vehicle meeting both criteria may still have a useful life. Also, a vehicle meeting one replacement criteria may be replaced based on high maintenance cost.
   c. Focus on vehicles with the most need to be replaced instead of criteria alone. This will allow vehicles with high maintenance costs, high miles, and excessive age to be replaced. With the replacement of vehicles in MCCs with high number requiring replacement will decrease the replacement percentage.
2. Fleet that complies with scheduled maintenance
   a. Analyze quarterly Preventive Maintenance (PM) that was accomplished on core fleet to identify non-compliance and make recommendations for vehicle maintenance.
   b. Outsource light duty vehicles for PM services to local shops and lube facilities. The shops will be responsible for servicing heavy equipment.
   c. Develop an enforceable policy for non-compliance of PM standards is still in development.

Which strategies were successful?

All strategies were successful. While the percentage of fleet requiring replacement didn't decrease per the target, the trend is in the right direction. Using the strategies indicates the fleet is being maintained as recommended to gain the maximum performance life.

Which strategies were not successful and why?

All strategies were successful.

Strategies for improvement planned for next reporting period:

Short term strategies

1. Fleet requiring replacement
   a. Replace vehicles in the MCCs that have a high number of vehicles meeting replacement criteria and are deemed most critical to replace.
2. Fleet that complies with scheduled maintenance
   a. Continue to analyze quarterly Preventive Maintenance (PM) accomplished on core fleet.
   b. Continue to develop enforceable policy for non-compliance of PM standards.
   c. Outsource light duty vehicles while the shops focus on PM services of the heavy equipment.

Long term strategies

1. Fleet requiring replacement
   a. Maintain fleet size by usage assessments maximizes the usage of underutilized vehicles while minimizing the usage of overutilized vehicles.
   b. Move vehicles that are underutilized in a District or Crew to other Districts or Crews that has overutilized vehicles.
2. Fleet that complies with scheduled maintenance
   a. Annual fleet condition audit will be performed by the Equipment Division, highway Equipment Specialist to inspect and ensure compliance of the maintenance policy and procedures.
   b. Quarterly audit of PM service by each Repair Shop. Work directly with Repair Shop to utilize all resources available to them.
   c. Implementation of a Telematic System to record real time meter readings directly from vehicle to M5. This will eliminate entry errors at the pump and data entry errors.
   d. Adjust the PM Maintenance Schedules to reflect OEM recommendations. This will extend our service intervals.

Does the performance measure effectively measure what is desired?

Yes

Does monitoring and evaluating this performance measure improve your process?

Yes

Is there a more effective performance measure that should be considered? If so, explain

No

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

COVID has no effect on our performance measure unless funding for replacement equipment is cut.

Will meeting the yearly target have a fiscal impact? If so, explain.

1. Percentage of fleet requiring replacement.

   Yes, meeting the target for replacing the fleet will require a significant increase in the approved annual replacement budget. In order to be in a position where a maximum of only 10% of the fleet requires replacement and subsequently meet the goal, $160 million is needed. It is estimated to take 14 years with the current level of funding to reach this target. For the Department to reach this goal in 8 years, the funding requirement would be$20 million per year. This would represent an annual increase of $12.5 million a year above our current annual budget of $7.5 million per year.

10. Maintain NDOT Facilities

Performance Measure:

NDOT buildings play a vital role in NDOT's mission of operating a safe roadway transportation system. There are two performance measures for the maintenance of NDOT facilities.

1. Percentage of facilities with a current Facility Condition Assessment (FCA).
   By law, state facilities must be assessed periodically, and by policy, NDOT does so on a seven-year cycle. This measure is the percentage of buildings that have a current FCA. On a seven-year cycle, Maintenance & Asset Management (M&AM) conducts FCAs, which are high-level assessments of the conditions of the buildings at all NDOT-owned sites. All structures observed during the FCA site visits are recorded in the buildings inventory. NDOT performs its own FCAs while SPWD performs it for other public agencies.
2. Overall Condition Composite.

   This measure reports a composite figure which represents the overall condition of NDOT buildings. The figure ranges from a minimum of 0 to a maximum of 1. A higher figure indicates a better average condition of NDOT's buildings than a lower figure. Please see the Overview and Plan Support section for a detailed explanation of how the figure is calculated.

Current and Ultimate Targets:

FY 2022 Reporting Period	Current Score	Ultimate Target
Current FCA	95.2%	100%
Overall Condition Composite	0.67	1.00

Performance Champion/Division:

Maintenance and Asset Management Division/Architecture Section

Support Divisions:

Districts, Right-of-Way, Environmental

Overview and Plan Support:

The Maintenance and Asset Management Division (M&AM) maintains an inventory of buildings and building-like structures owned and operated by NDOT, excluding most leaseholds. The following categories of structures are excluded from this report:

- Leaseholds on private property where NDOT owns no title to the land (e.g., an office lease in a privately-owned building);
- Building-like structures (e.g., shade ramadas, etc.);
- Non-building structures (e.g., wash pads, cutback oil tanks, etc.)
- Non-hazardous buildings and building-like structures with purely highway operations purposes (e.g., Boschung buildings, fiber huts, radio towers, etc.);
- Buildings of a minor nature that are not for occupancy (e.g., minor storage sheds, etc.); and
- Buildings less than 120 ft^2 in area that pose no operational risk of failure.

Trained teams with broad-based experience in inspection, engineering, and architecture are employed to conduct the FCA's. The ratings are generated through visual observation only, which is consistent with the intention that the FCA rates buildings at a high level. These teams rate each building for adequacy in 10 performance categories. For each performance category, the number of buildings with acceptable ratings is divided by the total number of applicable buildings within the category and the results are plotted as percentages in Figure 1. The performance categories are:

1. **Accessibility** – The building, or applicable portion thereof, complies with accessibility codes. The rating is either "yes" (fully compliant with applicable accessibility code), or "no" (if there is any exception to full compliance). Facilities where construction commenced prior to January 26, 1992, are exempt from accessibility codes to the extent that they have not been altered after that date. Residences are exempt from accessibility codes. A higher percentage indicates better average accessibility compliance.
2. **Painting** – The building exterior requires paint within the next three years. The rating is either "yes" (paint is required within three years), or "no." Buildings which do not require paint on the exterior envelope are not rated. A higher percentage indicates better average condition of paint.
3. **Roofing** – The building requires major maintenance or replacement to the roof within five years. The rating is either "yes" (major maintenance or replacement is required within five years), or "no." A higher percentage indicates better average condition of roofs.
4. **Life-Safety** – The building has exit signs (if required), egress lighting, automatic fire suppression (if required), and a fire alarm/smoke detection system (as applicable). The rating is either "yes" (all applicable systems are installed and operational), or "no" (any applicable system is not present). A higher percentage indicates a greater number of buildings have all required life-safety systems.
5. **Lighting and Electrical** – Rating of the overall condition of the building's lighting and electrical systems, excluding issues that are otherwise accounted for in Life-Safety and/or Energy Conservation (for example, egress lighting would be considered under Life-Safety rather than Lighting and Electrical). The rating is either "good" (no deficiencies noted, or minor deficiencies which are easily correctable by NDOT staff), "fair" (some deficiencies noted which could require contractor or engineering assistance to correct but pose no hazard to personnel or operations), or "poor" (deficiencies are noted which could require engineering and contractor support, and/or pose hazards to personnel and/or operations). Ratings of "good" and "fair" are considered acceptable. A higher percentage indicates better average condition of lighting and electrical systems.
6. **Mechanical Systems** – Rating of the overall condition of the building's heating, ventilation, air conditioning, and plumbing systems. The rating is either "good" (no deficiencies noted, or minor deficiencies which are easily correctable by NDOT staff), "fair" (some deficiencies noted which could require contractor or engineering assistance to correct but pose no hazard to personnel or operations), or "poor" (deficiencies are noted which could require engineering and contractor support, and/or pose hazards to personnel and/or operations). Ratings of "good" and "fair" are considered acceptable. A higher percentage indicates better average condition of mechanical systems.
7. **Energy Conservation** – Energy improvements are recommended due to one or several of the following conditions existing in the building: non-LED lighting; no automated lighting control; inefficient or obsolete heating/cooling/ventilation system; no automated heating/

cooling/ventilation system control; lack of thermal insulation where the construction of the building or a component of the building readily allows for installation of additional insulation or insulated components; non-insulated glazing, and insulated glazing units which have failed or show signs of deterioration. The rating is either "yes" (one or several improvements are recommended), or "no." A higher percentage indicates a better average degree of energy efficiency.

8. **New Building Needs** – There is a known need for a replacement and/or additional building. The rating is either "yes" (a replacement or additional building is needed), or "no." A higher percentage indicates a lesser need for replacement and/or additional buildings.
9. **Additions** – There is a known need to add area to an existing building. The rating is either "yes" (additional area must be added to the building), or "no." A higher percentage indicates a lesser need for additions.
10. **Tenant Improvements** – There is a known need for space reconfigurations, carpeting, remodeling, and similar major interior work. The rating is either "yes" (there is a known need), or "no." A higher percentage indicates a lesser need for tenant improvement work.

Finally, a composite number is generated by averaging all 10 performance category ratings. The composite number is the value reported as the current score in the Current and Ultimate Target table and is plotted for the current and previous four state fiscal years in Figure 2.

Measurement and Supporting Data:

Work for sixteen (16) capital projects has been completed in the current reporting period. Completed projects include a new salt/sand barn in Wellington, a variety of card access and security improvements, the new elevator and associated improvements to the Sparks administration building, emergency repairs to houses at Blue Jay and Independence Valley, and multiple office reconfigurations, among others.

The Architecture Section maintains records for 526 structures, some of which are minor in nature or leased as defined in the Overview and Plan Support section. Omitting minor and leased structures, Performance Measure 10 tracks data for 377 buildings. As of the time this report was written, the average age of an NDOT building is about 45.6 years.

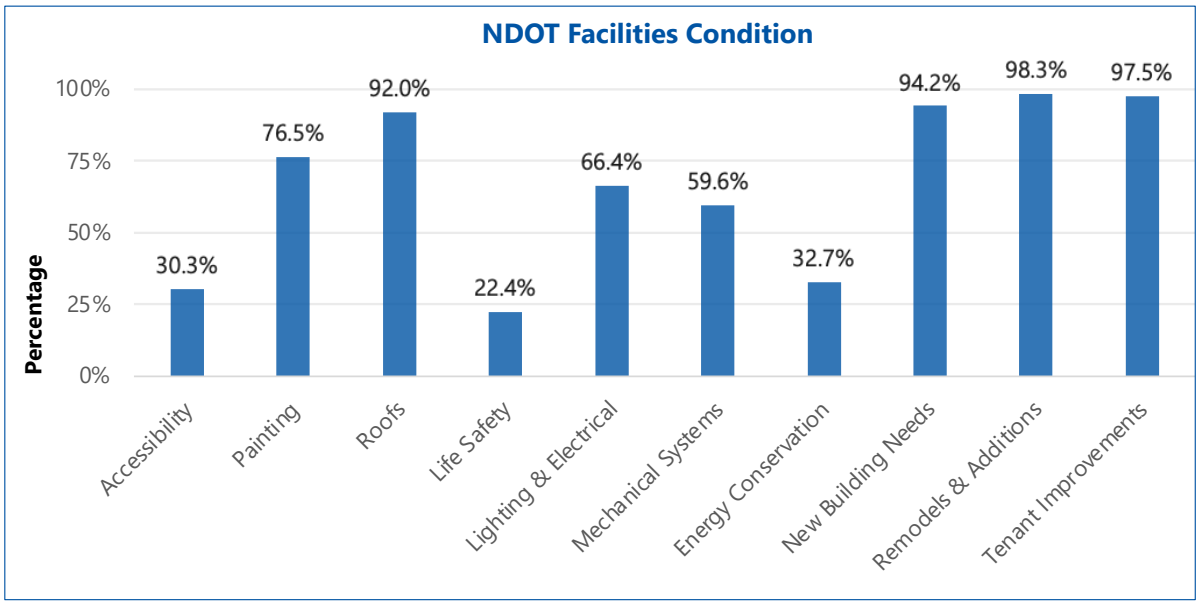


FIGURE 1 – NDOT Facilities Conditions Performance Categories

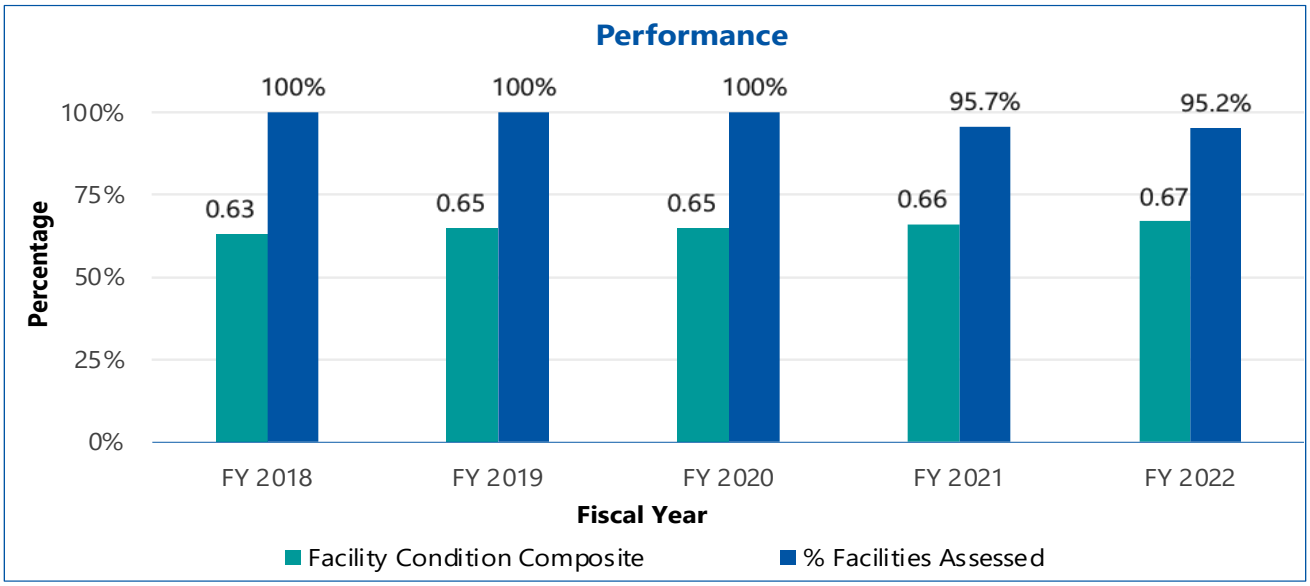


FIGURE 2 – Composite Score over Five Years

EVALUATION OF PERFORMANCE MEASURE

Annual Target Met

No, the target was not met. The target was predicted primarily based on assumptions that multiple new buildings would be constructed during 2022 (primarily, Sprung stockpile canopies), and that the few buildings which were missed in the 2019 facility condition analysis would be assessed during the reporting period. The following factors contributed to the target not being met:

- Construction of the new buildings was delayed by about one year due to permitting issues.
- None of the outstanding facilities were assessed.
- Several previously unknown buildings were discovered and added to the inventory.
- The majority of the projects that were completed did not result in changes to the rating data.
- A few facilities had ratings downgraded. For example, the Sparks administrative building was updated to reflect the need for tenant improvement work.

Which strategies were in place during the data reporting period?

The primary strategies were:

- Augment architecture staff.
- Begin work with a consultant to take existing strategic planning efforts over the finish line.
- Update this performance measure.
- Reassess NDOT's facilities maintenance strategies.

Which strategies applied during the current data reporting period were successful?

The Architecture Section was successful in gaining one full-time permanent staff plus three contract project management staff. The full-time position was successfully reclassified and advertised for applicants. The position will be filled during FY 2023.

The contract staff began in the second half of FY 2022. Most of their efforts during FY 2022 revolved around training, takeover of projects already in-motion (to balance workload with existing project managers), and preliminary phases of launching new projects. Their production is not readily apparent in most objective data for FY 2022; however, they were

invaluable in balancing workload by removing active jobs from other project managers. Their new project assignments will begin to go to construction soon, and their impact will be very noticeable in FY 2023.

Throughout FY 2022, there has been significant work on a variety of fronts regarding how NDOT can change its approach to facilities maintenance. While no actual operational change to maintenance was implemented in FY 2022, the work done will begin to result in changes in the near- and mid-term futures. As discussed below in short-term strategies for next year, additional facilities maintenance budget will be requested in the forthcoming legislative session.

Which Strategies were not successful and why?

Last year, it was noted that the PM 10 is no longer deemed to effectively measure the condition of NDOT's facilities. Progress on PM 10 remains ongoing. Contract staff have been hired to assist with resource challenges and the new full-time position will be filled soon which should free some time throughout FY 2023 to focus on a revised performance measure. Additionally, we have retained a consultant program manager to assist us with tools to strategically prioritize projects over the long-term and this will assist with revising the performance measure.

Strategies for improvement planned for next reporting period:

Short-term strategies:

NDOT buildings are aging and in need of repair. One of NDOT's strategic initiatives is to prioritize building and facility needs as there is not a current strategic plan for prioritization of repair of NDOT's buildings and facilities. NDOT will continue working with a program manager to produce detailed strategic plans which quantify and prioritize the needs of NDOT facilities to assist NDOT in setting long-range goals and planning for the achievement of those goals. The plans will include priorities with options for variables such as condition, occupancy, critical operations, etc. The plans will be prepared for NDOT's Executive Leadership Team to approve and advance for funding.

The need to perform reactive maintenance in an unplanned manner is highly disruptive to a strategic capital improvement program. NDOT is taking steps to increase routine and preventative maintenance efforts in order to prevent unplanned failures. The biennial budget request for FY 2024 and 2025 is planned to include $24M in increased maintenance funding.

Long-term strategies:

Staffing challenges limit the volume and speed of work that the Architecture Section can deliver. Contract staff have been helpful, but they come with risk due to uncertainty in contract duration. The life span of major facilities capital projects is generally five years at the minimum, but the current staffing contract is only funded for about three years. Once a project is in motion for that period of time, it is very difficult to simply stop the project if the contract project managers are no longer available. Due to the workload of the office, it is not possible to reassign projects to other project managers if the contract is not renewed for the contract project managers. Based on these risks, we intend to pursue all available avenues to acquire full-time state positions to augment Architecture staff over the long-term. NDOT has committed to requesting six new staff of the legislature in the 2023 session.

NDOT will continue reassessment of facilities maintenance strategies. Improvements to facilities maintenance – particularly, preventive maintenance – are essential to halt the current pattern of using assets to failure. This will increase the level of service provided by

NDOT facilities, and also assist with keeping unplanned catastrophic failures from interfering with a long-term strategic capital improvement program. Reorganizing and augmenting maintenance staff are viewed as essential components of this effort.

We are working on refinements to improve the efficiency of our assessment data to better enable the prioritization of projects. System improvements to maintain the performance measure are being enacted to reduce the potential for discontinuities and reconciliation of data sets as was observed recently. Additional efforts are being extended to increase the project capacity of the division to assist in reducing the backlog of necessary projects and deficient facilities throughout the state.

Does this performance measure effectively measure what is desired?

No. By their nature, capital projects often require years to plan, fund, and construct, and therefore it is ordinary for very few changes occur to the performance measure data within a state fiscal year, although the reality is that significant progress is being made. NDOT will identify different performance goals to effectively measure its program.

Does monitoring and evaluating this performance measure improve your business process?

No. The reporting timeline either needs to be increased or capital project milestones need to be tracked in order to monitor and evaluate performance.

Is there a more effective performance measure that should be considered? If so, explain.

We are currently evaluating several alternatives to see if there is a better and more simple way to report our performance. We are also evaluating our current building data to explore feasible alternatives. The next facilities condition analysis will be conducted during calendar years 2025 and 2026. The time between now and then will provide opportunity for contemplation of revisions and the FCA can be scoped according to those revisions to include additional or revised data set that will be needed for a new performance measure.

Has the COVID-19 pandemic affected this performance measure or your ability to achieve targets. If so, explain.

Yes. State restrictions eased during FY 2022 which made work progress easier than the previous year. However, ripple effects continue to be experienced:

- Long equipment/material lead times and supply shortages from continued supply chain disruption
- Significant cost escalation
- Labor shortages
- Poor morale

Will meeting the next yearly target have a fiscal impact? If so, explain.

Yes. There are fiscal impacts associated with the funding for needed projects as well as with the resources needed to deliver them.

Funding:

The estimate of the total backlog of vertical capital improvement needs exceeds $1 Billion. The vast majority of this is comprised of the need to rehabilitate/reconstruct the existing maintenance station inventory and construct new maintenance stations. Statewide, there are approximately 352 maintenance station structures at 62 sites with an average age of 47 years. The oldest are 81 years. In addition to the needs of the maintenance stations, new administration facilities are needed to accommodate the staffing needs of NDOT as change has

occurred at a rate that has not been matched by construction of new building assets.

There are approximately 125 rest area structures on 34 sites with an average age of 34 years. The oldest are 66 years.

In summary, the total need is very large due to decades of minimal capital improvement spending and lack of a formal, long-range capital plan.

Resources:

Beyond the need to plan for the actual construction of these and other projects, planning to adequately align the staffing of Architecture to the need is critically important. Both the type and number of staff in the Architecture Section are significantly mismatched to Architecture's role and workload.

Next year's target:

0.68

11. Emergency Management, Security and Continuity of Operations

Performance Measure:

This Performance Measure involves tracking the percentage of emergency plans that have been completed; training and education that has been provided to appropriate personnel; and emergency plans that have been tested, exercised, and updated to accommodate changes in departmental processes and policies and to reflect any changes to Federal and State guidelines. Training and updates are to be completed within a 4-year period. The Performance Measure 11 plans include:

- NDOT Emergency Operations Plan (EOP)
- NDOT Physical Security Plan (PSP)

Current year target:

100%

Ultimate target:

100%

Performance Champion/Division:

Maintenance and Asset Management

Support Divisions:

All NDOT divisions

Overview and plan support:

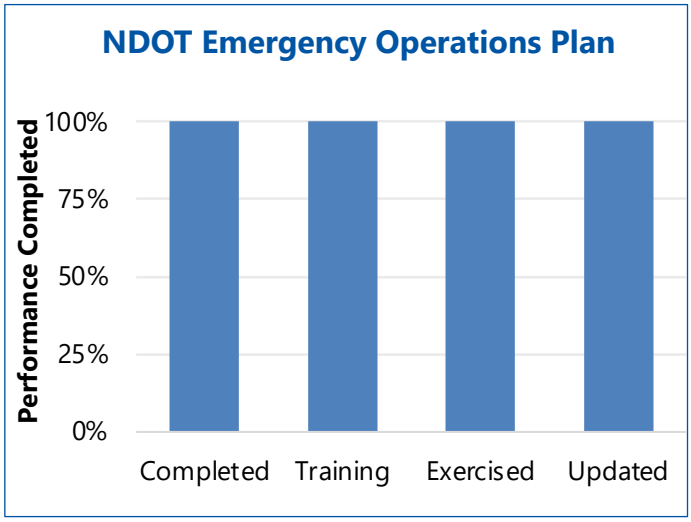
NDOT's emergency plans provide clear guidance on how NDOT will continue to perform critical functions and operations in the event of an emergency or disaster. The EOP provides a structure, processes, and procedures for the Department to continue operations in support of the state during catastrophic emergencies, including those effecting the Department directly. The PSP provides guidance for handling physical security threats to the Department directly as well as the Department providing support to others during homeland security type events.

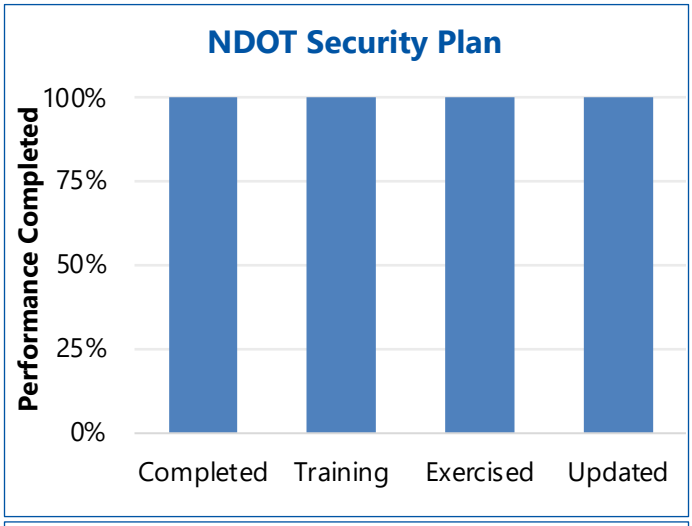
Being prepared and ready for an emergency is paramount to keeping systems operating during such times, as well as being in a position to respond to health and safety issues. Completing the Performance Measure 11 tasks helps NDOT meet its Mission, Vision, Core Values and Goals.

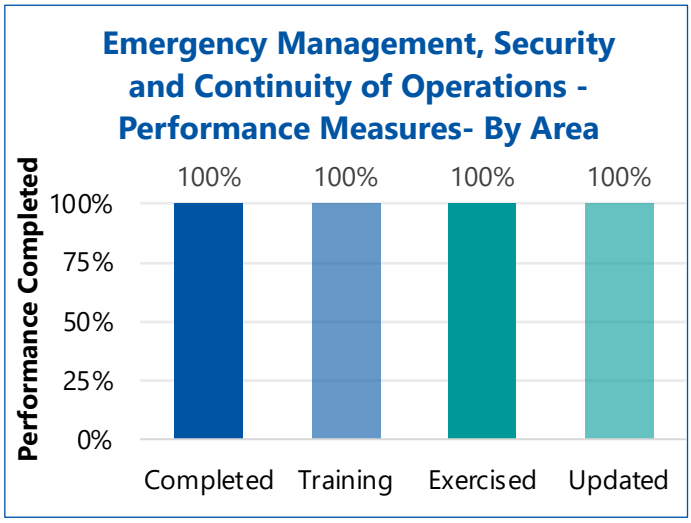
Measurement and supporting data:

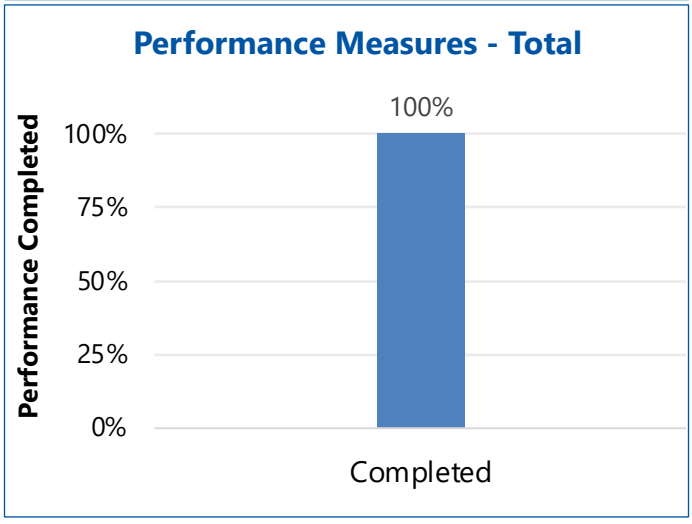
SFY 2022
7/1/2021 through 6/30/2022

Plan	NDOT Emergency Operations Plan (EOP)	NDOT Physical Security Plan (PSP)	% Compliant
Were PM Requirements Met by Providing Training within Last 4 Years	Y	Y	100%
Date of Last Training	2/17/2022	12/21/2021	100%
Were PM Requirements Met by Providing Exercises within Last 4 Years	Y	Y	100%
Date of Last Exercise	2/17/2022	10/20/2021	100%
Were PM Requirements Met by Updating Plans within Last 4 Years	Y	Y	100%
Date of Last Updates	4/12/2022	1/21/2021	100%









Evaluation of performance measure:

Annual target met?

Yes

Which strategies were in place during the current data reporting period?

Strategies applied during the current data reporting period included:

- Exercise planning strategies were in place this reporting period.
- Tracking the percentage of emergency plans that have been completed.
- Conducting, participating in, and tracking training and education that has been provided to appropriate personnel.
- Conducting, participating in, and tracking emergency plan testing, exercising, and updating.
- Conducting "hotwashes" following real events to determine successful practices and challenges in NDOT's emergency plans.
- Compiling After Action Reports following emergency plan testing and exercising to document what went well and areas for improvement.

Which strategies applied during the current data reporting period were successful?

All strategies have been successful. Due to the number of real events this year, including the COVID-19 pandemic (throughout the year), various wildfires (August and September 2021 [Tamarack and Caldor Fires]), severe winter weather (snow) associated with the record-breaking December storm, and earthquakes near Mina (July 2021, January 2022), the most successful strategy has been to conduct "hotwashes" following real emergency events. Lesson learned from the real events include successful processes such as the use of the Emergency Alert System (EAS) for providing critical information to the traveling public during events, and the need to ensure the EAS messages are appropriate and timely; NDOT has difficulty finding and funding lodging for employees brought into a district from another district to assist with emergency response activities, however NDOT can task the Nevada Division of Emergency Management to provide support for this issue, which will greatly alleviate the concerns; and although NDOT did a fantastic job of getting the traffic controls in place for a South Lake Tahoe evacuation during the Caldor Fire, the time frame for setting up requires earlier notifications from the agencies initiating an evacuation. Improved coordination with law enforcement, fire, and emergency management agencies from within Nevada and the bordering states has been initiated to deal with this issue. Lessons learned from these "hotwashes" will be incorporated into the EOP and in the various training sessions in order to improve NDOT's response to emergencies. Additionally, the Emergency Management Section 1) attended the Executive Leadership Team (ELT) and Division Chiefs monthly meetings in November and provided PSP training; 2) hosted January and February District II flood planning meetings (which incorporated EOP and PSP training and exercising) with the ELT, District II, District I and various Headquarters (HQ) Divisions (Financial Management, Administrative Services, Hydraulics, Environmental, etc.); 3) attended the Nevada Preparedness Summit in February; 4) formed the Emergency Response Team with Financial Management and Administrative Services in March to address standardizing NDOT's response to emergencies; 5) attended NDEM-hosted State Emergency Operations Center training in April and June in preparation for a full-scale exercise in December; 6) attended the Nevada Rural Preparedness Summit in June, and; 7) attended a joint Nevada/California Coordination meeting in June to build relationships to be able to more efficiently and effectively address cross-border emergencies such as the Caldor Fire.

Which strategies were not successful and why?

All strategies were successful.

Strategies for improvement planned for next reporting period:

Short term strategies:

The chart below outlines the proposed schedule for maintaining compliance with this performance measure with respect to the EOP. Regular exercises and training will remain a fundamental part of this section's strategy.

EOP Compliance Projection for Next Fiscal Year

	Date Due	FY23 Q1 Jul 21 - Sep 21	FY23 Q2 Oct 21 - Dec 21	FY23 Q3 Jan 22 - Mar 22	FY23 Q4 Apr 22 - Jun 22
Training	2/17/2026	District 1 Training	District 3 Training	HQ/Senior Mgt Training	District 2 Training
Exercises	2/17/2026	District 1 Exercise	District 3 Exercise	HQ/Senior Mgt Training	District 2 Exercise
Updates	4/12/2026	Contact List Update	Full EOP Update	Contact List Update	Contact List Update

The NDOT security audit was completed at the end of FY2020. Pertinent security issues raised in the security audit report, such as video surveillance upgrades, fence, and gate security measures, and building observation practices, will be incorporated into the PSP. The chart below outlines the proposed schedule for maintaining compliance with this performance measure with respect to the PSP.

PSP Compliance Projection for Next Fiscal Year

	Date Due	FY23 Q1 Jul 21 - Sep 21	FY23 Q2 Oct 21 - Dec 21	FY23 Q3 Jan 22 - Mar 22	FY23 Q4 Apr 22 - Jun 22
Training	12/21/2025	District 1 Training	District 3 Training	HQ/Senior Mgt Training	District 2 Training
Exercises	10/20/2025	District 1 Exercise	District 3 Exercise	HQ/Senior Mgt Exercise	District 2 Exercise
Updates	1/21/2025	Draft PSP Update	Full PSP Update	Critical Infrastructure ListUpdate	None

Long term strategies:

The Emergency Management Section plans to continue to provide quarterly training each year and to continue working with District and HQ personnel to enhance the NDOT EOP and the NDOT PSP over time. With the pandemic ensuing, training and exercises may need to continue to be conducted virtually, although in-person meetings are becoming more common.

Does this performance measure effectively measure what is desired?

Yes.

Does monitoring and evaluating this performance measure improve your business process?

Yes. Monitoring and evaluating this performance measure ensures that, at least quarterly, we inspect existing processes. Adjustments are made, if necessary, to improve these processes.

Is there a more effective performance measure that should be considered? If so, explain

No.

Has the Covid-19 pandemic effected this performance measure or your ability to achieve the targets? If so, explain.

Yes. Although the Emergency Management section has been able to meet the performance measure targets, training and exercises have generally been conducted virtually in place of traditional tabletop style events. This has caused difficulties in the quality of communications during the events as the moderator of the events has not been able to always see the participants, and therefore does not have the same ability to recognize body language indicating confusion, disagreement, or further interests in a particular topic. However, as above, in-person meetings are becoming more common.

Will meeting the yearly target have a fiscal impact? If so, explain.

No fiscal impact is anticipated.

Next year's target:

The target for next period is unchanged from the previous reporting period: 100%.

12. Reduce Fatal & Serious Injury Crashes

Performance Measure:

Number of fatalities, fatality rate, number of serious injuries, serious injury rate, and the number of non-motorized fatalities and serious injuries on Nevada's streets and highways.

Current year target:

All targets are based on 2021-2025 Nevada's Strategic Highway Safety Plan (SHSP) Goals to reduce fatalities and serious injuries. The 2021 targets were identified in the 2020 Highway Safety Improvement Program (HSIP) annual report submitted to the Federal Highway Administration (FHWA). The performance targets were developed using the best available crash data from 2015-2019 and calculated with crash data from 2015-2019.

Ultimate target:

Zero.

Performance Champion/Division:

Traffic Safety Engineering

Support Divisions:

All NDOT divisions.

Overview and plan support:

All drivers and highway system users should expect a safe highway system. The 2021-2025 SHSP focuses on the 6 "E's" of traffic safety: Equity, Engineering, Education, Enforcement, Emergency Medical Services/Emergency Response/Incident Management, and Everyone. Through the efforts of the 6 E's fatal crashes can be eliminated. The strategies for this performance measure are defined in the Nevada 2021-2025 SHSP and align with the Department of Transportation Strategic Plan goals.

Measurement and supporting data:

These measurements are in line with FHWA and the National Highway Traffic Safety Administration (NHTSA) reporting requirements. The evaluation of performance for 2021 includes crash data for 2015-2019. The data in this report uses a five-year rolling average.

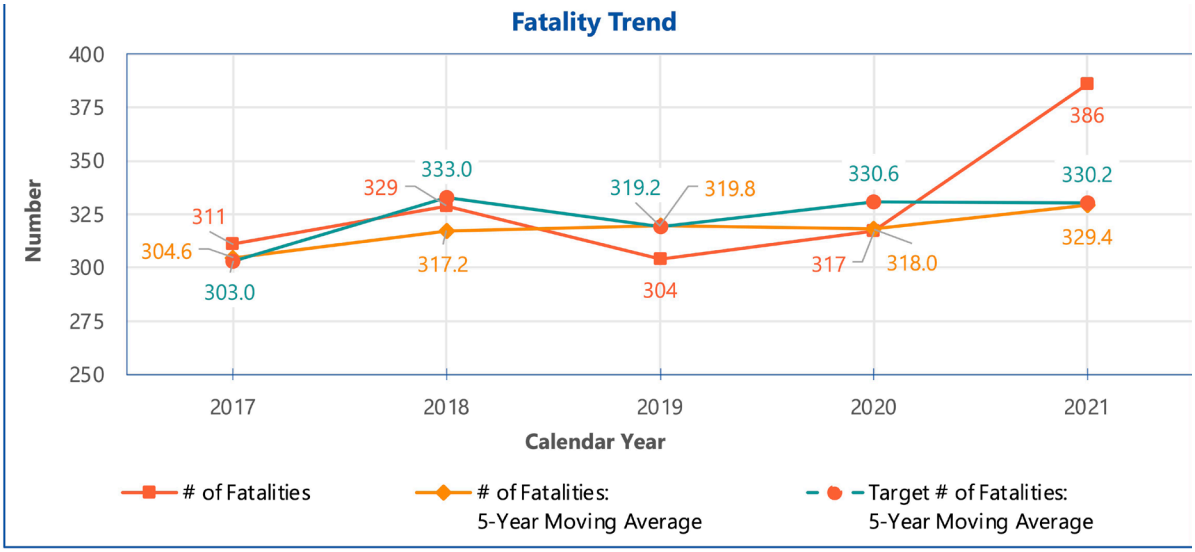
Evaluation of Performance Measure

Annual target met?

See individual targets on following pages.

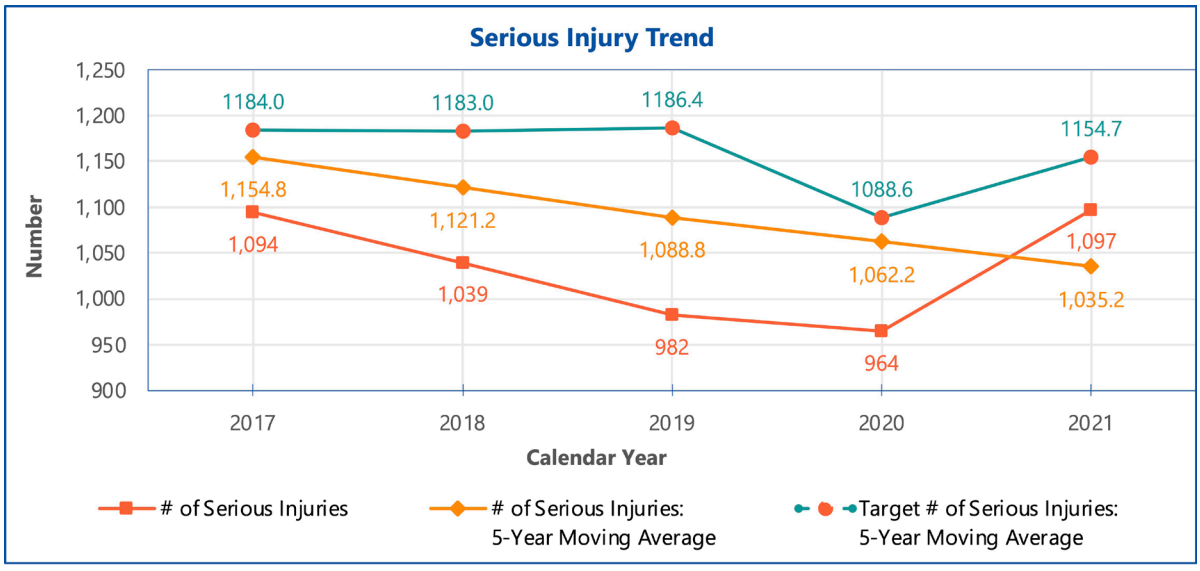
Measure 1: Number of Fatalities – Target met

The 2021 target was based on the five-year rolling average calculated using data from 2015-2019 and published in the 2020 HSIP Report per FHWA guidance. The actual number is calculated using the five-year rolling average from 2015-2019 data. The year- to-year data is included for transparency.
Target Rolling Average– 330.2
Actual Rolling Average– 329.4



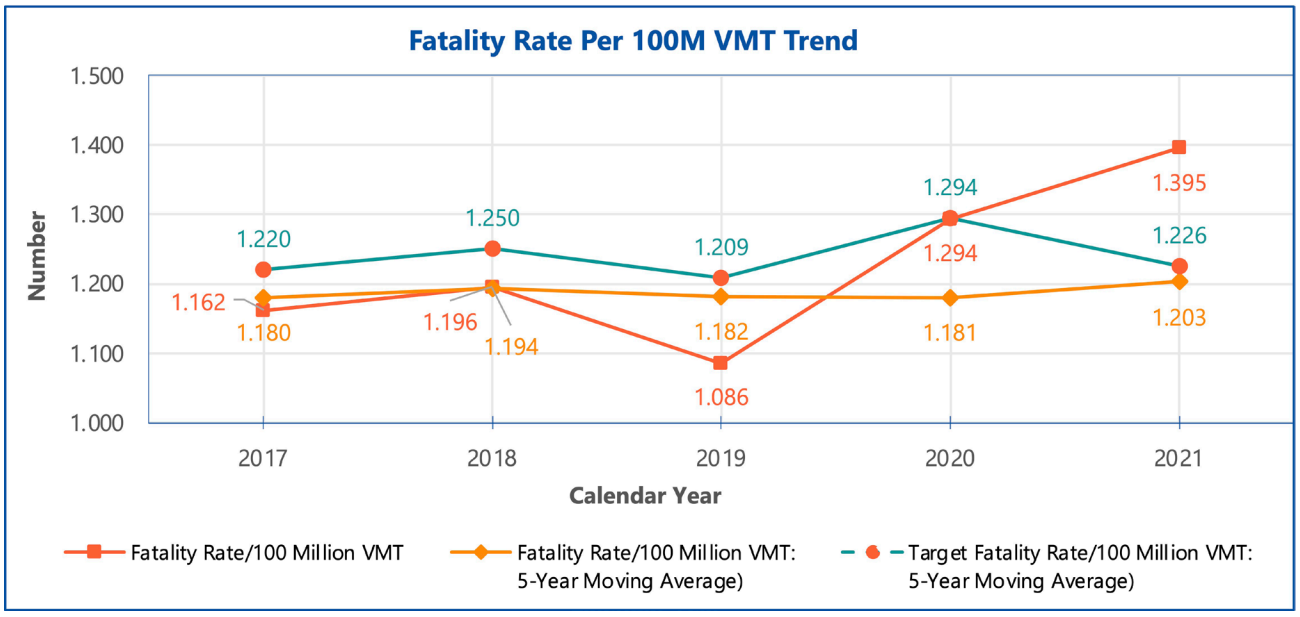
Measure 2: Number of Serious Injuries – Target met

The 2021 target was based on the five-year rolling average calculated using data from 2015-2019 and published in the 2020 HSIP Report per FHWA guidance. The actual number is calculated using the five-year rolling average from 2015-2019 data. The year- to-year data is included for transparency.
Target Rolling Average – 1154.7
Actual Rolling Average – 1035.0



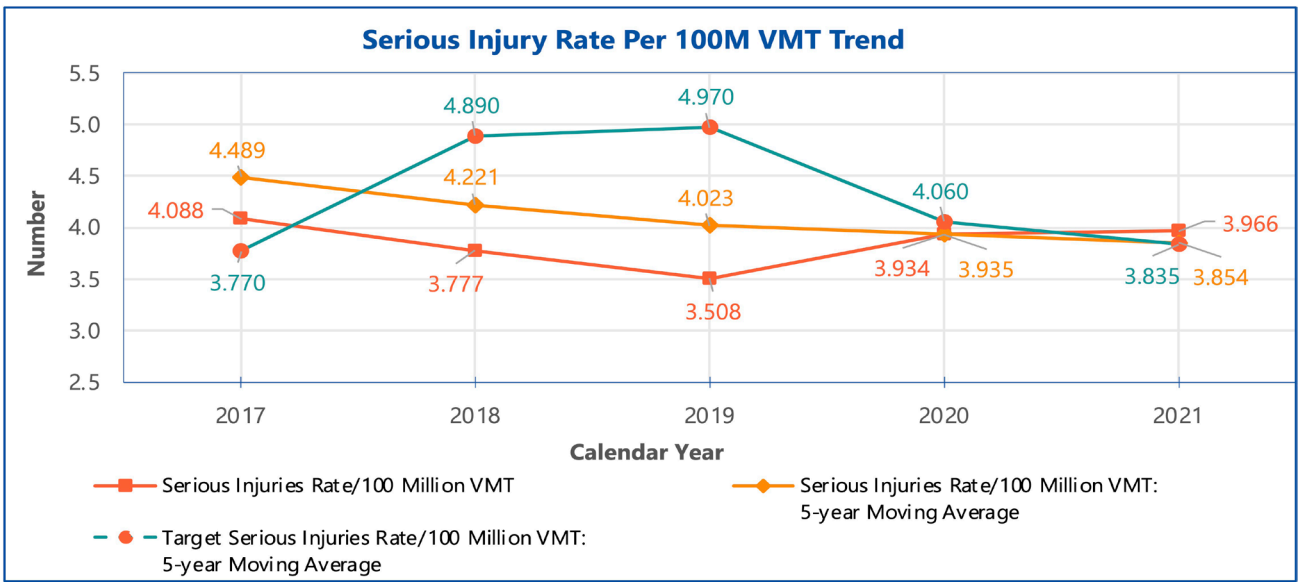
Measure 3: Number of Fatalities Per 100M Vehicle Miles Traveled (VMT) – Target met

Number of Fatalities Per 100M Vehicle Miles Traveled (VMT) – Target met
The 2021 target was based on the five-year rolling average calculated using data from 2015-2019 and published in the 2020 HSIP Report per FHWA guidance. The actual number is calculated using the five-year rolling average from 2015-2019 data. The year- to-year data is included for transparency.
Target Rolling Average – 1.226
Actual Rolling Average – 1.203



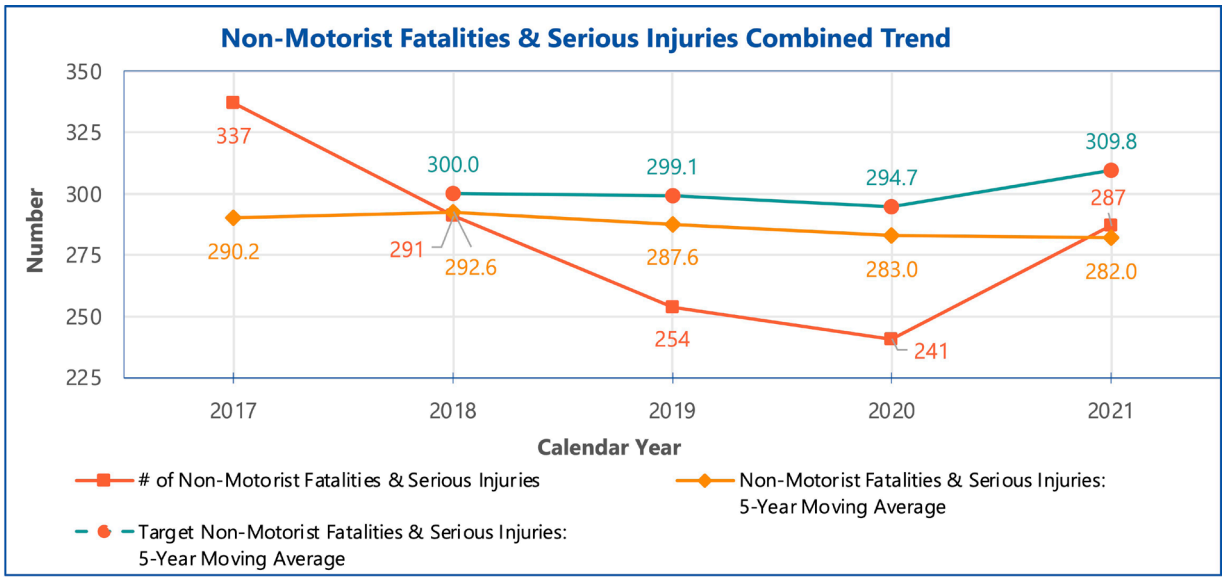
Measure 4: Number of Serious Injuries Per 100M Vehicle Miles Traveled (VMT) – Target not met

The 2021 target was based on the five-year rolling average calculated using data from 2015-2019 and published in the 2020 HSIP Report per FHWA guidance. The actual number is calculated using the five-year rolling average from 2015-2019 data. The year- to-year data is included for transparency.
Target Rolling Average– 3.835
Actual Rolling Average– 3.854



Measure 5: Number of Non-Motorized Fatalities and Serious Injuries – Target met

The 2021 target was based on the five-year rolling average calculated using data from 2015-2019 and published in the 2020 HSIP Report per FHWA guidance. The actual number is calculated using the five-year rolling average from 2015-2019 data. The year- to-year data is included for transparency.
Target Rolling Average– 309.8
Actual Rolling Average– 282.0



Which strategies applied during the current data reporting period were successful?

Strategies for Performance Measure 13 are identified in the Nevada 2021-2025 SHSP. The SHSP is a data-driven, multi-year, comprehensive plan that identifies and analyses highway safety problems and opportunities on all public roads with cooperation from public and private stakeholders.

SHSP strategies include:

- Low-cost improvements to keep vehicles in their lane
- Crash data analysis to identify high crash locations at intersections and along corridors
- Systemic safety improvements identified as FHWA Proven Safety Countermeasures
- Develop Safety Management Plans (SMPs) to analyze select corridors
- Perform Road Safety Audits (RSAs) to identify opportunities on Nevada's roadways

Which strategies were not successful and why?

Due to the systemic nature of current safety strategies, it is difficult to measure effectiveness or ineffectiveness of strategies. Additional data and analysis opportunities are under consideration.

Strategies for improvement planned for next reporting period

Short Term Strategies:

Developed a Passing and Climbing Lane study using highway attributes and crash data to prioritize projects as part of the Lane Departure Task Force of the 2021-2025 SHSP. The results of the study will prioritize projects through the One Nevada Transportation Plan and the Nevada Highway Safety Improvement Program (HSIP). The study is ongoing and will be completed in late 2022.

Continue to invest Nevada's HSIP Core Federal-Aid funds on strategies that will reduce fatalities and serious injuries as identified in the 2021-2025 SHSP.

Develop a Safe Systems Approach that can be implemented throughout the department. The FHWA states that Safe System Approach aims to eliminate fatal and serious injuries for all road users. It does so through a holistic view of the road system that first anticipates human mistakes and secondly keeps impact energy on the human body at tolerable levels.

Implement and track the Wrong Way Driver strategies on Nevada's freeway off-ramps and the Traffic Incident Management System to prevent secondary crashes. Developed a Speed Management Action Plan that looked at the way speeds are set on Nevada's roads. The plan uses the best available data on speed and crashes to develop strategies and actions that will reduce speed and speeding related fatalities and serious injury crashes on Nevada's roadways. This study was completed in 2022, has completed the evaluation stage, and is now moving towards implementation.

Long Term Strategies:

Engage local agencies and work with to develop Local Road Safety Programs (LRSP) that identify local concerns. LRSP's have been identified as proven countermeasures by the FHWA.

Continually update RSA procedure manual to reflect a virtual RSA option and current best practices identified by the FHWA.

Participate in the expansion of the Traffic Incident Management program to efficiently manage traffic crashes.

Does this performance measure effectively measure what is desired?

Yes. This performance measure is based off a five-year rolling average using the best available crash data. This performance measure aligns with FHWA reporting requirements outlined in the HSIP.

Does monitoring and evaluating this performance measure improve your business process?

Yes. The performance measure matches the goals in the HSIP and 2021-2025 SHSP.

Is there a more effective performance measure that should be considered? If so, explain.

Yes. We are considering tracking systemic improvements in the system, as those should have a direct correlation to the reduction of fatal and serious injuries.

Has the Covid-19 pandemic affected this performance measure or your ability to achieve the targets? If so, explain.

Crash data is not fully available until the end of the following calendar year. The 2022 Performance Measure will be based on the best available data from 2017-2021. Preliminary data from 2022 indicates that NDOT will struggle to meet targets in the 2022 Performance Management Report. The department recognizes the immediate problem with fatal & serious crashes and the Traffic Safety Engineering team is working with its SHSP partners to respond.

Will meeting the yearly target have a fiscal impact? If so, explain.

No. NDOT will continue to prioritize safety on Nevada's roadway system. This performance measure includes data from public roads in Nevada, not just NDOT maintained roads. There are several factors that are out of control of the Department. These factors are addressed in the 2021-2025 SHSP and are critical to reach Nevada's goals of zero serious injuries and fatalities on Nevada's roadways.

Next year's target (2022):

All targets are based on Nevada's 2021-2025 SHSP Goal of Zero Fatalities and included in the 2022 Nevada HSIP report, which include all state and local roads. These targets were set in the 2021 HISP Report. Targets are set with five-year rolling average from 2016-2020.

Measure 1: Number of Fatalities –309.9

Measure 2: Number of Serious Injuries – 964.0

Measure 3: Number of fatalities per 100M VMT – 1.171

Measure 4: Number of serious injuries per 100M VMT – 3.702

Measure 5: Number of Non-Motorized Fatalities and Serious Injuries – 245.9

13. Project Delivery - Schedule and Estimate for Bid Advertisement

Performance Measure:

This performance measure was established to track project delivery performance within the federal fiscal reporting year (FFY), October 1, 2021, to September 30, 2022. This measure is quantified by:

1. Schedule: The percentage of scheduled projects advertised within the established federal fiscal reporting year.
2. Project Cost: The percentage of engineers' estimates within a range of the awarded contract estimate. The comparison ranges include:
   a. Intermediate (60% Design) engineer's estimate is within 15% of the awarded contract estimate
   b. Final (100% Design) engineer's estimate is within 10% of the awarded contract estimate

Current year target:

80%

Ultimate target:

80%

This performance measure incorporates most project contracts advertised for construction by the Department through the electronic bidding process. Projects administered through a separate process are not captured in this metric. This includes capital improvement projects managed by the Architectural Division and contracts which cost under $250,000.
The methodology to complete this performance measure is to establish a baseline list of scheduled projects at the start of the FFY (October 1). These project schedules and costs are tracked throughout the year to award. Projects added after October 1st, that are expected to be advertised and awarded prior to September 30th, are also tracked, and reported for cost performance.
The reason for tracking projects according to the federal fiscal year timeline is because a large percentage of the Department's programs are delivered using federal funds. The Department tries to use all available federal funding each year. Doing so enables the Department to request, and in most cases receive, additional obligation authority, enabling more federal funds to be spent on additional projects. For example, the Department was able to receive an additional $101 million in federal "August Redistribution" funds this reporting year.

Performance Champion/Division:

Roadway Design, Scheduling and Estimating Section

Support Divisions:

ADA, Bridge/Structures, Hydraulics, Landscape and Aesthetics, Maintenance and Asset Management: District Betterment, Project Management, Stormwater, Traffic Operations, Traffic Safety Engineering, Transportation Multimodal Planning.

Overview and plan support:

This performance measure works towards meeting NDOT's Strategic Plan goals of putting safety first and efficiently operating and maintaining the transportation system in Nevada. With the effective planning and delivery of contracts, more lane miles will be preserved and improved,

mobility and travel time will be enhanced, multi-modal accommodations will be provided, freight and economic networks will be accounted for, and the needs of the environment and communities will be understood. NDOT will be able to consistently coordinate with other state agencies, federal and local public entities, and the public, to reach these goals.

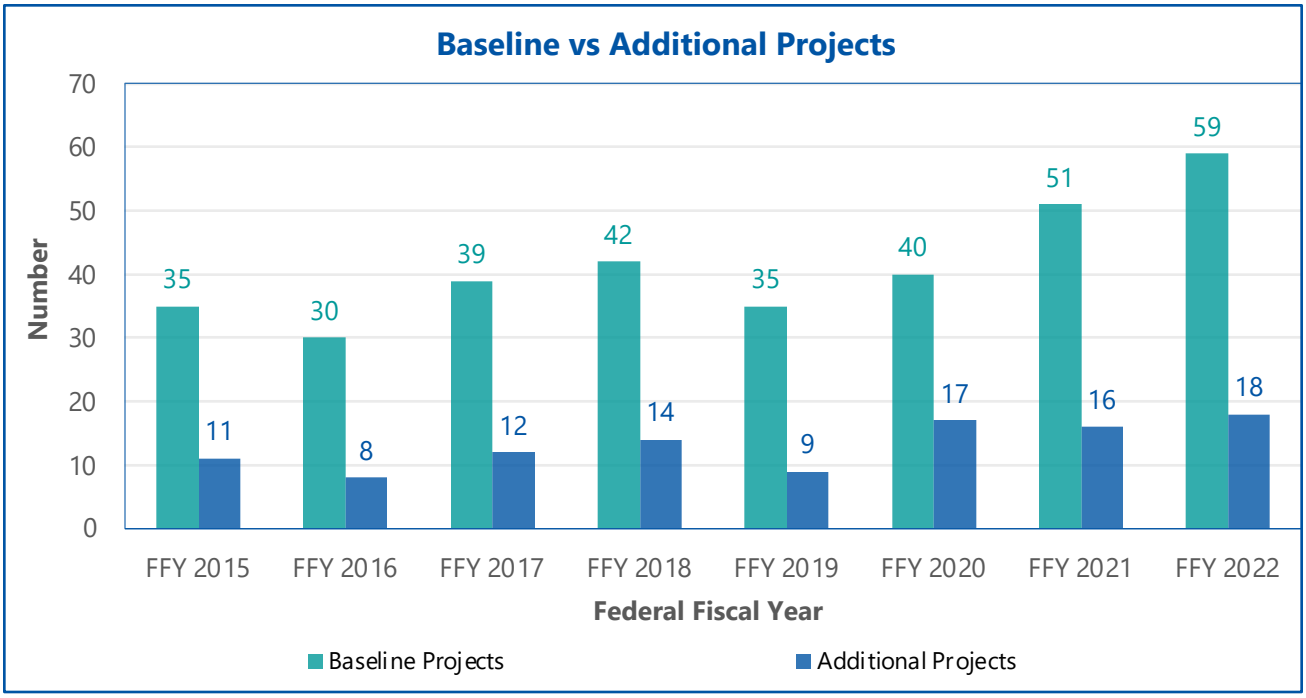
Measurement and supporting data:

1. Schedule Data:

At the beginning of the reporting period, 59 baseline projects were scheduled for FFY 2022; of the 59 baseline projects, 46 were advertised.

Aside from the baseline, an additional 18 non-baseline projects were scheduled and delivered for FFY 2022 resulting in a combined total of 64 projects delivered.

	Baseline	Additional	TOTAL
Delivered	46	18	64
Not Delivered	13	-	



There are various reasons for projects to be added or shifted to a different delivery year. Explanations for the 18 added this year include changes in the Department's priority, acceleration for funding fulfillment, and project replacement due to unexpected delays from an associated project.

The majority of projects added after Baseline establishment are Betterment projects. Not only does the program run on a state fiscal year cycle of July/June, but their pace for project identification and execution occurs in a shorter timeframe to fulfill more immediate pavement and maintenance needs. For example, Contract 3925 project need was identified in winter of 2021/2022 and constructed the following summer. This is an example of the Department's flexibility and expedited response to keep roads safe and connected.

Contract 3922 is another example of unplanned projects. This one was accelerated and deemed urgent by both the state of Nevada and California. This was a coordinated effort between the two parties.

2. Project Cost Data:

Over the course of the reporting period, 64 projects were awarded or expected to be awarded. Four projects are currently pending bid opening resulting in 60 apparent project award outcomes.

	Baseline	Additional	Total
Delivered	46	18	64
Not Delivered	13	-	
Project cost data not available*			4

* The project bid opening occurs after the reporting cutoff date; therefore, the awarded contract cost data is not available to report on. October 11, 2022 was determined to be the cutoff date for data collecting to meet the Performance Measure reporting deadline.

The 60 projects were tracked for their cost estimate performance with the following results:

a. Intermediate (60% Design) Engineer's Estimate is within 15% of the Awarded Contract Estimate: 22 projects have Intermediate Design Estimates within 15% above or below the Awarded Contract Estimate. 38 of the project estimates were outside the 15% threshold.

b. Final (100% Design) Engineer's Estimate is within 10% of the Awarded Contract Estimate: 21 projects have Final Design Estimates within 10% above or below the awarded contract estimate. 39 of the project estimates were outside the 10% threshold

Referencing Contract 3925 again, SR 225 was originally planned to be a simple overlay. The extreme winter events progressed the deterioration of the roadway surface to the point that an overlay would not be an appropriate strategy. A more robust pavement treatment, mill and fill, was then pursued increasing the project costs. The project was scheduled early January and successfully constructed in Summer of 2022.

Contract 3922 had the largest price discrepancy between estimate versions. Because it was deemed an urgent project, the intermediate review was completed in a short timeframe. With that, an error in bid item unit calculations was overlooked in the Intermediate estimate. It was corrected in reviews thereafter and more reasonable.

Evaluation of Performance Measure:

Annual target met?

1. Schedule:

The target of 80% of scheduled projects to be delivered within FFY 2022 was not met.

The established baseline list of scheduled projects includes 59 projects. Of the 59 scheduled projects, 46 were delivered/advertised within the reporting year resulting in a 78% delivery success.

The projects that didn't reach the performance metric for schedule delivery were delayed for multiple reasons. The most common reasoning is as follows:

- Department or District priority changes

- Project bundling or coordination with a local agency
- Resource shortages causing division delivery delays
  - Acquiring mapping
  - Consultant procurement delays
- Right-of-Way acquisition
- Delay in divisional program federal funding approval

2. Project Cost:

Intermediate compared to Awarded Estimates: the project cost target of 80% was NOT met.

Of the 60 known delivered projects, 22 Intermediate Design Estimates were within 15% of the Awarded Estimate; 37% of the projects were within the cost comparison target.

Final compared to Awarded Estimates: the project cost target of 80% was NOT met.

Of the 60 delivered projects, 21 Final Design Estimates were within 10% of the Awarded Estimate; 35% of the projects were within the cost comparison target.

The most common explanation for cost estimating inconsistencies this FFY was project scope changes after intermediate design, resulting in the Final and Awarded Estimates falling outside the target thresholds. Examples of scope change include design strategy changes, addition/removal of scope elements, specification changes, and alteration of project limits.

There are a series of other factors that have affected all state transportation departments including but not limited to:

- Construction resources in both staff and materials are leading to increase in prices
- Increased fuel and oil prices
  - This year asphalt, fuel, and emulsified asphalt escalations have been adjusted in attempts to account for these unstable prices

The Department has delivered a larger number of projects this year. Because of this, contractors are pushing their notice to proceed date further out than typical. It is believed that contractors are increasing prices anticipating increased construction costs/inflation.

One other note is there has been a mild decrease in the number of bidders this year as compared to the last. This could be another attribute in not meeting the cost estimating performance measure.

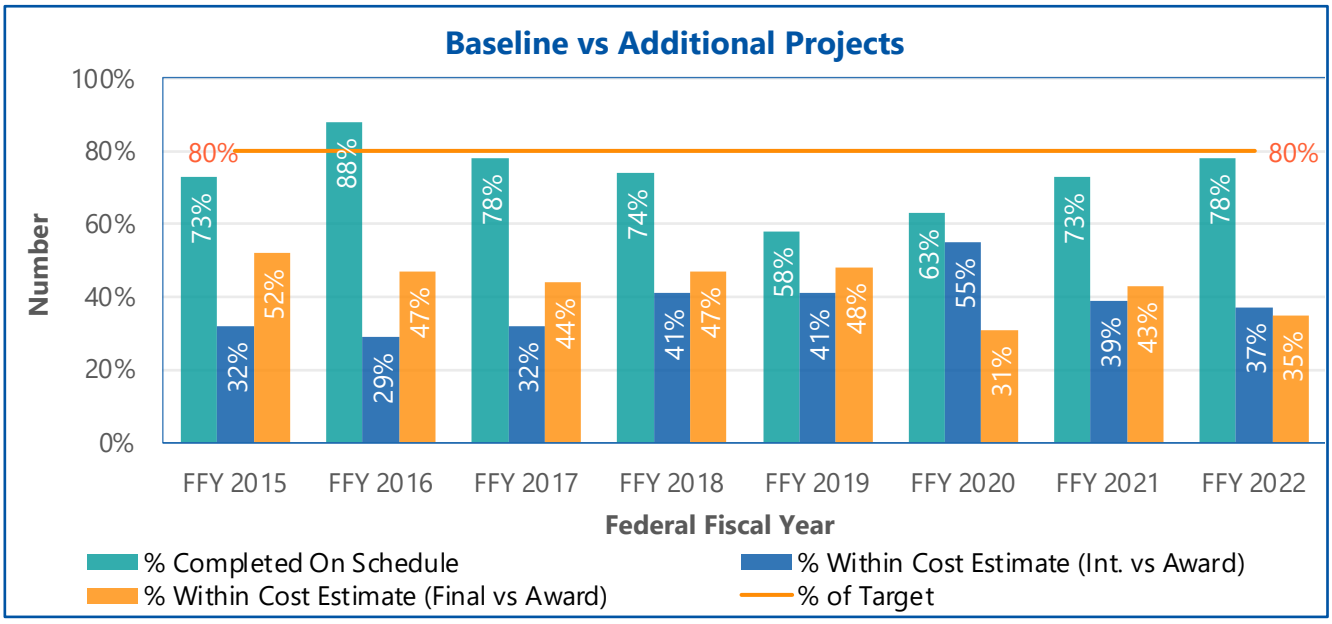
Upon further examination of the data, we noted the following trend with estimate comparisons:

- 49 Intermediate Design Estimates were above the Awarded Contract Estimate, and 11 were below
- 47 Final Design Estimates were above the Awarded Contract Estimate and 13 were below

The above estimate fluctuations resulted in the total costs for Awarded projects having an average 16% difference from the Intermediate Design Estimates and a 9% difference from Final Design Estimates. This demonstrates that although we have individual project estimate fluctuations above and below the Awarded, the Department overall is within a reasonable margin for project delivery cost delivery and utilizing the year's available funding.

Estimate Version	Total of All Project Costs	% Difference from Awarded
Intermediate	$341,434,233	16%
Final	$367,370,634	9%
Awarded	$404,837,234	

The graph below shows the performance for both project scheduling and cost estimating.



Which strategies applied during the current data reporting period were successful?

Multiple strategies were practiced or implemented during the reporting period to continue improving processes and moving towards achieving our performance measure targets. The Scheduling and Estimating Section continued to work with supporting divisions and program champions to solicit each programs' desired projects for the upcoming reporting period. This process has the advantage of allowing each program the ability to include its project priorities. However, we have discovered that there can be inconsistencies and varying levels of project scope development when projects are scheduled in this manner, potentially resulting in a project being included in the October baseline when it may not have been thoroughly evaluated for scope, cost, risks, and readiness to ensure the feasibility of delivering the project for the reporting year.

Roadway Design hosts a monthly project status meeting with other divisions to discuss scheduled projects and to give stakeholders an opportunity to learn from one another. In these meetings, representatives can share their challenges, and the respective divisions are able work together to discuss opportunities and possible solutions.

The Project Management Division championed an effort to contract consultant assistance to identify project readiness. Their focus was on this fiscal year and next. They have worked closely with other divisions to understand their project priorities and the associated scope, risk, and readiness. With that information, they have coordinated with Financial Management and Planning to determine which projects are ready to move forward and what type of funding should be applied.

The Department implemented another strategy by revising the scoping process for preservation projects to include a comprehensive multidisciplinary evaluation of scope, needs, cost and risks. The new process was executed in FFY 2020 for the review of FFY 2022/2023 preservation projects. The anticipated benefits should be reflected beginning in FFY 2022 reporting (the earliest these projects will be scheduled and ready for delivery). This process was repeated for FFY 2024/2025 preservation projects with the goal of having an approved project list 6 months earlier than in previous years, providing more time for project mapping and to reduce project delays. Another change made during the FFY 2024/2025 scoping was to not force project delivery into the 2024/2025 two-year window. Since these projects are comprehensive in scope, the complete design and pre-construction may need more time to complete. The timelines for delivery, in the future, should prove to be more accurate.

Referring to the scoped preservation reports created in 2020 for FFY22, 12 were proposed to be delivered, but only 7 were delivered, with the following estimating performance:

- 3 of the project's Intermediate Design Estimate were within the 15% of the Awarded Contract Estimate yielding an overall percentage of 42% success.
- 4 Final Design Estimates were above the Awarded Contract Estimate, and 3 were below. 57% the projects were within the cost comparison target.

The numbers are an improvement compared to the overall project performance, but the hope is with enhanced divisional engagement and further refinement of the preservation process, these numbers will improve.

The Department is invested in the establishment of a data-driven metric for defining project prioritization: The One Nevada Plan. This improvement, coupled with a focus on project readiness, will yield a more established scope and schedule for projects along with the costs of those projects. With project prioritization and readiness, the Department can move away from redundant planning, design, and financial discussions, to ensure funds are being spent efficiently, priorities are achieved, and schedules met. The Department plans to pilot the One Nevada Plan in the next fiscal year.

Finally, it is important to note that any initiative introduced into the project delivery process will take time to demonstrate its effectiveness. Every project has a different trajectory, and it may take years of tracking to ascertain the gains of any strategy or change.

Which strategies were not successful and why?

We have yet to note any specific strategies that can be quantified as not successful. Several strategies are either in development or are currently being implemented. The Department is starting to see the initial outcomes of the revised preservation project initiatives, and they are resulting in a slight improvement. The change in the approach to schedule these projects is expected to improve the delivery metric. The true success has yet to be determined.

Recently, it has been discussed that many of the scoped preservation reports from the FFY22/FFY23 cycle have yet to be initiated by the Design Division. Department wide staffing shortages have resulted in project delays due to the need to hire engineering consultant services. These project delays will result in the Design Division needing to take more time to re-address scope needs, current field conditions, risks, and overall readiness. This is an opportunity missed.

One focus area the Planning and Scheduling & Estimating Divisions are working on is the synchronization of the October baseline with the One Nevada Plan process and the Annual Work Program (AWP)/Statewide Transportation Improvement Program (STIP) to ensure priorities are aligned. With this, the Department will have a confident and reliable project delivery schedule and funding.

Strategies for improvement planned for next reporting period:

Neither scheduling nor cost estimating targets were met this FFY. Moving forward, there are several initiatives being developed both Department-wide and at the division level that we believe will help us meet proposed targets in the future.

1. **Schedule:**

   The principal reason for variability in project schedules is due to changes in project deliverability, in turn leading to a change in priorities. 18 projects were added to the schedule within the same FFY they were executed. Last year, 16 were added to the schedule. The Department will focus on early identification of characteristics that have the potential to impact a project's readiness and deliverability. The consultant lead readiness effort, changes in the preservation project delivery establishment, and an overall focus on readiness is expected to aid.

   As mentioned above, the Planning Division is actively developing the One Nevada Plan; this is a data-driven method to prioritize and harmonize projects throughout the Department. This is expected to create project delivery focus and confidence.

2. **Project Cost:**

   Cost estimate accuracy is a moving target. It is subject to variables such as changing markets, construction and materials innovations, and changes in community development patterns. The Design Division, in partnership with the Construction Division and FHWA, is actively reviewing bid item costs and changing estimation strategies. This year, the Department adjusted how it calculates mobilization as well as escalation factors for asphalt, emulsified asphalt, and fuel in hopes of accounting for the current economic trends.

   The Design Division is also looking into establishing a construction cost index to better identify and adjust common construction bid items. Measuring and projecting market fluctuations will give estimators a basis for adjusting bid item costs.

   Design strategy changes throughout the life of a project's design are expected. However, improvements can be made by identifying the final strategy earlier in the process, in turn allowing for more time to manage project risks that potentially impact schedule and cost. Enhanced Scoping in the early stages of a project concept will improve this. The OneNV process has this element incorporated in the planning and project development workflow.

Short Term Strategies:

1. **Schedule:**

   Short term strategies for improving project scheduling performance include:

   - Educating supporting divisions regarding their role in establishing and meeting performance measures to establish uniformity and consistency for project scheduling submission timelines
   - Clarifying roles and needs for submitting a project scheduling and programming form
   - Synchronize October baseline development with the One Nevada Plan process and the AWP/STIP annual approval to ensure project readiness and priorities are aligned
   - Develop a consensus and uniformity in understanding complete/multi-disciplined scope projects

2. Project Cost:

Short term strategies for improving project cost performance include:

- Educating supporting Divisions regarding their role in establishing and meeting performance measures to establish uniformity and consistency for project scheduling submission timelines
- Continue to improve division coordination to:
  - Identify projects earlier
  - Further document project scope elements, project unknowns, project risks, and other readiness factors that may affect project cost estimates and schedules
  - Prioritize projects for resource management
  - Prioritize projects to meet funding levels
  - Evaluate project bundling to optimize construction costs and resources
  - Consensus and uniformity in understanding complete/multi-disciplined scope projects.

Long Term Strategies:

1. Schedule:

A significant and pivotal long-term strategy will be the implementation of the One Nevada Plan being developed by the Planning Division. This plan will introduce a cohesive metric and established conduit for transportation needs to be analyzed, prioritized, and delivered. The Department can expect more consistency in project development, scheduling, resource allocation, coordination, and funding. The pilot One Nevada Plan is anticipated for the next FFY. Several other smaller initiatives are being championed that are expected to have an impact on schedule performance. For example, the Traffic Operations Division is developing its Transportation Systems Management and Operations (TSMO) program for implementation. This group is actively using a data-driven process to develop program planning and project prioritization. In turn, strategies identified by TSMO have the potential to be incorporated into other transportation projects with less risk. An example of this is the 2024/2025 Preservation Projects- TSMO initiatives were carefully explained and justified in prioritized ranking to be incorporated into the projects.

The Department is still in the completion phase of the first module of the Masterworks enterprise project management and funding system. The scheduling, estimating, bid letting, and financial management components of project tracking are nearing completion in the next few months. This new program offers opportunities for streamlining processes, project status transparency, and creating greater project oversite for all divisions.

2. Project Cost:

The implementation of the One Nevada Plan is anticipated to provide a more comprehensive project list that better establishes needs, scope, risks, and readiness. With more coordination and analysis at the early project development stages, the Department can expect more accurate cost estimates.

Another strategy being researched by the Design Division is developing a construction cost index with the expectation of its utilization will better the Department in anticipating and reacting to construction market trends.

Does this performance measure effectively measure what is desired?

The metrics established provide the explicit results directly and accurately; however, the larger discussion of measuring the performance of project delivery is complex and nuanced with multiple compounding and interconnected factors.

1. **Schedule:**

   This measure provides a snapshot of projects planned to be executed within a federal fiscal year; however, it does not accurately depict the lifecycle of a project including but not limited to:

- Re-advertisements
- Supplementals
- Change Orders
- District Betterments utilizing state funding and tracking funding according to the state fiscal year (July 1 to June 30). This is a contributing factor as to why many of these projects are not captured on the October 1 baseline. The Betterment program is organized around a different timeline.

2. **Project Cost:**

   This metric shows the accuracy of Intermediate and Final Design estimates and how they compare to the Awarded Estimate. This metric does not provide a comprehensive picture of the overall design versus completed construction costs. The initial planning level costs through completion of construction are also not captured.

   Another element that should be considered when reviewing the current metric is that the Awarded Estimate does not necessarily provide an average of what the market rate would be. For example, consideration of the second or third bidders would provide a different perspective of the design engineer's estimate.

Does monitoring and evaluating this performance measure improve your business process?

Monitoring and evaluating project delivery is critical to the Department's success in fulfilling NDOT's Strategic Plan. There are many processes and stakeholders involved with project development and delivery. The Scheduling and Estimating Section continues to work with these stakeholders to make additional process improvements and to move towards achieving our performance metrics.

Is there a more effective performance measure that should be considered? If so, explain.

As mentioned above, a comprehensive evaluation of project delivery is complex. There are opportunities to review project delivery from different parts of the development process and with different comparisons. All of which would provide different insights and opportunities for change. For example, adding the Final Design Estimate as a comparison criterion has given us a more consistent measure of cost estimation at the end of the project development process. With the implementation of the One Nevada Plan process, consideration of evaluating our cost estimation performance at earlier project development milestones, such as planning/STIP level estimates, would be of a benefit to establishing a more confident fiscally constrained STIP.

Identifying unforeseen changes to projects, changes in priorities, mandates, funding impacts, and specific project development issues, will help us better identify where improvements need to be made. A supplemental measure to consider might be to measure project delivery based on the percentage of program funding obligated per the Department's transportation goals for the year. If the Department is unable to deliver a scheduled project, might there be a comparable project (similar program/location/funding/scope) that could be delivered as a replacement.

The FHWA Stewardship Performance indicators were introduced for FFY 2016. The indicators have overlapping goals to NDOT's Performance Measure 13. We believe it would be helpful for future performance measure tracking to have these goals align.

Has the Covid-19 pandemic affected this performance measure or your ability to achieve the targets? If so, explain.

This last year, the Department has seen a large number of vacancies and changes in positions. With this, project delivery and cost estimation are affected. Resource to complete projects and the institutional understanding of project costs and market trends are declining. The existing workforce is strained. This may be an indirect effect of the pandemic.

It is difficult to understand the effects Covid-19 has on the current construction industry. It may be an element in the increased material prices and delay in material deliveries.

Will meeting the yearly target have a fiscal impact? If so, explain.

Yes. Meeting the yearly targets will allow the Department to optimize project funding and deliver more projects.

Next year's target:

FFY 2023 project delivery performance measures will remain the same to allow implemented strategies to take effect to meet performance criteria and reach the Department's overall goals and priorities.

14. Maintain State Bridges

Performance Measure:

The Department's performance measure associated with the maintenance of state bridges includes bridge condition ratings, separated by those assets on the National Highway System (NHS) and those not on the system (non-NHS). In alignment with the established national performance measures, this will include percentages of the inventory considered to be in "good" and "poor" condition.

Data in the NDOT bridge inventory is collected in accordance with the National Bridge Inspection Standards (NBIS) and is reported to the National Bridge Inventory (NBI). For each bridge, the condition rating is determined for three primary elements: deck, superstructure, and substructure. Bridge-sized culverts have a single, independent rating. NBI general condition ratings are assessed on a scale that ranges from 0 (failed condition) to 9 (excellent condition). The lowest of the three ratings for bridges, or the single rating for culverts, is used to represent the overall condition of the structure. Ratings of 7 or better, represent a bridge that is in good condition and ratings of 5 or 6 represent a bridge in fair condition. If any of the condition ratings are 4 or below, the bridge is in poor condition. A structure deemed to be in poor condition is classified as structurally deficient (SD). Percentage of the overall inventory in each category is determined by square foot area of the bridge deck.

Bridge data referenced in the report is based on the annual federal reporting "snapshot" taken at the end of March every year. In years past, a snapshot of the inventory was taken at the time data was requested for the various reports the Department produces (facts book, preservation report, performance management report). However, this created confusion because the inventory changes continuously throughout the year, so that each report included different data. The data in the performance management report reflects all changes to the inventory from the previous calendar year. The data provided in this report represents calendar year 2021.

Current year target:

As part of the NDOT Transportation Asset Management Plan (TAMP), the Department has established performance goals related to the overall condition of the State's bridge inventory. These performance targets include maintaining an inventory that has greater than 35% of bridges in good condition and less than 7% in poor condition. Maintaining an inventory with less than 10% of bridges classified as structurally deficient is a federally mandated performance requirement. NDOT has established these goals as part of the annual and long-term targets.

Previous performance measures considered the number of structurally deficient bridges that were replaced or rehabilitated annually. While this is no longer a direct performance measure, it contributes to the overall goal of minimizing the percentage of bridges in poor condition and will continue to be listed annually to help provide some context for the bridge condition ratings.

Ultimate target:

The ultimate target is to eliminate structurally deficient bridges from the inventory, and to extend the service life of the Department's bridges.

As part of the TAMP, the Department has committed to the established performance goals for the next 10 years.

Performance Champion/Division:

The Structures Division is the performance champion for this performance measure.

Support Divisions:

The maintenance of state bridges is supported by those divisions involved with the Department's preservation program – the Design and Materials divisions – as well as the Department's three districts. Along with the Structures Division, these groups plan and execute bridge maintenance and preservations activities state-wide.

Overview and plan support:

These performance measures work towards meeting the Department of Transportation Strategic Plan goals of putting safety first and efficiently operating and maintaining the transportation system in Nevada. These goals can be met in the following ways: safety for the motoring public will be optimized by replacing structurally deficient bridges. The Bridge Division will seek and implement innovative solutions to the challenges faced by the Bridge Program. The Division will deliver timely and beneficial bridge projects and programs. Meeting this performance measure will help to efficiently preserve and manage Department assets.

Measurement and supporting data:

All supporting data is extracted from the Department's annual reporting to the National Bridge Inventory. Inspections are performed in accordance with established federal guidelines, and the Department is responsible for performing these inspections state-wide. While this data is constantly changing, as required inspections of our infrastructure occur and new bridges are added to the inventory, an annual snapshot is taken every year in March and submitted to, and subsequently approved by, the FHWA.

Tables have been included to allow for ease of tracking. The tables do not include structures that are subject to routine preservation and maintenance activities (such as expansion joint replacement, repair of deck cracking, etc.) that are typically included in preservation or District Betterment projects.

Table 1 includes the condition ratings of all state-maintained bridges in the inventory. A small percentage of structures owned by other entities have been included in this data because they are part of the NHS. Data from 2016 was included as part of the Federal Highway Administration (FHWA) approved TAMP and has been included in this report as the base year. While the FHWA's emphasis is primarily on the NHS, the Department's long-term goal is to meet the established performance measures for both the NHS and non-NHS state-owned structures.

Table 2 lists all projects that have rehabilitated or replaced a state-owned bridge. Bridge replacements and major repairs generally have a direct impact on the established performance goals by increasing the percentage of the bridge inventory in good condition and decreasing the percentage of the bridge inventory in fair or poor condition, thereby improving the overall health of the inventory state-wide. In addition, the Department continues to replace scour susceptible bridges to improve the resiliency of our transportation network in response to disruptive natural events such as floods, wildfires and earthquakes.

Table 3 includes other significant structural work performed by the Department. These projects are often eligible for federal funding but may not directly contribute to the established performance measures. As noted, these are primarily seismic retrofits or bridge replacements. The Department's on-going efforts to retrofit seismically deficient bridges are an important part of our annual work plan, but seismic deficiencies alone do not relate to a structurally deficient classification and do not meet the performance criteria. The table also includes the replacement of structurally deficient bridges that are owned by other agencies. While it is essential these bridges be replaced, they do not meet the performance criteria which only addresses Department owned structures.

Table 4 includes a historic listing of structurally deficient bridges.

TABLE 1: BRIDGE CONDITION RATINGS

Calendar Year	2016 Baseline	2017	2018	2019	2020	2021	Target
Good Condition NHS	41.4%	43.3%	44.9%	41.0%	46.2%	49.6%	> 35%
Good Condition Non-NHS	50.0%	50.5%	49.2%	44.1%	48.2%	52.1%	> 35%
Poor Condition NHS	0.6%	0.5%	0.9%	1.0%	0.9%	1.1%	< 7.0%
Poor Condition Non-NHS	1.3%	1.0%	0.9%	0.9%	2.0%	0.7%	< 7.0%

TABLE 2: STRUCTURALLY DEFICIENT BRIDGE REHABILITATION/REPLACEMENT

Calendar Year	Number of Bridges	Structure #'s	County	Contract # Award Date	Description of Work/Comments
2016	0	-	-	-	-
2017	0	-	-	-	-
2018	5	B-474	DO	3707-2/12/18	Replace SD bridge on SR757
		B-1392E	PE	3725-7/11/18	Replace SD bridge on I-80
		I-1899	CL	3755-11/19/18	Replace SD bridge on SR582
		B-425	MI	3735-9/6/18	Replace SD bridge on SR361
		B-242	CH	3738-10/9/18	Replace SD bridge on Maine St, Fallon
2019	1	B-639	EL	3758-2/7/19	Replace SD bridge on SR226
2020	4	I-1306	WA	3819-4/13/20	Replace SD bridge on US395
		B-28	PE	3846-10/23/20	Replace SD bridge on SR396
		B-3226	CH	3842-9/14/20	Repair SD bridge on US95
		I-889	EU	3849-11/9/20	Replace bridge over I-80
2021	2	I-1440 H-1450	CL	3856-3/8/21	Replace SD bridges on I-515
	1	B-180	NY	3868R-12/13/21	Replace SD bridge on US6
2022	1	B-452	EL	3924-7/11/22	Replace bridge (scour)
	1	B-422	HU	3932-7/21/22	Replace bridge (scour)

TABLE 3: ADDITIONAL BRIDGE IMPROVEMENT PROJECTS

Calendar Year	# of Bridges	Owner	Structure #'s	County	Contract #/ Award Date	Description of Work/Comments
2016	-	-	-	-	-	-
2017	-	-	-	-	-	-
2018	1	HU	B-1658	HU	3713-/30/18	Replace 1 SD bridge
2019	1	LY	B-1615	LY	-	Replace 1 SD bridge
2021	1	NDOT	G-947/I-947	CL	3856-3/8/21	Seismic Retrofit
2022	4	NDOT	I-700E/W	WA/LY	3935-	Seismic Retrofit
			I-717E/W			
			H-844E/W			
			I-740E/W			

TABLE 4: HISTORIC LISTING OF STRUCTURALLY DEFICIENT BRIDGES

Calendar Year	Total State-Owned Bridges	State SD Bridges	Comments
2006 BASELINE	1,045	20	2007 Report.
2008	1,056	20	2009 Report.
2010	1,064	18	2011 Report.
2012	1,116	19	2013 Report.
2014	1,154	15	2015 Report.
2016	1,163	12	2017 Report.
2018	1,208	15	2019 Report.
2020	1,221	12	2021 Report.

NOTES:

Bridge counts shown are based on the number of SD bridges as reported in the NDOT State Highway Preservation Report. This report is published every 2 years.

A description of Structurally Deficient bridges from the 2021 Nevada State Highway Preservation Report is included below for information.

"Bridges are considered Structurally Deficient (SD) if significant load-carrying elements are found to be in poor or worse condition due to deterioration and/or damage, or the adequacy of the waterway opening provided by the bridge is determined to be extremely insufficient to the point of causing intolerable traffic interruptions."

Because the term "Structurally Deficient" causes undue concern, FHWA is considering changing the terminology. The term does not imply that the bridge is unsafe. Safety and maintenance concerns are identified during regularly scheduled inspections.

Evaluation of Performance Measure:

Annual target met?

Yes, the Department met the performance goals established in the Transportation Asset Management Plan.

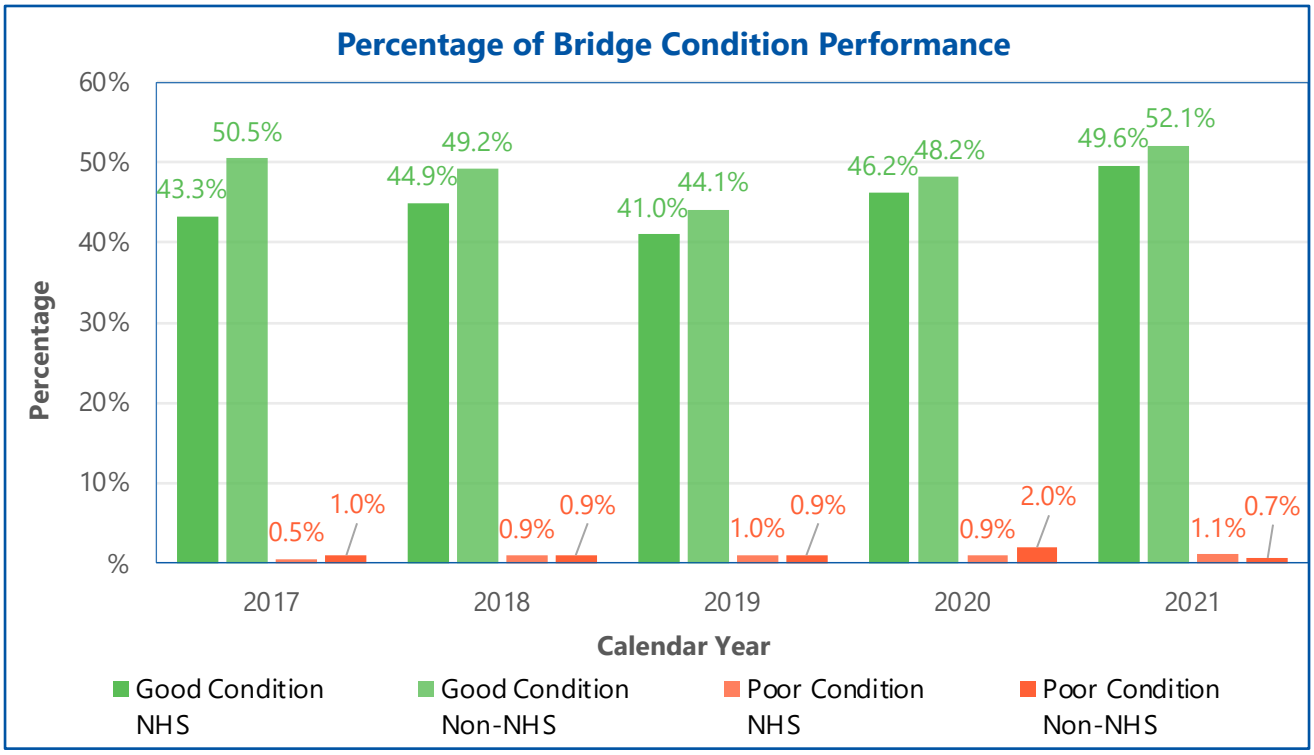


Figure 1: Percentage of Bridge Condition Performance

The Department has replaced a number of bridges since the TAMP baseline was established in 2016 leading to a net decrease in the overall number of structurally deficient bridges. The twelve SD structures listed in the 2021 preservation report – which correspond to the percentage of bridge deck area in poor condition - include seven NHS and five non-NHS bridges statewide. The Department is uniquely positioned, as all state-owned SD bridges are in various stages of planning, design, or construction. The following summary provides a description of these structures, separated by urban and rural demographics.

Clark County

- B 1516S – Reinforced box culvert to be included in upcoming fiscal year 24/25 rehabilitation program.
- H 1450 – The existing steel tub-girders of the Desert Inn Road structure in Las Vegas have exhibited fatigue cracking over time. The superstructure is currently being replaced as part of Contract 3856.
- I 969S – The I-15 structure near Apex suffered a significant high-load impact and structural repairs have been completed.
- I 1440 – The existing steel tub-girders of the Eastern Avenue structure in Las Vegas have exhibited fatigue cracking over time. The superstructure is currently being replaced as part of Contract 3856.

Washoe County

- G 751 – Bridge provides access to Lockwood, east of Sparks, crossing the railroad. The structure is currently included as part of the Department's bridge replacement program.
- H 866E – The Nugget Viaduct replacement is included in future phases of the Reno Spaghetti Bowl project.

Other Counties

- B 1119 – To address structural deterioration and scour concerns, the replacement of the Halleck Road bridge, crossing the Humboldt River east of Elko, is early in the design phase of the project.
- G 53 – Bridge replacement over the railroad, southwest of Deeth. Project programming is pending, awaiting the start of design.
- G 58 – Bridge located on a frontage road in Elko County, west of Wendover, crossing the railroad. Structure is currently in design.
- G 928E – The deck replacement and superstructure rehabilitation of this I-80 bridge, east of Wells, is currently anticipated as part of the fiscal year 24/25 NDOT rehabilitation program.
- G-29 – The structure crosses the railroad north of Lovelock. The project is currently in the final stages of design.
- B 180 – Culvert replacement east of Tonopah is under construction as part of Contract 3868.

Which strategies applied during the current data reporting period were successful?

The overall good condition of our inventory has allowed us to shift from a previous "worst first" approach to a more proactive preservation approach. The Department recognizes that our aging inventory is trending more rapidly from good to fair and we realize the importance of extending the service life of our structures. To meet the targets established in the TAMP, we are addressing this decline on several fronts.

We are not only analyzing our inventory from a state-wide perspective, but also a regional perspective to focus our efforts on those structures that would benefit most from preservation activities. Future Department preservation projects are playing a larger role in accomplishing necessary work on our major corridors and we are actively programming and planning projects outside of these areas to protect the health of the inventory. The Structures Division and Districts continue to work closely to prioritize necessary bridge work in every county. Analysis has shown that the bridge decks are primary drivers for overall bridge condition, and we recognize that preservation starts with construction. Requirements for regional multi-layer and polymer overlays on new bridge decks have been added to the NDOT Structures Manual to aid in preserving and extending the service life of our bridges.

Which strategies were not successful and why?

Not applicable. The Department met and exceeded the performance goals established in the Transportation Asset Management Plan.

Strategies for improvement planned for next reporting period:

Short Term Strategies

Evaluate programmed projects for possible preservation actions, corrective maintenance and risk reduction activities and include these activities into project scope as appropriate. NDOT Bridge Division provides information regarding state bridge policies and practices to local agencies to cooperate with and assist them.

Long Term Strategies

Along with the Department's previously established funding commitments, recent passage of the Infrastructure Investment and Jobs Act (IIJA) has provided additional resources for the expansion of NDOT's bridge rehabilitation and preservation program. Included in the infrastructure bill are specific federal formula funding amounts for each state as well as small and large bridge grant opportunities.

Included in Table 5 are bridge condition ratings separated by urban and rural areas throughout the state. As noted previously, the current condition of the state-owned bridge inventory is very good, with projects planned for all structurally deficient bridges. This has provided the Department a tremendous opportunity to approach our bridge preservation program more proactively and replace structures prior to the development of a poor condition rating.

Condition	Items	Clark	Washoe	Other	Total
Good	Area (Sq. Ft.)	5,558,226	1,190,024	1,158,149	7,906,399
	Percentage	56.0%	37.9%	42.8%	50.2%
Fair	Area (Sq. Ft.)	4,299,037	1,894,994	1,509,848	7,703,879
	Percentage	43.3%	60.4%	55.8%	48.9%
Poor	Area (Sq. Ft.)	62,032	54,193	35,698	151,923
	Percentage	0.6%	1.7%	1.3%	1.0%
Total Area	Area (Sq. Ft.)	9,919,295	3,139,211	2,703,695	15,762,201

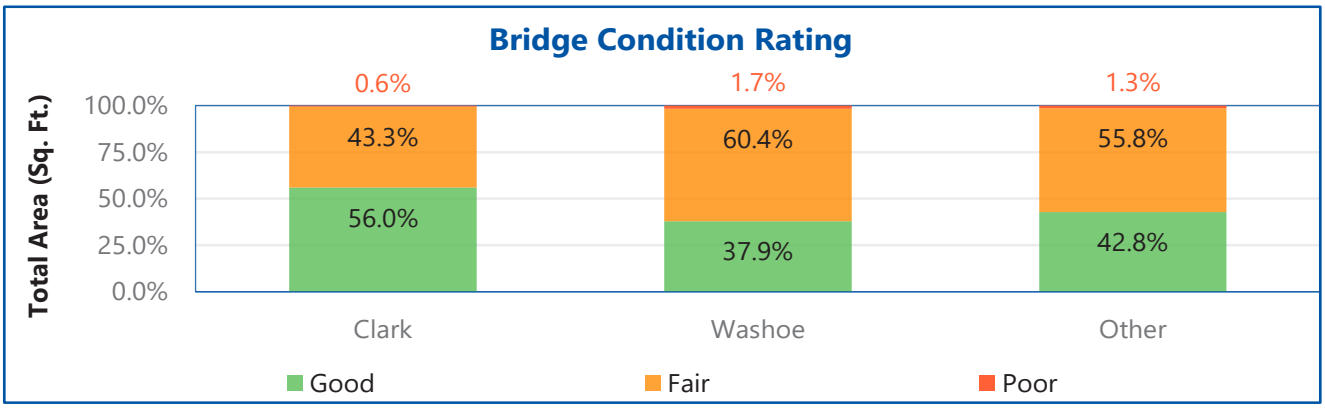
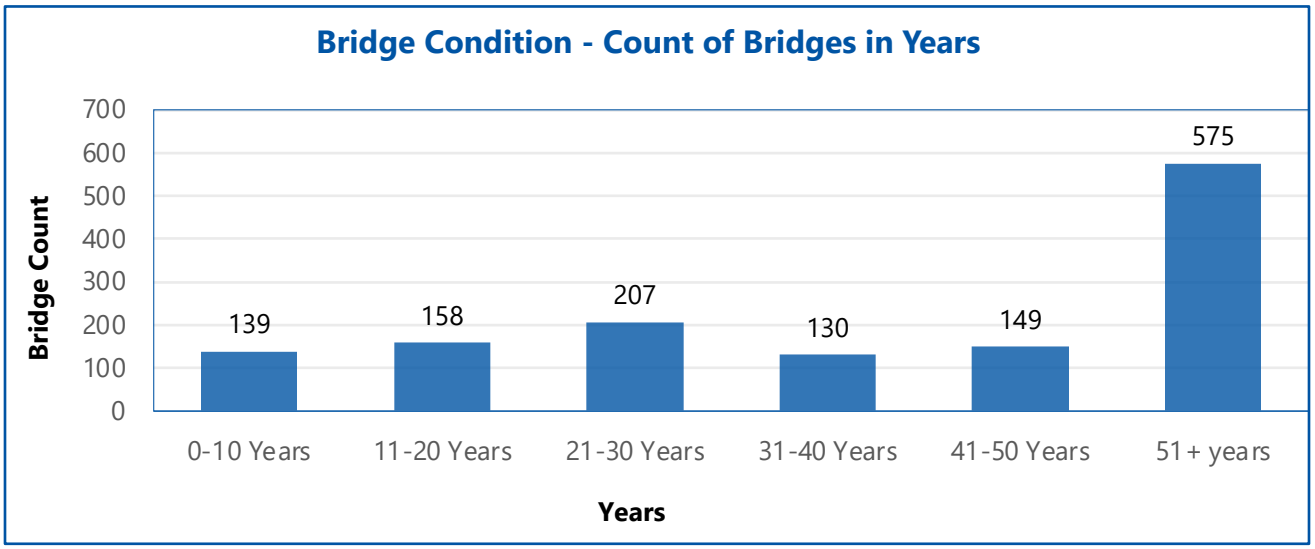
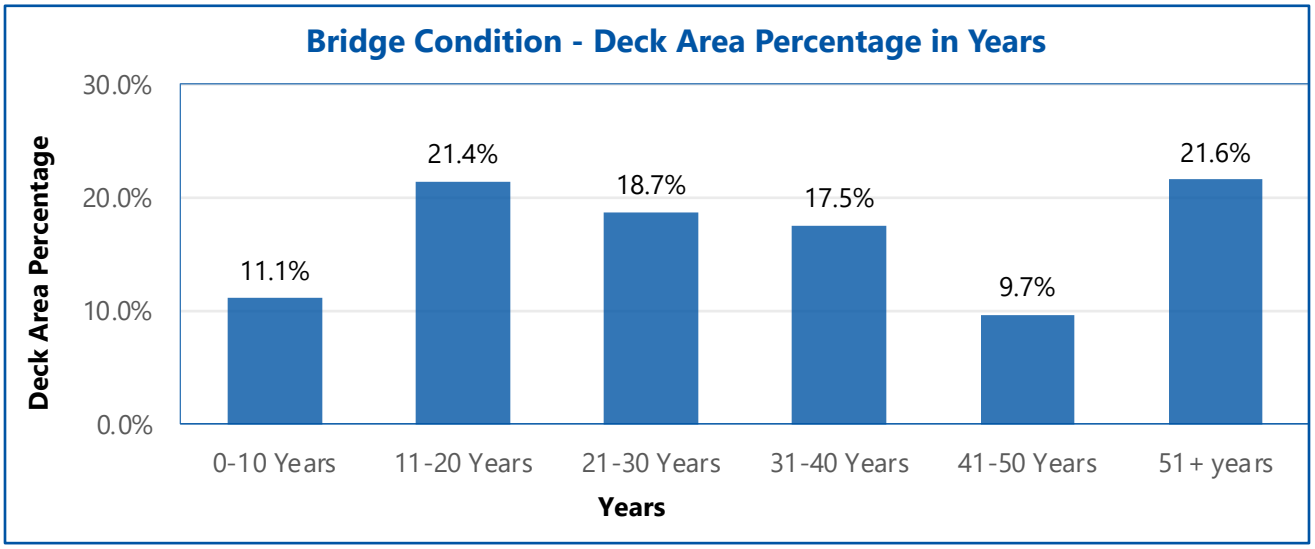


Table 6 provides an age profile of all structures in the TAMP inventory. There are currently 1,358 bridges state-wide, of which, over forty percent exceed fifty years of age – surpassing the original design service-life. To determine mid and long-term priorities, the inventory was analyzed based on age and structural condition. The resulting list was utilized to develop scoping efforts for bridge replacements state-wide.

Age	0-10 Years	11-20 Years	21-30 Years	31-40 Years	41-50 Years	51+ years	Total per Condition
Count	139	158	207	130	149	575	1,358
Percentage	10.2%	11.6%	15.2%	9.6%	11.0%	42.3%	
Deck Area (sq. ft.)	1,750,031	3,379,860	2,943,825	2,761,520	1,525,532	3,401,431	15,762,199
Percentage	11.1%	21.4%	18.7%	17.5%	9.7%	21.6%	





While none of the targeted structures were considered deficient – defined by a primary component condition rating of four or less – most of the structures have a rating of five or an age that is well beyond the design service life. This review yielded a number of structures state-wide that were candidates for upcoming bridge replacement or rehabilitation. The list was further refined by correlating these structures with other proposed projects within the department. This included projects in the Department's rehabilitation program, as well as larger projects like the Downtown Access Project and future phases of the Spaghetti Bowl. Work that could be included in other projects was removed from this effort.

A project study identifying the scope, schedule and budget was subsequently initiated to determine reasonable alternatives for delivery. Feasible project delivery dates were determined considering environmental, right-of-way, utility, and railroad impacts. Based on established timeframes for these processes, options were developed for delivery over the next five to seven years. The following provides a general overview of the consolidated list of proposed replacements.

Clark County

Proposed replacements in the southern portion of the state include two structures on the I-15 north of Las Vegas. While a significant percentage of the bridge inventory resides in Clark County, the overall condition of these bridges is very good. This is due in large part to the

Department's efforts to improve the I-15 corridor. Projects including the I-15 North and South Design-Builds as well as Project NEON and the Tropicana interchange have provided significant improvements to the structural condition ratings of bridges in the Las Vegas Valley. Most structures identified in the initial screening process will be included as part of the future Downtown Access Project (DAP) and potential projects in the Central Corridor study area and future phases of Project NEON. The DAP alone includes the replacement of more than one million square feet of bridge deck area.

Washoe County

The most significant structural replacements are proposed in the Reno area. This includes two bridge replacements in Lockwood and a series of replacements west of Reno to the California border.

The Lockwood bridges were placed in the outer funding years as they are also included as part of the I-80 corridor study from Vista to USA Parkway and realignment of the structures may be necessary to accommodate the planned I-80 modifications.

The Reno bridge replacements include structures on I-80 from Mae Anne Avenue headed west to the Truckee River crossings. All these structures are condition-based replacement candidates, several of which are very large structures. To include all proposed replacements in one bridge-bundling contract may not be feasible financially, so the replacements have been divided into two projects. These projects are appealing candidates for potential grant opportunities utilizing IIJA funding.

Other Counties

Northern Nevada projects primarily include the replacement of deteriorated reinforced concrete box culverts. While these could be replaced individually, there is opportunity to combine several replacements in a bundled project. Several of the structures are near Eureka and would likely benefit from combined traffic control and consistent construction administration.

Does this performance measure effectively measure what is desired?

Yes. The performance measure allows us to track the overall condition of our bridge inventory and comply with current federal requirements.

Does monitoring and evaluating this performance measure improve your business process?

Monitoring these performance measures on an annual basis helps the Department prioritize projects to utilize available funding most efficiently.

Is there a more effective performance measure that should be considered? If so, explain.

In compliance with federal regulations, bridge conditions in the TAMP are based on the four primary component ratings. To aid in the preservation of our bridge assets, it may be valuable to evaluate the element condition rating of structural components that are critical to extending the service life of a structure and maintaining a state of good repair. An evaluation of components such as bridge decks could provide a more detailed look at where to focus future preservation efforts.

Has the Covid-19 pandemic effected this performance measure or your ability to achieve the targets? If so, explain.

To date, the Covid-19 pandemic has had little impact on meeting our performance measures.

Will meeting the yearly target have a fiscal impact? If so, explain.

Yes, an increasing investment in bridge preservation funding will be necessary in coming years to alleviate current backlog and address the anticipated growing rehabilitation and replacements needs of the state's aging inventory. The Department has committed to provide

additional bridge preservation funding and, through the One Nevada Plan, looks to prioritize and utilize this investment in the most efficient way possible, to preserve the service-life of structures state-wide.

Current federal infrastructure funding will also aid in meeting the funding requirements necessary to preserve the state's bridge inventory.

Next year's target:

While additional bridges from our aging inventory will likely be added to the list in coming years, we anticipate meeting the current target without need of adjusting the established performance measure.

15. Streamline Permitting Process

Performance Measure:

Percentage of permits issued or rejected within 45 days of receipt, in accordance with Transportation Policy (TP) 1-10-3 Encroachment Permit Processing Time Schedule.

Current Year Target:

95%

Ultimate Target:

95%

Performance Champion/Division:

Right-of-Way Division

Supporting Divisions:

NDOT District Permitting Offices and Permit Reviewers from the following sections/divisions: Construction, Environmental Services, Hydraulics, Materials, Planning, Project Management, Roadway Design, Safety Engineering, Stormwater, Structures, Traffic Operations, and the Federal Highway Administration.

Overview and Plan Support:

In accordance with Transportation Policy (TP) 1-10-3 "Encroachment Permit Processing Time Schedule", this performance measure identifies a goal for the Right-of-Way Division to process 95% of encroachment permits within 45 days. TP 1-10-3 sets a 45-working-day process for all accepted encroachment permit applications.

Measurement and Supporting Data:

Encroachment Permits are processed using the Integrated Right-of-Way Information Network (IRWIN). The measurement and data for this reporting is generated from the IRWIN program based on information input and dates of work from District Permits staff during the processing of encroachments permits.

The data provided by the IRWIN report effectively provides adequate date and timeframe information to show if improvements are necessary to achieve the target goal. Delays in permit processing may have potential impacts to Department projects scheduling Statewide.

Evaluation of Performance Measure:

Annual target met?

Yes. All three Districts' annual reporting reflects a 96.03% of all permits processed were completed within 45 days or less. The annual performance measure for each district is as follows:

- District 1 accepted 475 permits and processed 442 permits, achieving 98.64%
- District 2 accepted 341 permits and processed 272 permits, achieving 92.28%
- District 3 accepted 91 permits and processed 66 permits, achieving 93.94%

Which strategies were in place during the data reporting period?

Permit Committee meetings with District permitting offices to ensure consistent processing procedures.

The ongoing District level permit meetings have been effective in identifying areas of improvement and establish better communication between Headquarters and the District offices.

Which strategies were successful?

Ongoing District-level meetings have been effective in identifying areas for improvement and establishing better communication between Headquarters and the District offices.

Which strategies were not successful and why?

None. The implemented strategies have been successful.

Strategies for improvement planned for next reporting period

Short term strategies:

Short range plan includes maintaining regularly scheduled permit meetings with the District Permitting offices to ensure consistency in processing permits Statewide.

Long term strategies:

The implementation of new software for the Department is being considered that will include a permit processing workflow to enhance staff productivity among the various Department divisions that review and approve permits.

Does the performance measure effectively measure what is desired?

Yes. The established 95% processing rate within 45 days is reasonable and effectively evaluates the desired goal of efficiently issuing encroachment permits. Several factors have a potentially negative impact on our ability to meet the performance measure, including attrition of experienced permitting staff and reviewers. Demand for permits is driven by the public. High numbers of permit applications require more staff time to meet ever-increasing demand.

Does monitoring and evaluating this performance measure improve your process?

Yes. This performance measure keeps the permitting process accountable and clearly identifies any deficiencies that would require further investigation.

Is there a more effective performance measure that should be considered? If so, explain.

No. 95% has proven to be a high, but reasonable standard that is sometimes unattainable due to increased permit applications from the public sector and current staffing levels.

Has the Covid-19 pandemic affected your performance measure or the ability to meet your targets? If so, explain.

Yes. When the work from home order was given, Division reviews were taking a little bit longer to get back. Otherwise, the electronic permitting system (IRWIN) has been up and running, allowing effective telework permitting processes to occur.

Since the recension of the work from home order, permit reviews and the permitting process have largely returned to pre-COVID operations.

Will meeting the yearly target have a fiscal impact? If so, explain.

There is no anticipated direct fiscal impact for next year. However, low staffing levels will negatively impact any ability to timely process permits and collect permit fees.

Next year's target:

95%

16. Reduce Greenhouse Gas Emissions

Performance Measure:

Percent reduction in Greenhouse Gas (GHG) emissions within the Department's operations.

This measure was added to the annual reporting cycle in April 2020 to support the overall GHG reduction from the transportation sector as reported by the Nevada Annual Greenhouse Gas Inventory Report.

Current year target:

Fiscal years (FY) 2019, 2020, 2021 and 2022 are evaluated to establish a baseline to measure and assess future GHG reduction goals.

Ultimate target:

Support statewide GHG reduction initiatives to achieve 28% economywide reduction by 2025 and 45% by 2030 compared with the 2005 baseline.

Performance Champion/Division:

The Environmental and Planning Divisions' management teams.

Support Divisions:

All Divisions and District offices.

Overview and plan support:

NDOT proposed GHG emissions reduction as a new performance measure for NDOT's Annual Performance Management Report in support of Nevada's statewide climate goals. The Nevada Transportation Board of Directors adopted this measure on April 13, 2020. The Department is committed to providing leadership in achieving GHG emissions reduction by implementing a combination strategy in our operations, planning, design, construction, and maintenance of existing and future transportation systems. This commitment is supported in the Nevada Department of Transportation's 2020 Strategic Plan's Goal 2: Cultivating Environmental Stewardship.

During FY 2022, NDOT completed the following actions to establish future performance targets and implemented several GHG reduction measures within our operations.

- Continue to perform annual GHG inventory for NDOT Administrative Operations for fiscal years (FY) 2019 to 2022, resulting in a 21.5% reduction overall. The inventory included fuel usage (staff commuting, business travel, equipment), energy usage (electricity, natural gas, HVAC/refrigeration), and waste and material recycling.
- Implemented electronic reporting forms for NDOT Operations to facilitate annual Waste Management and material recycling inventory in District 3.
- Implemented measures from the NDOT GHG Emission Reduction Implementation Plan, including procuring more energy-efficient lighting fixtures (O-5 and DC-11), installing solar lighting capacities where applicable (DC-4), and allowing the use of Portland Limestone cement to reduce GHG emissions on road projects (DC-2).

GHG emissions and implementation action plans are monitored and continue to be refined in FY 2023 and beyond.

Measurement and supporting data:

NDOT continues to use the EPA Simplified Greenhouse Gas Emission Calculator, Version 6 (August 2020 – August 2022), released by the EPA Center for Corporate Climate Leadership, to estimate GHG emissions for the Department's operations in FY 2019 through FY 2022, as shown in Table 1 below. A graphical representation of GHG emissions from NDOT operations over time is shown in Figure 1. Several gaps in data sources are noted (below Table 1).

Table 1. GHG Emissions FY 2019 - 2022 in Metric Tons of CO2 Equivalent (Mt CO2e)

Parameters	FY 2019	FY 2020	FY 2021	FY 2022	FY20-22 Change
Stationary source [a]	3,036.9	2,776.2	1,868.0	1,953.0	4.6%
Mobile source	20,385.9	18,183.6	17,410.4	15,710.0	-9.8%
Biofuel [b]	287.3	245.4	293.6	223.0	-24.0%
Refrigeration/AC [c]	389.7	389.7	1,360.3	1,453.0	6.8%
Electricity purchase	6,011.4	5,870.0	5,834.7	5,244.5	-10.1%
Business travel	163.3	130.7	14.5	94.0	548.3%
Commuting	6,170.8	4,442.5	2,808.2	3,537.0	26.0%
Waste generation	1,445.3	1,445.3	1,905.6	1,534.0	-19.5%
Total	**37,603.3**	**33,238.0**	**31,201.7**	**29,525.5**	**-5.4%**

Notes:

a. Natural gas and electricity data for FY 2021 and FY 2022 were unavailable for several District 2 facilities.
b. Emissions from biofuel fractions (E85, B20) are quantified but are not included in the total GHG emissions.
c. Inventory for refrigeration and AC equipment is an ongoing effort for District facilities. AC units from Department's vehicles and mobile equipment were added in FY 2021 and FY 2022.

GHG emissions from NDOT operations in FY 2022 were reduced by more than 21% compared with the baseline 2019 fiscal year (5% reduction compared to FY 2021). Most of the reduction realized can be attributed to reduced energy/fuel usage (stationary and mobile sources), less business travel, and less commuting to and from the worksite. The Department continues to observe overall GHG reduction in our operations between FY 2019 and 2022, except for waste generation. However, several categories show an increase between FY 2021 (COVID-19) and FY 2022 (post-pandemic). The GHG emission increases in FY 2021 (stationary energy use, employee commuting, and business travel) may be attributed to returning to the workplace and resumed in-person meetings that began in early FY 2022.

GHG emissions associated with staff commuting increased by 26%, and business travel increased by more than 500% compared to the height of social distancing during the COVID-19 pandemic in FY 2021. The use of virtual meetings by Department staff (both public and contractors) and less commuting by Department staff (where applicable) will continue to reduce GHG emissions compared to the FY 2019 base year.

Overall, missing invoices for natural gas and electricity usage data and incomplete inventory for AC units from many District facilities are noted (above) and will continue to affect the inventory process. As a result, the Department will continue to explore ways to improve data collection for these parameters in FY 2023.

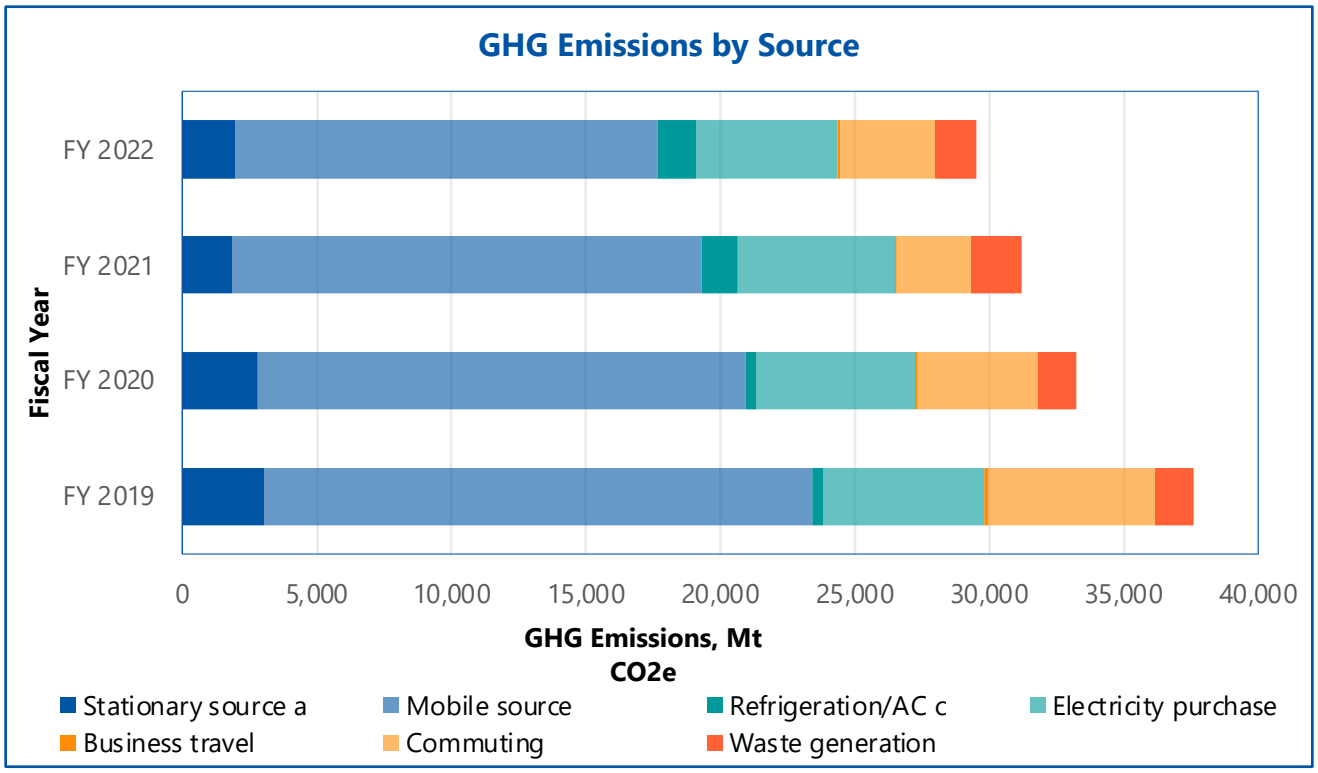


Figure 1. GHG Emissions from NDOT Operations by Fiscal Year and Source Type

Figure 2 presents the trend and forecasting of GHG emissions within NDOT operations using Logarithmic and Linear trendlines. In this case, the logarithmic trendline is a better fit (R2 = 0.998) for forecasting GHG emissions. As a result, the Department estimates that GHG emissions may level off near 27,000 Mt CO2e per year by FY 2024 unless significant fuel and electricity reduction measures can be realized.

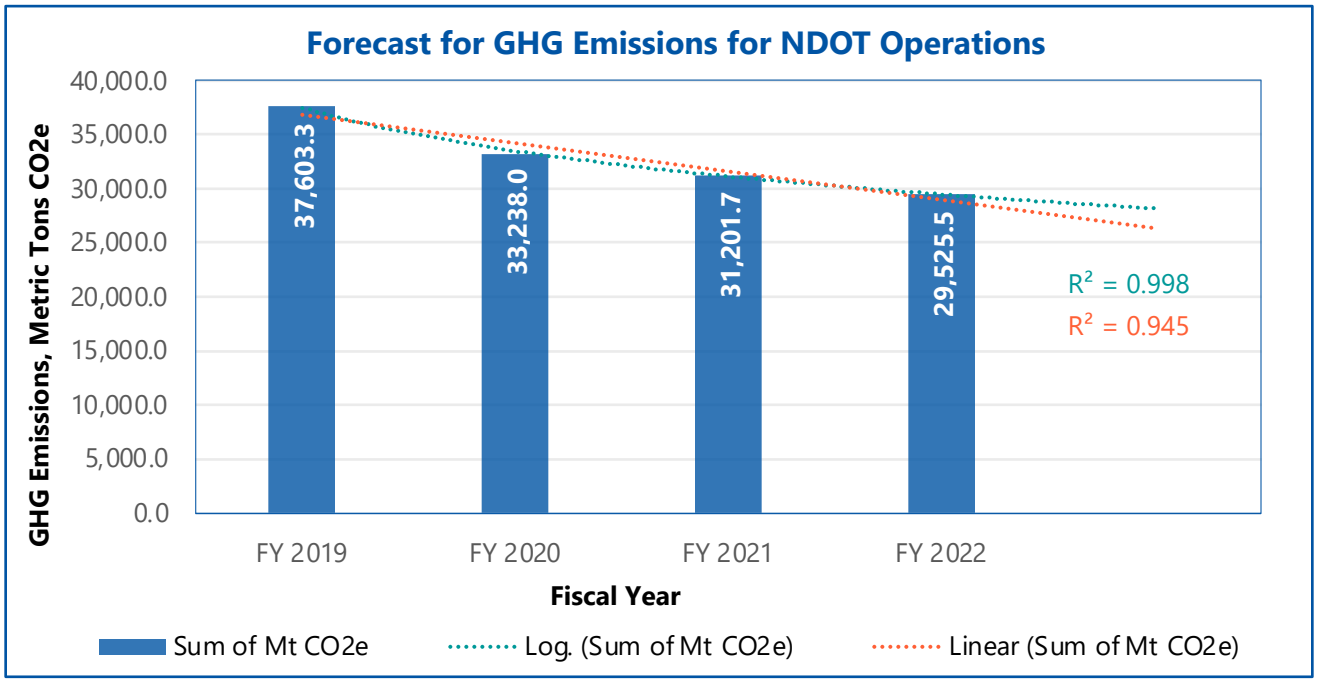


Figure 2. Forecasts for GHG Emissions in NDOT Operations

Evaluation of Performance Measure:

Annual target met?

Not applicable. A specific performance target has not been set for GHG reduction in NDOT operations due to data gaps identified during the inventory. Baseline inventory measuring will continue through FY 2023 to develop future performance targets.

Which strategies applied during the current data reporting period were successful?

The Department's GHG Reduction Strategic Plan was finalized in February 2021. Twenty-four GHG reduction measures were identified. The following measures have begun in FY 2022:

- O-1 (Procure more energy-efficient movable appliances and electronics): Buildings and Grounds staff completed an inventory of small devices at NDOT headquarters in FY 2022. Further evaluation to implement centralized break areas and procure energy-efficient appliances will begin in FY 2023.
- O-4 (Implement policies to support telecommuting or compressed workweeks): In FY 2022, the Department implemented a hybrid-telecommuting policy. As a result, 300 out of 1556 employees have active telecommuting agreements to work in the office at least two days per week.
- O-5 and DC-11 (Energy-efficient roadway lighting): Traffic operations (for 5+ years) have installed LED lighting specifications for all new installations and replaced them on all maintenance contracts. Upcoming projects with LED replacement include the District 1 project (EA 69997) to replace LED lighting on sections of I-15, US 95, SR 582, and SR 160.
- DC-1 (Include GHG emissions in roadway design standards): Biweekly meetings continue to evaluate projects for including context-sensitive design (bike, ped, complete streets) opportunities. In addition, the Design team is updating Standard Plans Drawings. Updates will include more LED lights and alternative power.
- DC-2 (Consider GHG emissions in pavement and material selections): In late 2021, the Department allowed the use of Portland Limestone cement, which contains 5% to 10% additional natural limestone powder. The Department estimates the new specification reduces GHG emissions by 4,000 tons per year on road projects.
- DC-4 (Alternative Energy Capture: Solar): Traffic Operations currently has seven remote sites with solar lighting capacities. By FY 2023 & 2024, three more remote sites will have solar capabilities (adding 79 kW), and four sites will receive upgrades (adding 74.7 kW). In FY 2022, the Department also began converting all planned installations and replacements of lighting and Intelligent Transportation Systems (ITS) to solar power where applicable.
- DC-5 (Reduce GHG through traffic management and control): Integrated corridor management is being addressed in the Statewide ITS & ATM Master Plan, which will be completed in summer 2023.
- DC-6 (Improve traffic flow and reduce congestion and idling): Continue to design the shortest idle times and detours in our traffic control and traffic management plans. The ITS Strategic Deployment Plan is updated bi-annually.
- DC-7 (Provide real-time travel information to reduce congestion): Real-Time Traveler information is provided through a 511 Service Provider contract. The Department will update the 511 System in Fall 2022.
- DC-8 (Encourage use of active modes and public transportation in design elements): Biweekly meetings continue to evaluate projects for including context-sensitive design (bike, ped, complete streets) opportunities.

- DC-9 (minimize traffic delays and vehicle miles traveled (VMT) during the construction phase): TSMO strategies to reduce traffic delays and vehicle miles traveled through construction work zones is an ongoing process via Smart Work Zones, 511 Traveler Information, Dynamic Message Signs, Traffic Incident Management Plans, and Temporary Traffic Control Plans.
- DC-10 (Reuse/recycle materials): Continue to implement project-by-project. Recycled asphalt paving (RAP) continues to be used on contracts.

Which strategies were not successful and why?

Not applicable. Implementation of GHG reduction measures was initiated in FY 2022 and is ongoing. FY 2022 shows an increase in Business Travel (>500%) and employee commuting (26%) compared to FY 2021 as employees return to the workplace and in-person meetings resume. However, an overall reduction, of more than 40%, between FY 2019 (pre-pandemic) and FY 2022 was observed. The Department will continue to track and monitor formally implemented strategies to reduce GHG emissions and modify them as needed.

Strategies for improvement planned for next reporting period:

GHG reduction strategies officially implemented are in the Department's GHG Reduction Strategic Plan as scheduled for FY 2022-2025. The following are some of measures included in that plan.

Short Term Strategies

- Asset Management: Switching light fixtures to LED and replacing windows at HQ and other facilities continue to be implemented. Improved record keeping will better document energy savings and resulting GHG reductions (O-1 through 3). Projects planned for FY 2023 include:
  - Replacement of an old oil-fired boiler at the Ely facility to improve energy efficiency.
  - Install electric fleet service equipment (EVSE) at Hot Springs and Galletti facilities.
  - Replacement of windows in the Carson materials lab.
- Traffic Operations: LED lighting replacement and the increased use of solar power for NDOT lighting and ITS are current and upcoming practices being implemented within Traffic Operations and NDOT Districts. NDOT will track and update the inventory of lighting fixtures and solar panel installations to document energy savings and resulting GHG reduction. (O-5, DC-4, and DC-11).
- Reducing business travel for in-person meetings has been and will continue to be a practice that supports GHG reduction. The use of virtual meetings by Department staff (both public and contractor) will continue post-COVID to realize GHG reduction benefits. (Not included in the plan)
- Promoting and incentivizing alternative commuting for Department staff such as carpooling, public transit, and telecommuting continues to provide meaningful opportunities to reduce GHG emissions. (O-4).
- Recycled materials in waste management and construction have a significant impact on offsetting GHG emissions. Reusing and recycling construction materials include reclaimed asphalt pavement (RAP), Portland cement concrete pavement (PCCP), and fly ash. The Materials and Design divisions will continue to promote and implement recycled materials to improve function and durability and reduce the carbon footprint of our Department's operations. (O-6 and DC-10).

Long Term Strategies

- Planning: Develop new transportation projects with GHG reduction and sustainability as key components. Recent board approval of the One Nevada Plan and STIP, which includes priorities directly related to GHG reduction, is an important initial step toward incorporating GHG reduction into the Department's planning process. (P-1)

- Planning: Develop transportation planning documents to address GHG reduction. For example, the rail plan aims to reduce the number of semi-trucks traveling on our roadways. (P-2)
- Planning: Include quantitative GHG assessments of major projects for consideration in planning studies. (P-2 and P-4)
- Planning: Include quantitative GHG assessment of projects' modal types for consideration in planning studies and decisions. (P-2)
- Planning: Consider GHG emissions in transportation network design.
- Planning: An emphasis on bike and pedestrian connectivity and implementing Complete Streets projects is projected to reduce vehicle emissions.
- Roadway Design: Incorporating landscape vegetation in roadway design would help offset GHG emissions. (DC-3)

Does this performance measure effectively measure what is desired?

It is anticipated the performance measure will allow the Department to track the effort as desired and help meet statewide GHG goals. In addition, departmental tracking and monitoring of GHG reduction strategies will assess the effectiveness of the performance measure, and modifications will be made to ensure accurate and effective measurement.

Does monitoring and evaluating this performance measure improve your business process?

Currently, the Department continues to monitor baseline emissions and evaluate the impact from COVID-19 and post-pandemic operations in FY 2022. With continued monitoring and refinements, we expect to achieve sufficient accuracy in emission estimates to make meaningful process improvements.

Is there a more effective performance measure that should be considered? If so, explain.

Not applicable. The Department continues to evaluate baseline GHG emissions and refine reduction strategies.

Has the Covid-19 pandemic effected this performance measure or your ability to achieve the targets? If so, explain.

Yes. Reduced work travel and staff commuting because of hybrid-telecommuting reduced GHG emissions by more than 40% in FY 2022 compared to FY 2019. This is a positive outcome for the GHG reduction initiative. However, FY 2022 shows an increase in Business Travel (>500%) and employee commuting (26%) compared to FY 2021 as employees returned to the workplace and in-person meetings resumed.

Will meeting the yearly target have a fiscal impact? If so, explain.

Replacing equipment with energy- and fuel-efficient alternatives will have a fiscal impact initially. Where possible, the existing/authorized operating budget will be utilized to fund purchases. Modifications to construction and maintenance practices or materials may incur higher costs for the Department and our construction contractors and consultants. Quantitative tracking of Department GHG emissions will attempt to utilize existing personnel, processes, and systems where applicable. Additional staff is needed to support coordination, monitoring, and implementation. The Department continues to work on specific guidance and establish yearly targets and fiscal implications.

Next year's target:

Due to continuing data gaps in the inventory, a performance target has not been established for FY 2023. Therefore, the Department will continue to monitor annual GHG emissions in NDOT operations through FY 2023 to develop realistic future reduction performance target(s).

APPLICABLE DIRECTIVES FROM THE TRANSPORTATION BOARD/LEGISLATURE

LEGISLATIVE DIRECTIVES

The 2021 Legislature passed two bills that may affect elements of this report in future years:

AB 54 created the Nevada Advisory Committee on Traffic Safety (NVACTS). This effort brings additional attention to the continued need to improve safety on Nevada's transportation system. This committee is a revision of a prior committee created by the Department to be advisory on the creation and implementation of the Strategic Highway Safety Plan. By formalizing this committee in statute and revising the membership, we hope the state benefits from more attention to traffic safety, including strategies and policies as well as the role everyone has in achieving the goals and targets. NVACTS has met quarterly since its creation and provided an annual report to the legislature on July 1, 2022, which included policy priorities from the committee.

AB 413 required the Department to create an Advisory Working Group (AWG) to study sustainable transportation funding and related considerations, such as electric vehicles, climate policy, equity, and land use. The AWG has met 11 times since the passage of AB 413 and, with consultant support, developed a set of findings, conclusions, and recommendations that are being provided to the legislature as required by this bill. The results of this study will be provided to the 2023 Legislature for consideration. This effort could affect several elements of this report in future years, including, but not limited to new or adjusted performance measures and targets as well funding sources and expenditures. This bill does not require any changes at this time, but the results of the study as well as any actions taken by the 2023 legislature may.

STATE HIGHWAY FUND ANNUAL STATUS REPORT

STATE HIGHWAY FUND ANNUAL REVENUE AND EXPENDITURES

Assembly Bill 595 in the 2007 Legislative Session included the requirement for the Department to report on the funding sources, amount and expenditures (Section 47.2).

The following three tables provide the required information:

1. Schedule of Revenues and Receipts – Budgetary Basis
2. Comparative Schedule of Expenditures and Disbursements – Budgetary Basis
3. Highway Fund Balance – Budgetary Basis

The first table reports that total FY 2022 revenues into the State Highway Fund were approximately $1.15 billion while the second table contains the total FY 2022 actual expenditures of approximately $1.25 billion. These two tables also include other detailed financial data about transportation-related revenues and expenditures.

The third table indicates the Highway fund balance was $520,617,395 at 2021 fiscal year-end. This balance is approximately $42.7 million higher than the 2020 year-end balance of $477,903,965. Please note that the 2022 fiscal year-end balance will be available when the State of Nevada 2022 Comprehensive Annual Financial Report has been completed.

State of Nevada Highway
Special Revenue Fund
Schedule of Revenues and Receipts - Budgetary Basis
For the Years Ended June 30, 2022, and 2021
(In thousands)

State User Taxes	2022	2021
Gasoline Taxes	**$226,299**	**$212,106**
Motor Vehicle Fees and Taxes		
Vehicle Registration & Bicycle Safety Fees	$133,830	$127,779
Basic Government Service Tax	$79,295	$0
Motor Carrier Fees	$45,337	$42,591
Driver's License Fees	$23,350	$27,255
Special Fuel Taxes	$118,689	$111,612
Total Motor Vehicle Fees and Taxes	**$400,501**	**$309,237**
Total State Revenue	**$626,800**	**$521,343**
Federal Aid Reimbursement		
Department of Interior	-	-
Federal Aviation Administration	$316	$284
Federal Emergency Management Administration	-	$14
Federal Highway Administration	$319,040	$272,740
Federal Rail Administration	-	-
Federal Transit Administration	$10,930	$13,620
Total Federal Aid	**$330,286**	**$286,658**
Miscellaneous Receipts		
Departments of Motor Vehicles & Public		
Safety Authorized Revenue	$116,448	$146,158
Appropriations From Other Funds	-$294	$2,637
Proceeds From Sale of Bonds	-	$160,009
Agreement Income	$12,149	$14,052
Interest	$4,165	$3,720
Sale of Surplus Property	$2,377	-
AB595 Property Tax	$29,407	$27,108
AB595 Bond Revenue	-	-
Other Sales & Reimbursements	$28,242	$22,779
Total Miscellaneous Receipts	**$192,494**	**$376,463**
Total Revenue and Receipts - Budgetary Basis	**$1,149,580**	**$1,184,464**

State of Nevada Highway
Special Revenue Fund
Comparative Schedule of Expenditures and Disbursements
Budgetary Basis for the Fiscal Year Ending June 30, 2022, and 2021
(In thousands)

	2022			2021
	Budgeted	Actual Using Budgetary Basis	Variance Favorable (Unfavorable)	Actual Using Budgetary Basis
Department of Transportation				
Labor	$170,207	$143,118	$27,089	$141,447
Travel	$3,079	$2,258	$821	$1,161
Operating	$92,751	$78,482	$14,269	$77,761
Equipment	$19,875	$10,690	$9,185	$27,282
Capital Improvements	$875,760	$593,088	$282,672	$513,237
Bond Expenditures	$94,057	$90,709	$3,348	$67,278
Other Programs	$22,745	$14,013	$8,732	$14,858
Total Operations	**$1,278,476**	**$932,358**	**$346,118**	**$843,024**
Cost of Fuel Sold to Other Agencies	$2,791	$2,691	$100	$1,864
Total Department of Transportation	**$1,281,266**	**$935,049**	**$346,217**	**$844,888**
Department of Motor Vehicles (see Note 2)	$209,434	$146,958	$62,476	$123,842
Department of Public Safety (see Note 2)	$106,554	$81,919	$24,635	$108,485
	$315,988	**$228,877**	**$87,111**	**$232,327**
Appropriations to Other Funds				
Board of Examiners	-	-	-	-
Department of Administration	-	-	-	-
Transportation Services Authority	$2,683	$2,440	$243	$2,400
Public Works Board	$4,018	$4,009	$9	$3,358
Traffic Safety	$310	$310	-	-
Investigations	$430	$302	$128	$350
DMV Training Division	$1,313	$1,192	$121	$1,492
Transfer to Treasurer	$4,155	$4,155	$0	$4,150
Governments Office of Finance IT Project	$1,064	$1,064	$1	$6,078
Fleet Services Capital Purchase	-	-	-	-
Legislative Counsel Bureau	$5	-	$5	-$1,546
Dept of Information Technology	-	-	-	-
Total Appropriations to Other Funds	**$13,978**	**$13,472**	**$507**	**$16,282**
Other Disbursements				
Transfer to Bond Fund	$84,000	$70,941	$13,059	$73,007
Total Other Disbursements	**$84,000**	**$70,941**	**$13,059**	**$73,007**
Total Expenditures & Disbursements	**$1,695,232**	**$1,248,339**	**$446,894**	**$1,166,504**

See Highway Special Revenue Fund Report June 30, 2022

State Highway Fund Balance
(Budgetary Basis)
State Fiscal Years 2019 - 2021

	Actual		
Items	**FY 2019**	**FY 2020**	**FY 2021**
Beginning Fund Balance:			
General Obligation Bonds	$111,015,911	$0	$0
Restricted Funds	$41,897,438	$91,781,507	$105,442,342
Other Highway Fund	$358,543,723	$340,582,003	$372,461,622
Total Beginning Fund Balance:	**$511,457,073**	**$432,363,510**	**$477,903,965**
Add:			
Revenues	$1,144,728,498	$1,125,345,978	$1,024,062,447
Bond Proceeds	$1,447,658	$683	$160,403,618
Total Additions:	**$1,146,176,156**	**$1,125,346,661**	**$1,184,466,065**
Deduct:			
Dept of Trans. Non-bond Expenditures	$816,395,194	$773,373,013	$774,070,944
Dept of Trans. Bond Expenditures	$112,463,572	$683	$67,278,256
Exp. & Approp to Other Agencies	$292,171,905	$310,284,803	$324,644,896
Total Deductions:	**$1,221,030,671**	**$1,083,658,498**	**$1,165,994,096**
Adjusting Entries:			
Controllers Office CAFR Adjustments	-$4,239,047	$3,852,291	$24,241,462
Estimated Reversion to Fund (see Note H)	-	-	-
Total Adjusting Entries:	**-$4,239,047**	**$3,852,291**	**$24,241,462**
Ending Fund Balance:			
General Obligation Bonds	$0	$0	$93,125,362
Restricted Funds	$91,781,507	$105,442,342	$179,369,574
Other Highway Fund	$340,582,003	$372,461,622	$248,122,459
Total Ending Fund Balance:	**$432,363,510**	**$477,903,965**	**$520,617,395**

MAJOR PROJECTS ANNUAL STATUS REPORT

TYPICAL PROJECT DEVELOPMENT PROCESS

The Department's project development process typically consists of four major phases: planning, environmental clearance, final design, and construction. These phases are described in more detail below. The development process is based on federal and state laws and regulations, engineering requirements, and a Departmental review and approval process. This appendix provides an overview of the four-phase process, identifies major milestones within the phases, and describes the information developed during each phase.

Project Planning Phase

In this phase the project needs are analyzed, and conceptual solutions are developed. Project descriptions, costs, and schedules are broadly defined. The planning phase typically addresses such issues as number of lanes, location and length of project, and general interchange and intersection spacing. The intent of this phase is to develop the most viable design alternatives, and to identify the best means to address risks and uncertainties in cost, scope and schedule.

Environmental Clearance Phase

For the environment clearance phase, major projects are subject to the National Environmental Policy Act (NEPA) to address potential social, environmental, economic and political issues.

During this phase studies are conducted to define existing conditions and identify likely impacts and mitigations so the preferred design alternative can be selected from among various alternatives. In this phase, the project scope is more fully defined, right-of-way issues are generally identified, project costs and benefits are estimated, and risks are broadly defined.

Finally, a preliminary project schedule is determined. After this phase, major projects are divided into smaller construction segments to address the project's social, environmental, economic and political issues as well as funding availability and constructability.

Final Design Phase

During this phase, the design of the selected alternative identified during the environmental clearance phase is finalized. In this phase, the project scope is finalized, a detailed project design schedule and estimate is developed, and project benefits are fully determined. The right-of-way requirements are also determined, and acquisition is initiated. Additionally, utility relocations are initiated toward the end of the final design phase. At the end of this phase the project design and cost estimate are complete, and the project is advertised for construction.

Construction phase

During this phase projects are constructed based on the final design plans. Depending on the nature of the project, utilities relocation might occur during early stages of this phase. Due to the complexity of major projects, a detailed construction schedule, traffic control plans, and environmental mitigation strategies are developed in consultation with the selected contractor.

PROJECT STATUS SHEET EXPLANATION

The information contained on the project status sheet is centered on the Department's project development process. This process typically consists of the four major phases: planning, environmental clearance, final design and construction. Additional details of these phases are contained in Appendix A, which details the project development process utilized by the Department of Transportation. The project status sheets contain several items of information as follows:

Project Description:

Contains the preliminary project scope, which generally identifies features of the project i.e., length, structures, widening, and interchanges, and directs the project development process.

Project Benefits:

Summarizes the primary favorable outcomes expected by delivering the project.

Project Risks:

Identifies the major risks that might impact project scope, cost, and schedule. Unforeseen environmental mitigation, right-of-way litigation, and inflation of construction materials or land values are only a few items that can adversely affect project development.

Schedule:

Provides the time ranges for the four primary phases of project development: planning, environmental clearance, final design, and construction. Generally, the schedule by state fiscal years, reveals the time range for starting or completing a phase. It indicates the starting range early in the development process and completion range later in the process.

Project Costs:

Project cost ranges are provided by activity: 1) engineering activities that include planning, environmental clearance and final design costs, 2) right-of-way acquisition, and 3) construction. Costs are adjusted for inflation to the anticipated mid-point of completing a phase.

What's changed since last update?

Contains summaries of the project scope, cost, and schedule changes, if any.

Financial Fine Points:

Includes the total expended project costs and summary of financial issues.

Status Bars at the Bottom of the Form:

Shows the percentage completion for the primary project development activities that are in progress: planning, environmental clearance, final design, right-of- way acquisition, and construction.

MAJOR PROJECTS SUMMARY SHEETS

MAJOR PROJECTS

I-15 North - Phase 3
Speedway Boulevard to Garnet Interchange

Project Sponsor: NDOT

Project Manager: Christine Chia, P.E.

(775) 888-7767

Project Description:

- Last phase of improvements associated with the I-15 North Corridor Environmental Assessment. Original project limits were from Speedway Boulevard to Apex Interchange (May 2007 Environmental Assessment). Project limits were extended 6.1 miles to the north from the Apex Interchange to the Garnet Interchange (US 93)
- Widen I-15 from four to six lanes from Speedway Boulevard Interchange to the Garnet Interchange, approximately 10.7miles
- Project also includes drainage improvements, bridge rehabilitation and widening, highway maintenance facility, landscape and aesthetic enhancements, improved and additional lighting, and truck parking

Schedule:

Planning:
Complete

Environmental Phase:
Complete

Final Design:
Complete

Construction:
2022 - 2024

Project Cost Range:

Engineering:
$3.4 - $4.9 million

Right-of-Way:
$1.5 - $2.0 million

Construction:
$79.3 - $93.3 million

Total Project Cost:
$84.2 - $100.2 million

Project Benefits:

- Improve safety
- Improve travel time reliability
- Improve access to areas planned for development in North Las Vegas
- Improve operations

What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - No Change

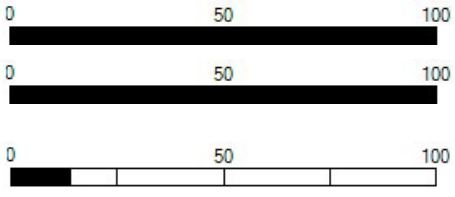
Project risks:

- Timely completion of construction

Financial Fine Points (Key Assumptions):

- Total funding expended for phase 3: $ 2,164,000 (design and environmental)
- Total funding expended for original Environmental phase: $214,000

- % Environmental Complete
- % Design Complete
- % Construction Complete



September 2022

NEVADA DOT SAFE AND CONNECTED

I-15 North - Phase 4

I-15 / CC-215 Northern Beltway Interchange

Project Sponsor: NDOT

Project Manager: Christine Chia, P. E.

(775) 888-7767

7Project Description:

- This is one of four phases of improvements to the I-15 North Corridor between US 95 and Apex Interchange (15 miles)
- Construct new direct connect ramps to upgrade the I-15 and CC 215 (Las Vegas Beltway) Interchange
- Construct I-15 SB ramps and reconstruct I-15 NB ramps for the I-15 and Tropical Parkway Interchange
- Reconstruct local streets to match interchange re-configurations
- Provide landscape and aesthetic enhancements in accordance with the I-15 Landscape and Aesthetics Corridor Plan
- Improvements will be constructed within the existing I-15 and CC-215 rights-of-way to the extent possible. However, a total of approximately 3.8 acres has been acquired for these improvements

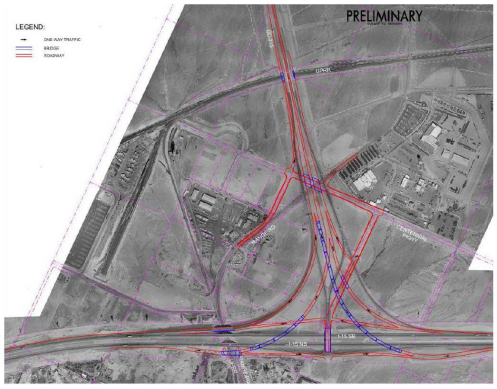
Schedule:

Planning:
Complete

Environmental:
Complete

Final Design:
Complete

Construction:
2020 - 2022



Project Cost Range:

Engineering: $10.5 - $10.9 million

Right-of-Way: $1.7 - $3.7 million

Construction: $112.9 - $117.9 million

Total Project Cost: $125.1 - $132.5 million

Project Benefits:

- Improve safety
- Improve travel time reliability
- Improve access to areas planned for development in North Las Vegas
- Improve operations with full freeway-to-freeway connectivity

What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - No Change

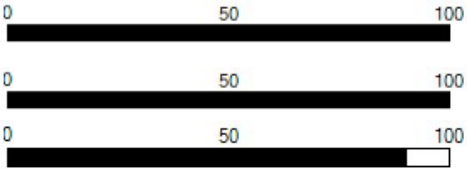
Project risks:

- Timely completion of utility relocations
- Timely completion of UPRR construction reviews

Financial Fine Points (Key Assumptions):

- Total funding expended for construction: $ 65,833,000
- Total funding expended for construction engineering: $ 6,088,000
- Total funding expended for engineering: $10,828,000
- Total funding expended for right of way: $3,901,000
- Total funding expended for I-15 North environmental phase: $875,000
- NDOT Average Escalation Rates applied
- Awarded 01/13/2020 to Fisher Sand & Gravel. Bid $98,989,898.98

- % Environmental Complete
- % Design Complete
- % Construction Complete



September 2022

NEVADA DOT SAFE AND CONNECTED

I-15 Central Corridor

Project Sponsor: NDOT

Project Manager: Christine Chia, PE

(775) 888-7767

Project Description:

- Feasibility study along I-15 from Flamingo Road to Sahara Avenue.
- Enhance access and mobility within the I- 15 corridor.
- Define needs and examine potential improvements to the I-15 within the resort corridor area.
- Engage stakeholders in a feasibility study and alternative analysis that meets project goals.
- Create a phased implementation strategy and prioritization for future construction.

Schedule:

Feasibility Study:
2019 - 2021

Environmental:
TBD

Final Design:
TBD

Construction:
TBD

Project Cost Range: Engineering:
TBD

Right-of-Way:
TBD

Construction:
TBD

Total Project Cost:
TBD

Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Improve travel time reliability

What's Changed Since Last Update?

- Feasibility Study Virtual Public Meeting held from May 25-June 23, 2021
- Planning Phase: Feasibility Study expected to be completed fall 2021
- Scope, schedule, and cost- No change

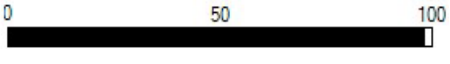
Project risks:

- Consensus building among the stakeholders.
- Funding uncertainty.
- Economic development along the corridor could require design changes affecting scope, schedule and budget.

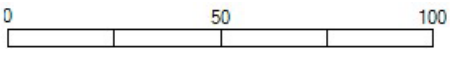
Financial Fine Points (Key Assumptions):

- Total funding: TBD

- Planning Phase: I-15 Central Corridor Feasibility Study



- % Environmental



September 2022

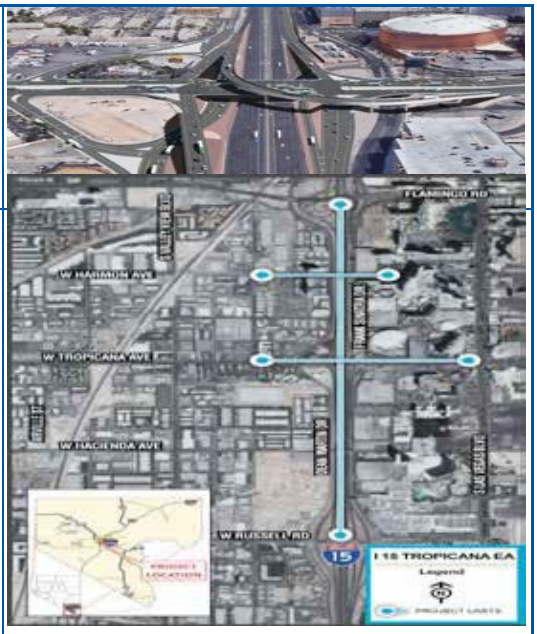
NEVADA DOT SAFE AND CONNECTED

I-15 Tropicana Interchange Reconstruction

Project Sponsor: NDOT

Project Manager: Lynnette Russell, PE

(702) 671-6601



Project Description:

- Demolish and reconstruct the Tropicana Avenue interchange at I-15
- Grad separates the intersection of Tropicana Avenue and Dean Martin Drive
- Construct HOV ramps at Harmon Avenue
- Extend the Active Traffic Management System South on I-15
- Pavement preservation Warm Springs to Harmon

Schedule:

Environmental:
FONSI - February 6, 2020

RFQ:
September 2020

RFP:
January 2021

Design Build Contractor award:
September/November 2021

Construction:
2022 - 2025

Project Benefits:

- Improve operations, safety, and mobility
- Provide for future expansion of I-15
- Improve travel time reliability.

Project Cost Range:

Engineering:
$8,000,000 to $12,000,000

Right of Way:
$40,000,000

Construction:
$305,000,000

What's Changed Since Last Update?

- FONSI - February 6, 2020
- Scope - No Change
- Schedule - Updated to reflect delay in award of construction contract
- Budget - No change

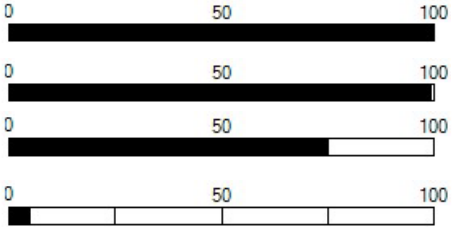
Project risks:

- Timing of funding
- Stakeholders buy-in
- Right of Way
- Utility conflicts and coordination

Financial Fine Points (Key Assumptions):

- N/A

- Environmental (NEPA Phase)Design Build
- Procurement January 2020 -October 2021
- Design Build design development
- Construction



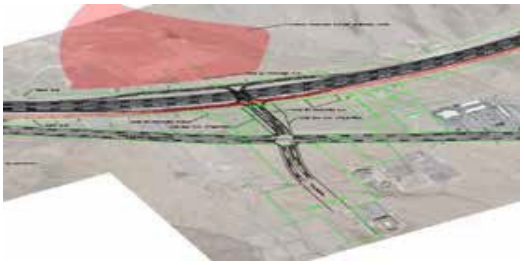
September 2022

I-15 South - Via Nobila Interchange
(Formerly Bermuda Road)

Project Sponsor: City of Henderson

Project Manager: Danja Petro, PE

(702) 671-8865



Project Description:

- The I-15 South Corridor Environmental Assessment from Sloan to Tropicana was completed in 2008 and broke the corridor into nine (9) project elements to address funding and constructability opportunities.
- Construction of a new interchange at Via Nobila (formerly Bermuda Road) was one of the project elements identified in the original Environmental Assessment.
- Because of the length of time since the original Environmental Assessment was completed, the corridor is being re- evaluated to address any changes that may have occurred and determine how those changes impact the future of the corridor.

Schedule: Planning: Complete

Environmental: Re-evaluation of 2008 EA to be complete 2nd Quarter SY 2021

Final Design: TBD

Construction: TBD

Project Cost Range:
(Estimates per January 2019 CRA)

Engineering: $11 million - $15 million

Right-of-Way: $8 million - $25 million

Construction: $73 million - $106 million

Total Project Cost: $92 million - $146 million

Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Improve travel time reliability

What's Changed Since Last Update?

- Scope - No change
- Schedule - No change
- Cost - No change

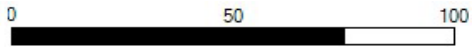
Project risks:

- Unit price and property escalation may affect project cost
- Funding uncertainty

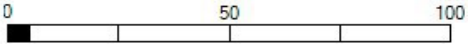
Financial Fine Points (Key Assumptions):

- Escalation due to project funding not being available until 2040per CRA
- Total funding expended for I-15 South Environmental Studies (all phases): $3.5 million

- % Environmental Complete



- % Design Complete



September 2022

NEVADA DOT SAFE AND CONNECTED

I-15 South - Pebble Road Overpass

Project Sponsor: Clark County

Project Manager: Danja Petro, PE

(702) 671-8865

Project Description:

- The I-15 South Corridor Environmental Assessment from Sloan to Tropicana was completed in 2008 and broke the corridor into nine (9) project elements to address funding and constructability opportunities.
- Construction of an overpass at Pebble Road and I-15 was one of the project elements identified in the original Environmental Assessment.
- Because of the length of time since the original Environmental Assessment was completed, the corridor is being re- evaluated to address any changes that may have occurred and determine how those changes impact the future of the corridor.

Schedule:

Planning: Complete

Environmental: Re-evaluation of 2008 EA to be complete 2nd Quarter SY 2021

Final Design: TBD

Construction: TBD

Project Cost Range: (Estimates per January 2019 CRA)

Engineering: $5 million - $6 million

Right-of-Way: $0

Construction: $33 million - $43 million

Total Project Cost: $38 million - $49 million

Project Benefits:

- Improves access
- No connections to I-15, so interstate traffic will not be negatively impacted

What's Changed Since Last Update?

- Scope - No change
- Schedule - No change
- Cost - No change

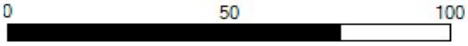
Project risks:

- Unit price and property escalation may affect project cost.
- Lack of funding may push this project well into the future

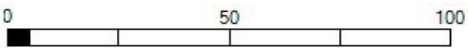
Financial Fine Points (Key Assumptions):

- Funding not available
- Total funding expended for I-15 South Environmental Studies (all phases): $3.5 million
- Funding Source (2019 EA Update): Clark County Fuel Revenue Index Funding

- % Environmental Complete



- % Design Complete



September 2022

NEVADA DOT SAFE AND CONNECTED

I-15 South - Phase 2

Sloan Road to Blue Diamond (SR-160)

Project Sponsor: NDOT

Project Manager: Danja Petro, PE

(702) 671-8865

Project Description:

- The I-15 South Corridor Environmental Assessment from Sloan to Tropicana was completed in 2008 and broke the corridor into nine (9) project elements to address funding and constructability opportunities.
- This is one project element identified in the original Environmental Assessment.
- Because of the length of time since the original Environmental Assessment was completed, the corridor is being re-evaluated to address any changes that may have occurred and determine how those changes impact the future of the corridor.
- The original project identified widening on I-15 between Sloan Road and Blue Diamond Road from 6 to 10 lanes for a total length of 8.2miles.

Schedule:

Planning: Complete

Environmental: Re-evaluation of 2008 EA to be complete 2nd Quarter SY 2021

Final Design: TBD

Construction: TBD

Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Improve travel time reliability

Project Cost Range: (Estimates per January 2019 CRA)

Engineering: $22 - $25 million

Right-of-Way: $0

Construction: $138 million - $284 million

Total Project Cost: $160 million - $309 million

What's Changed Since Last Update?

- Scope - No change
- Schedule - No change
- Cost - No change

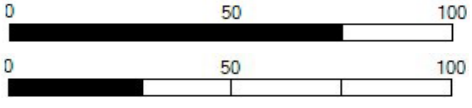
Project risks:

- Complexity in maintaining traffic staging, relocating utilities and reducing impacts to traveling public.

Financial Fine Points (Key Assumptions):

- Funding not available until 2045
- Total funding expended for I-15 South Environmental Studies (all phases): $3.5 million

- Environmental Complete
- Design Complete



September 2022

NEVADA DOT SAFE AND CONNECTED

I-15 South - Via Inspirada Interchange

(Formerly Sloan Road)

Project Sponsor: City of Henderson

Project Manager: Danja Petro, PE

(702) 671-8865

Project Description:

- The I-15 South Corridor Environmental Assessment from Sloan to Tropicana was completed in 2008 and broke the corridor into nine (9) project elements to address funding and constructability opportunities.
- Construction of a new interchange at Via Inspirada (formerly Sload Road) was one of the project elements identified in the original Environmental Assessment.
- Because of the length of time since the original Environmental Assessment was completed, the corridor is being re- evaluated to address any changes that may have occurred and determine how those changes impact the future of the corridor.

Schedule: Planning:

Complete Environmental: Re-evaluation of 2008 EA to be complete 2nd Quarter SY 2021

Final Design:

TBD

Construction:

TBD

Project Cost Range:

(Estimates per January 2019 CRA)

Engineering:

$10 million - $12 million

Right-of-Way:

$13 million - $22 million

Construction:

$54 million to $73 million

Total Project Cost:

$77 million - $107 million

Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Improve travel time reliability

What's Changed Since Last Update?

- Scope - No change
- Schedule - No change
- Cost - No change

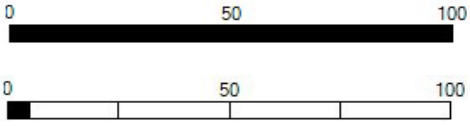
Project risks:

- Unit price and property escalation may affect project cost.
- Sloan Interchange to be constructed prior to widening to accommodate additional lanes

Financial Fine Points (Key Assumptions):

- Funding not available until 2022 per current Financial Plan
- Total funding expended for I-15 South Environmental Studies (all phases): $3.5 million

- Environmental Complete
- Design Complete:



September 2022

NEVADA DOT SAFE AND CONNECTED

Downtown Access Project

I-515/US-95 from Rancho Blvd Interchange to Mojave Rd

Project Sponsor: NDOT

Project Manager: Ryan Wheeler, P.E.

(702) 278-3391

Project Description:

- This project proposes to improve freeway capacity by adding more lanes and fixing ramp spacing by adding braided ramps connecting I-15 and I-515 in both directions. The project will also add additional access to/from I-515 and the Downtown area with two new HOV interchanges. One at City Parkway and the other at Maryland Parkway.
- This current scope of work on the project is to implement the necessary studies, documentation, and outreach to complete the NEPA phase of the project. This will be done by analyzing three proposed build alternatives that have been conceptually designed to 15% and a no-build alternative.
- The proposed build alternatives include replacing the existing viaduct but not building a lengthy bridge OR recessing the highway into a trench below existing ground level.
- Each construction alternative will include similar proposed improvements: remove or replace the 1.6-mile viaduct; add freeway capacity; fix ramp spacing by adding ramp braiding to/from I-15 and I-515; add HOV lanes on I-515/US-95; and new HOV interchanges at City Parkway and Maryland Parkway
- *** This project was originally the I-515 alternatives development study with project limits from the Wyoming grade separation to the MLK interchange. The alternatives development study had 5 separate tasks orders to perform general environmental work, develop lists of potential projects and pursue project development. Task Orders 1-4 have been completed. Task order 5 is the pursuit of the Downtown Access Project.
- Please visit the project website at www.ndotdap.com

Schedule:
The project is currently estimated to be 10-13 years in total.

Environmental (3-4 years):
In progress

Final Design (3-4 years):
TBD

Right-of-way (concurrent with final design, 3-4 years):
TBD

Construction (4-5 years):
TBD

Project Benefits:

- Improved safety, operations, and air quality through the I-515/US-95 corridor
- Remedy aging infrastructure by replacing or removing the 1.6-mile viaduct
- Improve operations by adding freeway capacity and braiding ramps to/from I-15 and I-515
- Extend HOV network to downtown along I-515/US-95 freeway, including new HOV interchanges at Maryland Parkway and City Parkway
- Improved landscaping and aesthetics

Project Cost Range: Environmental: $6.0 million

Environmental: $6.0 million

Engineering: TBD

Right-of-Way: TBD

Construction: TBD

Total Project Costs: TBD

What's Changed Since Last Update?

- View project information at www.ndotdap.com
- Mar 8-April 12 Temporary test closures of streets proposed to be closed permanently

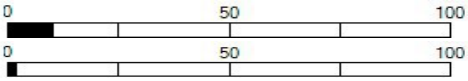
Project risks:

- Funding availability to move project into the next phases of design, right- of-way acquisitions, and construction
- Utility relocation, groundwater, right-of-way acquisitions, crossing the UPRR tracks, and maintenance of traffic during construction.
- The project team will manage risks through project development.

Financial Fine Points (Key Assumptions):

- $6million for pre-NEPA studies
- $5million for NEPA work

- Environmental
- % Design Complete



September 2022

NEVADA DOT SAFE AND CONNECTED

Henderson Interchange NEPA Study

Project Sponsor; NDOT

Project Manager; David Bowers, P.E.

702-671-6672

Project Description:

- This NEPA Study for the Henderson Interchange will determine the preferred alternative and system wide improvements.
- The project limits extend south along I-11 to Horizon Drive, north along I-515 to Galleria Drive, west along I-215 to Valley Verde Drive, and east along Lake Mead Parkway to Van Wagenen Street.

Schedule:

Planning (Henderson Feasibility Study):
Complete

Environmental:
2022

Project Cost Range: Environmental:

$4 million

Engineering:
TBD

Right-Of-Way:
TBD

Construction:
TBD

Project Benefits:

- Improved operations
- Improved travel time reliability
- Improved safety

What's Changed Since Last Update?

- Scope: Alternative 2A, which utilizes a crossover on the E-W route, has been selected to advance into the NEPA Study.
- Schedule: No Change
- Cost: No Change

Project risks:

- Negative environmental impacts
- High project cost

- EA

0 50 100

September 2022

NEVADA DOT SAFE AND CONNECTED

US-95 Northwest Phase 3D: Clark County 215 Interchange

Project Sponsor: NDOT, City Las Vegas and Clark County

Senior Project Manager: Pedro Rodriguez, PE

(775) 888-7321

Project Description:

- This is the third phase of the US 95 Northwest project that extends from Washington Avenue to Kyle Canyon Road
- Construct new system to system interchange at CC 215
- This third phase is anticipated to be constructed in 3 subparts (A, C and D)
- Phase 3D: Ramps providing west to north, south to west and east to north movements; local interchange; upgrade CC215; and construct Multi-Use Path

Schedule:

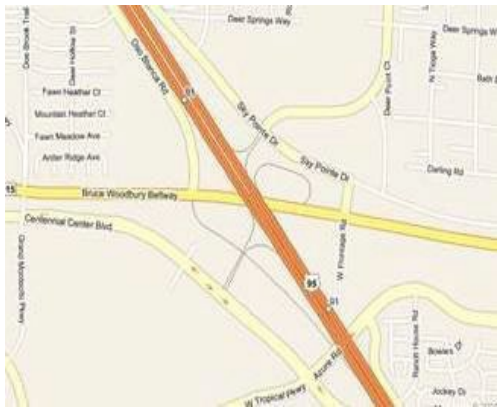
Planning:
Complete

Environmental:
Complete

Final Design:
Complete 2020

Construction:
Start January 4, 2021

Construction:
End 2nd Quarter SY 2024



Project Cost Range:
(Design Phase Estimates):

Engineering (All Phases): $14 - $15 million

Right of Way (All Phases): $0 - $1 million

Construction (All Phases): $204 - $268 million

Construction (3D): $134 - $185 million

Total Project Cost (All Phases): $218 - $284 million

Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Improve travel time reliability

What's Changed Since Last Update?

- Scope - No change
- Schedule - No change
- Cost - No change

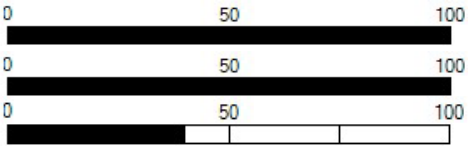
Project risks:

- Unit price escalation may affect project cost
- Complex right of way and utility issues may impact schedule and cost

Financial Fine Points (Key Assumptions):

- Total funding expended for Phase 3: $141.62 million
- Total funding expended for US 95 Northwest Environmental Studies (all phases): $5 million
- 3D: inflation escalation (2.27%) to midpoint of construction 2021
- Funding source:
- - Federal: 113 million
- - State: $40 million
- - Local: $2 million

- % Design Complete
- % ROW Complete
- % Construction Complete



September 2022

NEVADA DOT SAFE AND CONNECTED

Reno Spaghetti Bowl & Spaghetti Bowl Express (Phase1)

I-80/ I-580/ US 395 System Interchange

Project Sponsor: NDOT

Project Manager: Robert Vrooman, PE

775-888-7317

Project Description:

- Freeway capacity, safety, and operational improvements to and surrounding the Spaghetti Bowl Interchange
- Freeway access management improvements
- Modify service interchanges
- I-80 limits: Virginia/Sierra/Center Street Interchange to Pyramid Highway Interchange
- I-580/US 395 limits: McCarran/Clear Acre Interchange to Virginia/Kietzke Interchange

Schedule:

Environmental: **Complete**

SBX Phase 1 Design and Construction: 2019 - 2023

SBX Phase 1 Design- Build: 2020 - 2023

Future Construction Phases: 2025 and later

Project Cost Range:

Engineering: $107 - $153 million

Right of Way: $342 - $495 million

Construction: $1.5 - $2.2 billion

Total Project Cost (All Phases): $1.9 - 2.8 billion

Project Benefits:

- Improve freeway safety and operations
- Improve travel time reliability
- Accommodate current and future travel demands
- Improved freeway maintenance

What's Changed Since Last Update?

- Scope - No changes
- Schedule - Environmental Phase Complete
- Budget - Updated based on Cost Risk Assessment

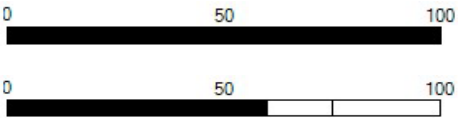
Project risks:

- Complex access management strategies Railroad
- Truckee River
- Socio-economic environment
- Fragmented Local Network
- Right of Way
- Historical and cultural impacts
- 4f and 6f impacts

Financial Fine Points (Key Assumptions):

- Total funding expended for Environmental Phase: $11.6 Million

- % Environmental Complete
- % Design SBX Phase 1 Design-Build Complete



September 2022

Reno Spaghetti Bowl - Phase 2 Nugget Viaduct

East of I80/I580/US395 Interchange to East McCarran Blvd (SR659)

Project Sponsor: NDOT

Project Manager: Fred Shakal, P.E.

(775) 888-7589

Project Description:

- This project is the second phase of the Reno Spaghetti Bowl (RSB) I80/I580/US395 System Interchange Improvements to address necessary operational improvements in the Truckee Meadows area
- The current scope of work for this project includes conducting a feasibility study for the replacement of the Nugget Viaduct and preliminary design for necessary improvements for the eastern leg of the Reno Spaghetti Bowl FEIS limits
- Improvements include reconstructing I- 80 from east of the Spaghetti Bowl to East McCarran Blvd
- Replace I-80 Bridge H-866 E/W over the Nugget Casino
- Construct new interchange at Kietzke Lane
- Reconstruct Rock Blvd. and Pyramid Way Interchanges

Project Benefits:

- Improve Safety
- Improve Travel Time Reliability
- Optimize Local and Regional System Connections
- Improve Freeway Operations

Schedule:

Milestones and Deliverables:

Environmental:
Complete

Preliminary Engineering and Preliminary Design:
2022

Final Design and Right- of-Way:
TBD

Construction:
TBD

Project Cost Range:

Engineering:
TBD

Right-of-Way:
TBD

Construction:
TBD

Total Project Cost:
TBD

What's Changed Since Last Update?

- Scope: No change
- Schedule: No change
- Cost: No change

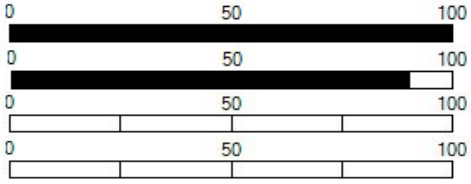
Project risks:

- Funding uncertainty for construction
- Consensus building among stakeholders

Financial Fine Points (Key Assumptions):

- State funds programmed to conduct preliminary engineering including feasibility study to determine estimated costs for design, right-of-way, and construction

- Environmental
- Preliminary Design
- Final Design
- Right of Way



September 2022

NEVADA DOT SAFE AND CONNECTED

I-80 East Vista Blvd. to USA Parkway (SR 439)

Project Sponsor: NDOT

Project Manager: Chris Kuhn, P.E.

(775) 888-7728

Project Description:

- This project consists of corridor improvements on 13.1 miles of I-80 between Vista Blvd. and USA Parkway
- Freeway capacity improvements include widening I-80 in each direction from two to three lanes
- Freeway safety improvements include widening shoulders for emergency access.
- Interchange improvements will enhance acceleration lanes/merging distances and freeway access management
- The current scope of work on the project is to implement the necessary studies, outreach, and documentation to fulfill the NEPA requirements as well as to develop preliminary design alternatives

Schedule:

Planning: Anticipated scoping completion 2021

Milestones / Deliverables:

Environmental: TBD

Intermediate Design: TBD

Final Design and Right-of-way: TBD

Construction: TBD

Project Benefits:

- Improve Safety and Emergency Service Access
- Improve Travel Time Reliability
- Improve Freight Movement
- Accommodate Future Planned Growth
- Improve Operations and Maintenance

Project Cost Range:

Engineering: TBD

Right-of-Way: TBD

Estimated Construction Costs: $400-$500M

What's Changed Since Last Update?

- Scope: Scope development in progress
- Schedule: TBD
- Cost: Updated

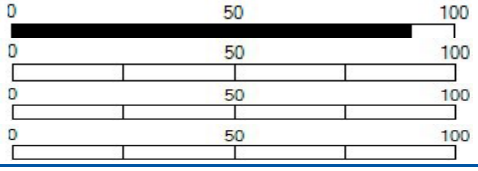
Project risks:

- Funding uncertainty for project construction
- Environmental study outcomes could impact schedule
- Challenging topography between steep rock slopes, the Truckee River and the UPRR adjacent to I80
- Significant utilities located adjacent to I80 could impact schedule and budget

Financial Fine Points (Key Assumptions):

- Environmental effort programmed to use state funds
- Preliminary Engineering Anticipated to use state funds
- Funding for Construction not yet identified

- Planning/Scoping
- Environmental
- Right of Way
- Design



September 2022

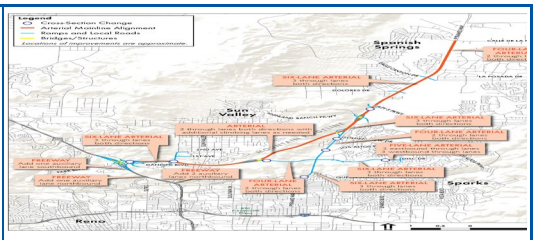
SR 445 Pyramid Highway/US 395 Connection

Project Sponsor: Washoe County RTC and NDOT

Washoe RTC Project Manager: Doug Maloy, P.E.

NDOT Project Manager: Nanette Maxwell, P.E.

Phone: (775) 301-8891



Project Description:

- Calle de la Plato to La Pasada-Transition from 4 Lane Arterial to 6 lane freeway.
- La Pasada to Sparks Blvd. – Develop Pyramid alignment into 6 lane freeway with frontage roads.
- Continue 6 lane freeway from Sparks Blvd. to Disc Dr. either on the Pyramid alignment with frontage roads or on a separate alignment to the west.
- Extend 6 lane freeway through Sun Valley to US-395.
- Widen and improve Pyramid highway from Disc Dr. to Queen Way.
- Widen and extend Disc Dr. to Vista Blvd.
- NEPA completed by Washoe RTC.
- This project will be delivered in 6 phases.
- Phase 1 from Queen Way to Golden
- View Drive - Final Design complete.

Schedule:

Planning: Complete

Environmental: 2010 - 2018

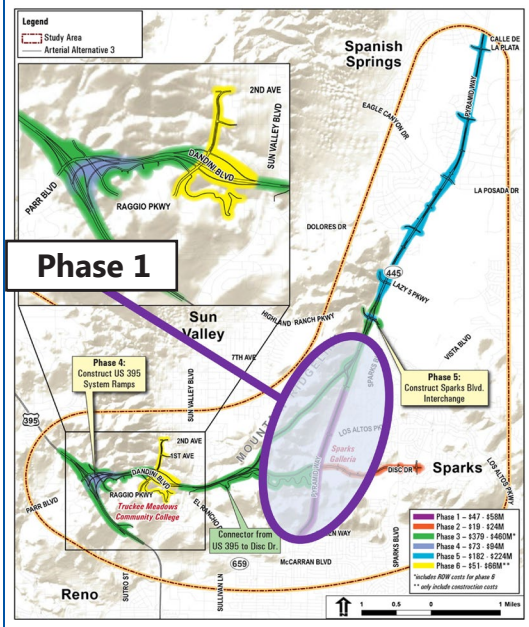
Final Environmental Impact Statement (FEIS): Winter 2014-2017

Record of Decision (ROD): 2018

Final Design: Phase 1 - completed August 2022

Phases 2 through 6 design TBD

Construction: Phases 1 Spring 2023 Phases 2 through 6 construction TBD



Project Cost Range: (Planning phase estimates)

Engineering: $40M - $60M

Right-of-Way: $100M - $150M

Construction: $410M - $660M

Total Project Costs: $550M - $870M

Project Benefits:

- Address travel time reliability and safety along the Pyramid Highway and McCarran Blvd. corridors.
- Provide alternative access to freeway system.
- Improve safety.

What's Changed Since Last Update?

- Phase 1 - Queen Way to Golden View Drive (Final Design complete).

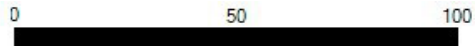
Project risks:

- Construction in a dense urban residential area.
- Funding sources for all phases not identified.
- Complex right of way and utility issues may impact schedule and costs.

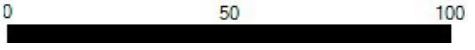
Financial Fine Points (Key Assumptions):

- BUILD Grant received for Phase 1 Construction - $23,000,000
- Construction funding for all phases: TBD

- % Environmental Complete



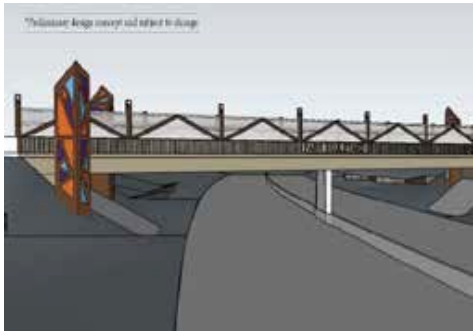
- % Design Complete Phase 1



September 2022

US-395 North Valleys Phase 1A:
Parr-Dandini Bridge Replacement

Highway Project Manager: Pedro Rodriguez, P.E.
Phone: (775) 888-7321
E-mail: prodriguez@dot.nv.gov



Project Description:

- US 395 is the major connection between Reno/Sparks and the north valleys: Golden Valley, Lemmon Valley, and Cold Springs. This route also serves as the main connection to northeastern California.
- This is the first phase of the future widening of US 395 in the North Valleys
- This phase includes the removal of the aging and structurally deficient Parr-Dandini Bridge structure (I-1306) and construction of a new bridge that will be longer and wider to accommodate future phases of widening through this area

Schedule: Final Design Submittal:
December 2019

Advertise Project:
February 2020

Construction Awarded:
April 2020

Anticipated Construction Completion:
December 2020

Project Benefits:

- Improved safety
- Decreased structure maintenance
- Multimodal design

Project Cost Range:

Engineering: $500k to $700k

Construction: $8 to $9 million

Total Project Cost: $8.5 to $10 million

What's Changed Since Last Update?

- Scope: No change
- Schedule: No change
- Budget: No change

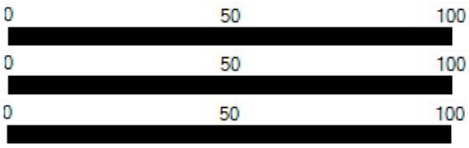
Project risks:

- Existing transmission line poses constructability challenges
- Weather could delay construction completion

Financial Fine Points (Key Assumptions):

- Total funding expended: $6 million

- Planning/Environmental
- Design Complete
- Construction



September 2022

US-395 North Valleys - Phase 1B

Highway Project Manager: Robert Vrooman, P.E.
Phone: (775) 888-7317
E-mail: rvrooman@dot.nv.gov

Project Description:

- US 395 is the major connection between Reno/Sparks and Golden Valley, Lemmon Valley, and Cold Springs areas. This route serves as the main connection to northeastern California.
- This the second phase of US 395 North Valleys Project, Phase 1B, which begin just north of McCarran Boulevard and ends just south of Golden Valley Road interchange.
- This phase will include a third southbound travel lane, auxiliary lanes between the interchanges in both the northbound and southbound directions, new braided ramp at Panther Valley and the rehabilitation of the existing.

Schedule:

Planning:
Complete

Intermediate Design Submittal:
September 2021

Advertise:
December 2022

Project Cost Range:

Engineering: $4 to $6 million

Right-of-Way: $100,000 to $150,000

Construction: $75 to $100 million

Total Project Cost: $80 to $106 million

Project Benefits:

- Increase capacity to accommodate projected traffic
- Improve travel time reliability
- Improve safety

What's Changed Since Last Update?

- Intermediate Design Review January 2022. The projected Advertisement milestone not expected to change.

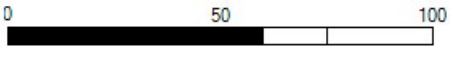
Project risks:

- Bridge widening within UPRR right-of-way

Financial Fine Points (Key Assumptions):

- Total preliminary engineering funding expended for Phase 1A/1B: $3,800,000

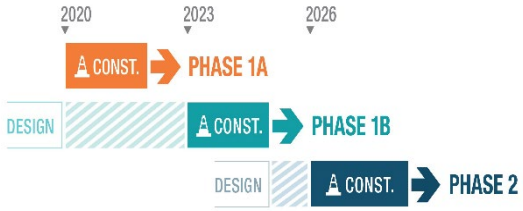
- Design Complete



September 2022

US-395 North Valleys - Phase 2

Highway Project Manager: Robert Vrooman, P.E.
Phone: (775) 888-7317
E-mail: rvrooman@dot.nv.gov



Project Description:

- US 395 is the major connection between Reno/Sparks and Golden Valley, Lemmon Valley, and Cold Springs areas. This route serves as the main connection to northeastern California.
- US 395 North Valleys, Phase 2 will include a third southbound general purpose lane and auxiliary lanes between Golden Valley Road and Lemmon Valley Drive.
- Between Lemmon Valley Drive to Stead Boulevard, Phase 2 will include a general purpose lane in both the northbound and southbound direction.

Schedule:

Planning:
Complete

Intermediate Design Submittal:

March 2023

Advertise:
November 2025

Project Cost Range:

Engineering:

$350,000 to $450,000

Construction:

$50 to $70 million

Total Project Cost:

$50.4 to $70.5 million

Project Benefits:

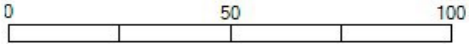
- Increase capacity to accommodate projected traffic
- Improve travel time reliability
- Improve safety

What's Changed Since Last Update?

Project risks:

Financial Fine Points (Key Assumptions):

- Design Complete



September 2022

NEVADA DOT SAFE AND CONNECTED

US-395 Carson City Freeway - Phase 2B

South Carson Street to Fairview Drive

Project Sponsor: NDOT

Senior Project Manager: Nanette Maxwell, P.E.

(775) 888-7742

Project Description:

- This project will be delivered in four packages. Construction is complete for Phase 2B Packages 1, 2 & 3.
- Phase 2B Package 4 will construct the South Carson Interchange and complete the remainder of the project.

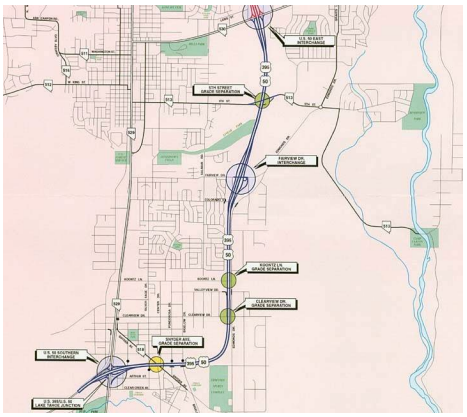
Schedule:

Planning:
Complete

Environmental:
Complete

Final Design:
Phase 2B Packages 1, 2& 3 are Complete - Package 4 - TBD

Construction:
Phase 2B Packages 1, 2& 3 are Complete - Package 4 - TBD



Project Benefits:

- Improve travel time and reliability on Carson Street through Carson City and local streets along the freeway corridor.
- Provide flood control protection.
- Improve opportunities for economic development along the corridor and downtown.

Project Cost Range:

(Final design phase estimates):

Engineering: $11 - $13 million

Right-of-Way: $30 - $32 million

Construction: $100 - $150 million

Total Project Cost:
$150 - $200 million not including Package 4

Project risks:

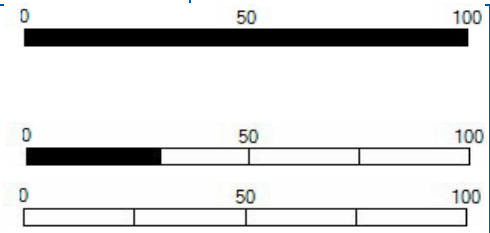
- Project completion date will depend on the availability of funds.
- Concurrent utility relocation will be required.
- Changes in design standards could affect schedule and budget.
- New development along the corridor.

What's Changed Since Last Update?

- Scope - Package 4 will complete the remainder of the Freeway.
- Schedule - TBD
- Cost - No change

Financial Fine Points (Key Assumptions):

- Total funding expended: $200 million
- Construction funding source for Phase 2B-4: TBD



- % Design Complete 2B-1, 2B- 2, 2B-3
- % Design Complete 2B-4
- % Construction Complete 2B-4

September 2022

APPENDICES

APPENDIX A

BENEFIT-COST ANALYSIS OF CAPACITY PROJECTS

The Department is required under NRS 408.3195 to conduct benefit cost analysis for larger highway capacity projects. Specifically, prior to submitting a project to the Board for approval, the Department will prepare such a written analysis for highway projects that will increase capacity on the State Highway System and cost at least $25 million. Subsequently, this analysis was done and is being reported on active projects before the Department requests the Board to approve funding for construction, including right-of-way acquisition and utility work. The Benefit-Cost (B/C) ratio calculations are being done on the larger capacity projects that are expected to be funded for construction within 10 years and, thereby, appear in the Transportation System Projects document. Furthermore, B/C analysis has been done for some projects that do not meet the minimum dollar threshold, but the information will be beneficial to management for decision making purposes. The department has policy (TP 1-11-1) that guides the B/C analysis Program.

The B/C ratios for several projects have been determined for FY 2013 to present. The following table reports the B/C ratio results for major projects. Attempt has been made to include B/C ratios for entire projects and not the ratios of individual phases except in cases that are appropriate.

Major Projects	B/C Ratio	Fiscal Year
I-15 Interchange at Milepost 118 in Mesquite, Nevada	5	2013
US 93 Pavement Rehabilitation & Truck Climbing Lanes	8.3	2013
South McCarran Boulevard – Phase I Virginia Street to Mira Loma Drive	3.57	2013
South McCarran Boulevard – Phase II Mira Loma Drive to Greg Street	2.47	2013
US 395 Southern Corridor E Clearview Drive SR 88	2.13	2013
US-50 Widening Project Chaves Road to Roy's Road	1.9	2013
F Street Connection Washington Ave. to Bonanza Road	1.15	2013
USA Parkway	17.3	2013
I-15 NEON (All Phases)	2.3	2014
Boulder City Bypass: Phases I and II Foothills Drive to West of the Hoover Dam Bypass	0.94	2014
I-15 Pavement Rehabilitation: Dry Lake Rest Area to Logandale/Overton Interchange	1.7	2014
Carson City Freeway (All Phases)	2.14	2014
US 95 North-Phase 2A (Ann Road to Durango Drive)	4.2	2014
SR 593 Tropicana Avenue: Dean Martin Drive to Boulder Highway (The project starts at Dean Martin Drive and ends at SR 582 Boulder Highway (SR 593 CL-3.50 to -10.85))	2.5	2014
I-15 North-Part 2 Package D (Capacity Improvements): Craig Rd. to Speedway Blvd	7.1	2014

Major Projects	B/C Ratio	Fiscal Year
I-15 North Phase 4 – I-15/CC-215 Interchange – Alternative 1	1.37	2015
I-15 North Phase 4 – I-15/CC-215 Interchange – Alternative 2	1.66	2015
I 215 from I 15 to Windmill Lane (Airport Connector)	2.6	2015
US 95 NW Phase 3A; CC 215 from US 95 to Tenaya Way MP CL 0.88 - N/E & W/S Ramps and S/B collector road	1.2	2015
SR 593, Tropicana Ave. at SR 604 Las Vegas Blvd. (Replace Escalators)	1.2	2015
US95/CC215 Interchange and Associated Improvements (Phases 3C, 3D/E)	3.36	2017
I-15/US 93 Interchange (Garnet Interchange) Reconstruction and US 93 Capacity Improvements	2.64	2017
I-515 Alternatives Development Study Project 1	2.9	2017
I-515 Alternatives Development Study Project 2	0.4	2017
I-515 Alternatives Development Study Project 3	2.8	2017
I-515 Alternatives Development Study Project 4	6.8	2017
I-515 Alternatives Development Study Project 5	0.3	2017
I-515 Alternatives Development Study Project 6	1.2	2017
I-15 South Phase 2A/2B Widening	0.2	2018
I-15 South Bermuda Road Interchange	-0.1	2018
I-15 South Sloan Road Interchange	-0.1	2018
Reno Sparks Freeway Traffic Study (Total US 395 Improvements)	8.8	2018
I-15 North Corridor Improvement Phase 3 Project from Speedway Boulevard to Garnet Interchange	3.8	2019
I-15 Tropicana EA project	10.31	2019
Pyramid Highway Improvement Project (Phase 1)	1.57	2019
I-515 Charleston Boulevard Interchange Project	1.98	2020
I-15 Flamingo to Sahara Feasibility Study-Alternative 1	1.33	2021
I-15 Flamingo to Sahara Feasibility Study-Alternative 1-Shift	1.05	2021
I-15 Flamingo to Sahara Feasibility Study-Alternative 2	0.99	2021
I-15 Flamingo to Sahara Feasibility Study-Alternative 2-Shift	0.87	2021
I-80 East: Vista Blvd. to USA Parkway (SR 439)	0.07	2022
Henderson Interchange	1.52	2022

DISCUSSION OF THE CALCULATIONS OF COSTS AND BENEFITS

Introduction

The determination of the benefit and costs has received considerable use for many decades. The process was first proposed by a French engineer by the name of Dupuit in 1844. The method provides an analysis framework whereby many benefits and costs are quantified. It has become a widely used tool and enables the decision-making process of ranking projects to become more transparent. For the private sector it is a tool to guide private investment and has been certainly helpful to assist assessing the cost effectiveness of public projects. For the public sector, normally economic efficiency is the primary objective, but the public sector needs to consider economic equity as well. As the social and environmental factor became important, the economic analysis of projects came more complex and, therefore, more difficult.

The application of the B/C ratio calculations for this Annual Report compares each proposed project with a set of factors that are converted to monetary values. This appendix discusses the input data needed to conduct a B/C ratio calculation, which includes travel time benefits, crash cost benefits, motor vehicle emission cost benefits, vehicle operating cost benefits, and capital cost. In addition, the limitation of the B/C analysis is presented.

Benefit-Cost Analysis Assumptions and Parameters

The typical project life was assumed to be 20 years, i.e., benefits and costs accrued during a period of 20 years after the opening of the project are accounted for in the benefit/cost analysis. However, when the cost of the structural components of a project was a significant portion (greater than 25 percent) of the total project costs, a 40-year project life was assumed.

Travel Time Benefits:

For the value of travel time, the personal travel was 50% of local mean wage while business travel by truck/bus drivers was 100% of local mean wage plus fringe benefits. The wage values came from the Occupational Employment and Wage Statistics published by the U.S. Bureau of Labor Statistics in May 2021. A 50% fringe was used because it was an average of several labor groups. Table E-1 lists the travel costs at different areas including Metropolitan Statistical Areas (MSA).

Table E-1 Travel Costs (2021 USD)

Statistical Area	Mean Wage ($/hour)	Personal Travel ($/hour)	Business Travel ($/hour)
Nevada	$24.56	$12.28	$36.84
Las Vegas-Henderson– Paradise MSA	$24.21	$12.11	$36.32
Reno MSA	$25.36	$12.68	$38.04
Carson City MSA	$26.61	$13.31	$39.92
Nonmetropolitan Area	$24.77	$12.39	$37.16

Source: Occupational Employment and Wage Statistics published by U.S. Bureau of Labor Statistics in May 2021, https://www.bls.gov/oes/tables.htm

Average vehicle occupancy is shown in Table E-2.

Table E-2 Average Vehicle Occupancy

Vehicle Type	Average Occupancy* (National Wide)	Las Vegas – Paradise MSA**	Reno – Sparks MSA**
Passenger Vehicles (Weekday Peak)1	1.48	1.53	n/a
Passenger Vehicles (Weekday Off-Peak)	1.58	1.49	n/a
Passenger Vehicles (Weekend)	2.02	n/a	n/a
Passenger Vehicles (All Travel)	1.67	1.51	1.45

* Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs, USDOT, March 2022 (Revised).

** Vehicle occupancy rates are provided by RTC Washoe and RTCSNV.

Crash Benefits:

Freeways and Expressways with controlled access normally have lower crash rates than local streets and roads with little or no access control. Consequently, by increasing freeway capacity more travelers will benefit from lower accident rates. The rates are illustrated in Tables E-3 and E-4.

Table E-3 FY 2021 Nevada Crash Severity Numbers of the Larger Counties

Location	Traffic Crashes Percentage	Number of Crashes	PDO[1]	INJURY	FATAL	Crash Rates[2]
Clark County	75.99%	36,608	19,492	16,957	159	227.29
Washoe County	14.75%	7,106	4,528	2,544	34	193.50
Carson City / Douglas County	2.73%	1,314	951	357	6	152.63

Notes:
1. Property Damage Only.
2. Crash rates expressed in crashes per 100,000,000 vehicles miles traveled.
Source: NDOT Traffic Safety Division updated on September 15, 2022.

Table E-4 FY 2021 Crash Totals by County, Rates, Annual Vehicle Miles Traveled, and Population

County	Total Crashes	% of Total Crashes	Total AVM (2022)	% of Total AVM	Population	Crash Rate
Carson	806	1.67%	394,700,842	1.61%	57,073	204.21
Churchill	315	0.65%	324,568,939	1.32%	26,310	97.05
Clark	36,608	75.99%	16,105,996,249	65.72%	2,320,551	227.29
Douglas	508	1.05%	466,205,882	1.90%	49,661	108.96
Elko	825	1.71%	800,775,383	3.27%	54,546	103.03
Esmeralda	32	0.07%	111,529,145	0.46%	1,000	28.69
Eureka	76	0.16%	155,463,990	0.63%	1,898	48.89

County	Total Crashes	% of Total Crashes	Total AVM (2022)	% of Total	Population AVM	Crash Rate
Humboldt	209	0.43%	365,801,529	1.49%	17,202	57.13
Lander	66	0.14%	138,034,068	0.56%	6,195	47.81
Lincoln	148	0.31%	144,821,054	0.59%	5,188	102.20
Lyon	492	1.02%	520,232,474	2.12%	58,051	94.57
Mineral	72	0.15%	132,954,031	0.54%	4,826	54.15
Nye	594	1.23%	618,287,195	2.52%	49,289	96.07
Pershing	72	0.15%	287,120,399	1.17%	6,984	25.08
Storey	123	0.26%	71,430,982	0.29%	4,359	172.19
Washoe	7,106	14.75%	3,672,258,481	14.99%	485,113	193.50
White Pine	123	0.26%	195,298,889	0.80%	10,293	62.98
Total	48,175	100%	24,505,479,532	100%	3,158,539	176.56

Source: NDOT Traffic Safety Division updated on September 15, 2022.
1. Crash rates expressed in crashes per 100,000,000 vehicles miles traveled.
2. July 1, 2020 - June 30, 2021.

The crash costs per event (i.e., cost per fatality, cost per serious injury A, and others) were derived using Highway Safety Manual's Crash Cost Estimates. Consumer Price Index (CPI) and Employment Cost Index (ECI) were obtained from the Bureau of Labor Statistics (BLS) website, https://www.bls.gov/. The crash costs per event then were converted and rounded into 2021 dollars using BLS CPI data. The crash costs per event were converted to costs per crash to correspond with the data on crash reduction. Costs per crash are higher than costs per event because, for example, a fatal crash can involve multiple injuries; therefore, the cost of a single crash is likely higher than one event. Table E-5A shows the crash cost assumptions.

Table E-5A Crash Cost Assumptions

Crash Severity	Crash Cost per Event[1]
Fatal (K)	$6,889,837
Suspected Serious (A)	$363,051
Suspected Minor (B)	$132,573
Possibly/Claimed (C)	$74,472
Property Damage Only (PDO)	$11,984

1. Source: Highway Safety Manual's Crash Cost Estimates converted into 2021 dollars using BLS CPI data.

Table E-5B shows the monetization values for injury crashes and fatal crashes, that are based on an estimate of approximately 1.44 injuries per injury crash and 1.09 fatalities per fatal crash, based on an average of the most recent five years of data in NHTSA's National Crash Statistics. The fatal crash value is further adjusted for the average number of injuries per fatal crash

Table E-5B Recommended Monetized Value(s)

KABCO Level	Monetized Value (2020 $)[2]
O – No Injury	$3,900
C – Possible Injury	$77,200
B – Non-incapacitating	$151,100
A – Incapacitating	$554,800
K – Killed	$11,600,000
U – Injured (Severity Unknown)	$210,300
# Accidents Reported (Unknown if Injured)	$159,800

2. Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs, USDOT, March 2022.

Motor Vehicle Emissions and Costs:

The most common local air pollutants generated by transportation activities are Sulfur Dioxide (SO2), Nitrogen Oxides (NOX), Fine Particulate Matter (PM), and Volatile Organic Compounds (VOC). The recommended economic values for reducing emissions of various pollutants are shown in Appendix A, Table A-6 in Benefit-Cost Analysis Guidance for Discretionary Grant Programs published by USDOT in March 2022.

Vehicle Operating Costs Parameters:

Local data is encouraged to use on vehicle operating costs where available, appropriately documenting sources and assumptions. For analyses where such data is not available, the non-fuel costs for light duty vehicles can be estimated by the American Automobile Association (AAA)'s "Your Driving Costs" based on the average of three sedan categories (small, medium, and large).

The non-fuel costs for trucks can be estimated by values from the American Transportation Research Institute (ATRI), the research arm of the American Trucking Associations Federation. ATRI has conducted several analyses of the operational costs of trucking. These studies use costs derived directly from the trucking industry motor vehicle fleet operations. The operating costs reported include a number of categories associated with travel time and fuel operating costs in addition to non-fuel operating costs. These values include operating costs that vary with vehicle miles traveled such as fuel, maintenance and repair, tires, depreciation, and additionally, in the case of trucks, truck/trailer lease or purchase payments, insurance premiums, and permits and licenses. The values exclude other ownership costs that are generally fixed or that would be considered transfer payments, such as tolls, taxes, annual insurance, license, financing charges, and registration fees. For commercial trucks, the values also exclude driver wages and benefits which are already included in the value of travel time savings. Vehicle non-fuel operating cost assumptions are summarized in Table E-7.

Table E-7 Vehicle Non-Fuel Operating Costs

Vehicle Non-Fuel Operating Costs	Cost Per Mile ($2020)
Light Duty Vehicle	0.45
Commercial Truck	0.94

Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs, USDOT, March 2022.

Fuel consumption rates are suggested to be estimated from the California Air Resources Board Emission Factors 2014 (EMFAC2014) model. On December 30, 2014, the California Air Resources Board updated EMFAC from the previous version, EMFAC2011. EMFAC2014 also improves upon EMFAC2011's modeling structure.

Fuel costs used in the BCA model represent the out-of-pocket fuel costs paid by consumers. The American Automobile Association (AAA) Daily Fuel Gauge Report can be used as the source for fuel data (http://gasprices.aaa.com/?state=NV). It is suggested the price of mid-grade fuel for automobile fuel costs and the price of diesel fuel for truck fuel costs. The fuel cost calculation excludes federal, state, and local taxes. These taxes are transfer payments and user fees for funding transportation improvements. Fuel taxes can be broken into three components: Federal fuel excise taxes, State fuel excise taxes, and State and local sales taxes. Federal and state motor fuel taxes can be found from the U.S. Energy Information Administration (https://www.eia.gov/petroleum/). Nevada state local taxes can be found from the Facts & Figures book published annually by NDOT.

Capital Expenditures:

The capital cost of a project is the sum of the monetary resources needed to build the project (or program of projects). Capital costs generally include the cost of land, labor, material and equipment rentals used in the project's construction. In addition to direct construction costs, capital costs may include costs for project planning and design, environmental reviews, land acquisition, utility relocation, or transaction costs for securing financing. Costs should be recorded in the year in which they are expected to be incurred, regardless of when payment is made for those expenses.

Operating and Maintenance Expenditures:

Operating and maintenance (O&M) costs cover a wide array of costs required on a continuing basis to support core transportation functions. The ongoing O&M costs of the project throughout the entire analysis period should be included in the BCA and should be directly related to the proposed service plans for the project. O&M costs should be projected for both the no-build baseline and with proposed improvement project. For projects involving the construction of new infrastructure, total O&M costs will generally be positive, reflecting the ongoing expenditures needed to maintain the new asset over its lifecycle. For projects intended to replace, reconstruct, or rehabilitate existing infrastructure, however, the net change in O&M costs under the proposed project will often be negative, as newer infrastructure requires less frequent and less costly maintenance to keep it in service than would an aging, deteriorating asset. Note also that more frequent maintenance under the baseline could also involve work zone impacts that could be reflected in projected user cost savings associated with the project.

Residual Value and Remaining Service Life:

The analysis period used in the BCA should be tied to the expected useful life of the infrastructure asset constructed or improved by the project. Where some or all project assets have several years of useful service life remaining at the end of the analysis period, a "residual value" may be calculated for the project at that point in time. This could apply to both assets with expected service lives longer than the analysis period, and shorter-lived assets that might be assumed to have been replaced within the analysis period. A simple approach to estimating the residual value of an asset is to assume that its original value depreciates in a linear manner over its service life. Those residual values would then be discounted to their present value using the discount rate applied elsewhere in the analysis. The projected residual value of a project should be added to the numerator when calculating a benefit-cost ratio for a project.

Discussions and Limitations

In general, it is difficult to convert all diverse costs and benefits into monetary values. At times funding limitations might require the selection of an alternative that does not have the highest B/C ratio, simply because there is not sufficient funding. While the B/C ratio calculation reported herein is an excellent parameter to help select projects or alternatives, it does have limitations.

One limitation deals with the project cost impact on humans; therefore, a factor, i.e., community impact, will need to be addressed.

Another limitation deals with the system impact of large highway capacity projects. Correcting a significant urban freeway congestion problem at a site moves the primary 'bottleneck' (site of congestion) to another location. Such a project will probably have considerable benefit within the project limits, but might not provide much, if any, overall system improvement.

Consequently, at least one area wide factor is needed to address the system wide impacts. One of the Department's new performance measures is: percent of daily vehicle miles of travel at Level of Service E or worse. This measure is called the 'system congestion index'.

Another limitation with a benefit-cost analysis is that many times a project will have an economic development benefit component. This economic development component is very difficult to quantify monetarily. Different items that can be considered when trying to estimate the economic development component include the number of marginal jobs that a project will enable to be created, the increase in property values along a project, the amount of new tax revenues generated for all levels of government because of the project, and the marginal increase in total Nevada gross product. Each of these items is problematic to estimate by themselves, then to try to estimate the change in these items induced because of transportation projects becomes extremely difficult. For these reasons, the economic development component is not normally considered in a typical NDOT benefit-cost analysis.

Nationally, discount rates vary from zero to 7% and sometimes higher. The baseline discount rate of 7% is used because of OMB (Office of Management and Budget) Circular A-94 and is applied to all benefit/cost analyses. A three percent discount rate is recommended for performing sensitivity analyses to determine the impact of changes in the discount rate on the B/C ratio. All monetized values used in a BCA should be expressed in a common base year, with the effects of inflation netted out. OMB Circular A-94 and OMB Circular A-4 recommend using the Gross Domestic Product (GDP) Deflator as a general method of converting nominal dollars into real dollars. The GDP Deflator captures the changes in the value of a dollar over time by considering changes in the prices of all goods and services in the U.S. economy. If the method of Consumer Price Index is used as the deflator, it should be explicitly indicated, and the index values used to make the adjustments should be provided in the BCA.

The final limitation is the level of favorable public opinion toward a project. If there is a negative public perception toward a project, even if the perception is not justified, a high priority score might not suffice for a project to proceed toward implementation. In summary, even a good project needs public support; consequently, the level of public acceptance will be documented, most likely during the NEPA process.

Once the projects have been prioritized, they must be distributed among the various funding categories, meaning that a lower priority project might be funded before a higher priority because it is in a category with much more funding. Additionally, a lower priority project might be simple and easy to design, and build compared with a large-scale project might have major mitigation issues. In this case, the lower priority would likely be constructed first.

APPENDIX B

PROJECT PRIORITY RATIONALE

INTRODUCTION

Every year, the Department is responsible for the programming of federal and state funding for a wide range of transportation improvement projects across the state. Allocating these significant resources in an equitable, efficient, and effective manner requires a multifaceted approach. The Department has adopted flexible, yet accountable procedures to meet the needs of the traveling public, advance the Department's goals and priorities, and address the needs of a myriad of constituencies across the state.

The Transportation Board provides oversight on the project selection process. The Board approves the Annual Work Program (AWP), and Short and Long-Range Elements. This board also accepts, as approved by the Federal Highway Administration, the Statewide Transportation Improvement Program (STIP).

The Department's future transportation project priority rationale is guided by the One Nevada Transportation Plan which is NDOT's performance-based long-range transportation plan. The One Nevada Transportation Plan provides a framework for identifying future transportation needs, establishing project prioritization practices, and guiding future decision-making. The Plan includes an overarching vision and is the foundation for the continuous transportation planning process. The One Nevada goals are:

- Enhance Safety
- Preserve Infrastructure
- Optimize Mobility
- Transform Economies
- Foster Sustainability
- Connect Communities

The One Nevada Transportation Plan has moved into the implementation phase, which is focused on streamlining and advancing transportation needs through the project development process to implementable projects.

Long-Range
Need Identification

Needs Validation

Unified Project Concept (UPC)
Database

Mid-Range
Program Level Screening

STIP & AWP
Project Prioritization

STIP & AWP
Harmonization

The above graphic represents how the One Nevada Process is being used to guide NDOT's transportation investments. This transparent process will help validate transportation investment decisions by demonstrating how specific projects support the goals for the state's transportation network. There is a basic premise that validated needs are advanced into concepts and re-evaluated on their ability to meet NDOT's goals before they become funded projects.

BRIDGE PROGRAM

Highway assets are managed using two systems: A pavement management system and a bridge management system. Both systems provide an inventory of existing assets, their condition, needed repairs, and repair priorities. The bridge management system aids in identifying bridges in need of replacement and rehabilitation. Federal funds are available to replace and rehabilitate substandard publicly owned highway bridges. While the primary focus of this program is to replace or rehabilitate bridges, these funds can also be used for:

- Conducting federally mandated inspection on all existing bridges
- Compiling federally mandated inventory information
- Upgrading bridges to resist seismic activity
- Mitigating potential scouring of bridge supports due to flooding

Eligible expenses are funded at ninety-five percent federal funds with a five percent match by the bridge's owner.

There are 2,123 bridges in the Nevada DOT bridge inventory. Of these, 1,233 are owned and maintained by the Department, 817 bridges are maintained by Nevada Counties and Cities, 48 are maintained by other local agencies. Private entities maintain 11 bridges, Railroads maintain 6, and 8 bridges are maintained by other state agencies.

Priority of replacement and rehabilitation projects are based on a bridge's condition rating. For each bridge, the condition rating is determined for three primary elements: deck, superstructure and substructure. Bridge-sized culverts have a single, independent rating. National Bridge Inventory general condition ratings are assessed on a scale that ranges from 0 (failed condition) to 9 (excellent condition). The lowest of the three ratings for bridges, or the single rating for culverts, is used to represent the overall condition of the structure. Ratings of 7 or better, represent a bridge that is in good condition and ratings of 5 or 6 represent a bridge in fair condition. If any of the condition ratings are 4 or below, the bridge is in poor condition.

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STATE HIGHWAY PRESERVATION PROGRAM

The Department maintains 5,378 centerline miles of highways. The total number of miles fluctuates annually as new highways are constructed and others are eliminated due to relinquishment and road transfer activities to counties and cities, prompted by the 1999 Assembly Concurrent Resolution (ACR) 3. These highways carry 51 percent of Nevada's traffic and 68 percent of the heavy trucks. The Department is responsible for protecting highway assets and preserving existing highways. The Pavement Management System provides an inventory of existing assets, their condition, needed repairs, and repair priorities. The basic principle of pavement preservation is that timely lower-cost improvements will save money and better serve the public. At present, approximately $205 million is needed annually for pavement preservation projects to maintain the quality of highway pavements at acceptable levels. To preserve the state highway system at low cost, action plans are used that optimize the use of available funds.

The Department's action plan in priority order is as follows:

- Apply timely overlays on Interstate and other Principal Arterials, Minor Arterials, and other moderate to high volume roads.
- Further develop economical repair strategies for our low-volume roads.
- Continue coordinating and integrating routine pavement maintenance activities with planned overlay and reconstruction work.

Within this action plan, individual projects are prioritized based on pavement age, traffic volume, axle loads, and condition. From this analysis, an action list is formulated based on the financial consequences of not doing the project. Further assessment data is collected from field surveys in conjunction with district-engineer offices.

Collaboratively, repair strategies are formulated along with an appropriate funding level to accomplish the Department's preservation and other goals.

HIGHWAY SAFETY IMPROVEMENT PROGRAM

The Highway Safety Improvement Program is a core Federal-aid program with the purpose to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. The program is legislated under Section 148 of Title 23, United States Code and regulated under Part 924 of Title 23, Code of Federal Regulations.

The Department is tasked with a data-driven, strategic approach to improving highway safety on all public roads in Nevada. The Highway Safety Improvement Program consists of several components, namely:

1. Maintaining a geolocated database of all crashes
2. Analyzing data to determine high crash sites
3. Conducting Safety engineering studies to develop highway safety improvements
4. Establishing priorities for implementing safety improvements
5. Programming and implementing highway safety improvement projects
6. Federal reporting for all Highway Safety Improvement Program activities
7. Evaluating crashes before and after the implementation of safety improvements
8. Determining the overall effectiveness of the prescribed safety improvements

The Department cooperates with a variety of stakeholders to implement the Nevada Strategic Highway Safety Plan under the Highway Safety Improvement Program. Stakeholders include state, federal, local and tribal safety partner from "the 6 E's of Traffic Safety" – Equity, Engineering, Enforcement, Emergency Response, Education, and Everyone. These partnerships are essential to reach the goal of zero fatalities on Nevada's roads.

Programs and projects are developed on systemic and systematic principles. Systemic projects are proactive and look at the use of proven safety countermeasures throughout the system where systematic project are reactive and based on crash data. Programs and projects will align with the Strategic Highway Safety Plan Critical Emphasis Areas goals.

TRANSPORTATION ALTERNATIVES PROGRAM (TAP)

The TAP is a competitive grant program designed to help create safer, more walkable streets, including pedestrian and bicycle infrastructure, Safe Routes to School programs, and other local community projects. Nevada's statewide TAP is administered by the Nevada Department of Transportation and aligns directly with the One Nevada goals to enhance safety, preserve infrastructure, optimize mobility, and connect communities.

To be eligible, activities must fall within three broad categories: 1) Transportation infrastructure (including engineering, environmental analysis, and construction phases); 2) Planning and 3) Non-infrastructure projects (efforts related to Education, Encouragement, and Equity for students' grades K-8).

Eligible applicants include local governments, regional transportation authorities, transit agencies, natural resource or public land agencies, school districts or schools, tribal governments, MPOs with populations over 200,000, nonprofit organizations and other local or regional governmental entities with responsibility for oversight of transportation or recreational trails.

Eligible projects include planning, design or construction for bicycle and pedestrian facilities, sidewalks, trails, lighting, signals, traffic calming, ADA, turnouts, overlooks and viewing areas, historic preservation related to historic transportation facilities, recreational trails, Safe Routes to School for grades K-12 (infrastructure, non-infrastructure, and coordinators), vulnerable road user safety assessments, vegetation management, environmental mitigation related to

stormwater, water pollution prevention, wildlife crossings, and habitat connectivity, rails to trails, and community improvement activities related to the inventory removal or outdoor advertising).

Proposed TAP projects are solicited through a competitive process, facilitated by the NDOT, and ranked by a TAP evaluation committee. Members of this committee represent a wide range of interests such as active transportation, safety, traffic operations, and other State agencies such as Nevada State Parks. TAP funds may be used to reimburse eligible project costs incurred by grantees, in accordance with local public agency agreements between the project sponsor agency and NDOT. Federal funding covers up to 95% of project costs with 5% of costs provided by local project sponsors.

TAP funding is also made available through regional competitive solicitations conducted by the Regional Transportation Commission of Washoe County (Washoe RTC), the Regional Transportation Commission of Southern Nevada (RTCSN), and the Tahoe Regional Planning Organization (TRPA).

More information about Nevada's TAP program can be found by going to www.nevadadot.com/tap.

APPENDIX C

PERFORMANCE MANAGEMENT PLAN

Goal of the Plan

The Performance Management Plan aims to support the Nevada Department of Transportation staff and Executive Leadership with implementing transportation performance measures requirements through communication of strategic goals and distinct activities, and schedule established by the Department. The plan enables the Department to fulfil the requirement of NRS 408.133 primarily and aligns with the performance management requirements in the Moving Ahead for Progress in the 21st Century (MAP-21) and Fixing America's Surface Transportation (FAST) Acts.

The Performance Management Plan emphasizes the Department's goals as stated in the Strategic Plan to be achieved through successful implementation of performance management and activities aimed at achieving those goals. This plan covers the entire performance management process and other related actions that result in producing the Annual NDOT Performance Management Report, improve individual business unit processes and outcomes, identify resource needs and allocation, and improve the Department as a whole.

This plan compartmentalizes the relevant sections of NRS 408 as follows:

- Section 47.2 – Annual report on performance measures and general project information
- Section 47.3 – Annual Report on benefit-cost analysis for capacity projects that cost at least $25 million
- Section 55.3 – Annual reports on projects funded through the Las Vegas Convention and Visitors Authority funding
- Section 55.5 – Quarterly report on general project information for the Blue- Ribbon task force projects and any proposed super and mega highway projects

The fulfilment of all these requirements is documented in the Annual Performance Management Report.

Performance management at NDOT has significantly improved over the last four years. As Performance Measures Champions become increasingly aware of the importance of measuring their performance and incorporating performance management concepts and practices, this growth will continue. Also, this growth can be attributed to the Executive Leadership support and empowering Senior Leadership and staff to take ownership of the program. This plan is a living document for the Department and will remain aligned to the greatest extent possible with the One Nevada Plan, the Transportation Asset Management Plan, the Department strategic plan, and other plans and related documents developed by the Department and FHWA, supporting and or requiring performance management application.

Background

The Department has developed performance measures for the four major divisions to facilitate the accomplishment of the Department's mission and achieve its strategic plan goals. These goals are as follows:

1. Safety first
2. Cultivate environmental stewardship
3. Efficiently operate and maintain the state transportation system
4. Enhance internal and external communications
5. Enhance organizational and workforce development
6. Consistent and effective data management

These performance measures are designed to quantify progress in achieving those goals, as well as assist divisions improve on their business processes and outcomes. The sixteen performance areas are listed below. The performance management plan is broken into sections for enhanced clarity and transparency. The plan undergoes yearly evaluation and update to ensure significant changes, issues, or Transportation Board or Legislative directives that happen during the year are addressed in the subsequent performance management cycle.

Also, Congress established seven national goals and FHWA established national performance measures for the Federal-aid highway program as stated in section 1203 of MAP-21, as amended by the FAST Act. Performance management requirements were established that address safety, infrastructure condition, system performance, traffic congestion, on-road mobile source emissions, and freight movement.

It is the intention that through performance management and this performance management plan desired outcomes will be achieved that collectively will aid in the realization of some or all of the Department's goals.

Performance Management: Desired Outcomes

Investments Accountability

- Transportation funding is limited therefore we thrive to use it wisely and maximize the return on the investment
- Performance-based decisions driven by data and logic

Enhance Efficiency and Consistency

- Defendable project selection process and better project selection across the state
- Repeatable process that can be applied over time and in different parts of the state
- Minimizes risk
- Outcomes can be measured

Increasing Coordination amongst Divisions

- Division heads/Performance Champions share in the responsibility to support the Department's goal through their decision-making as they manage their performance measures
- Data sharing and periodic meetings are keys to successful coordination. The performance management process requires and enhances coordination.

Tracks and Monitors Department-Wide Performance

- Through tracking of performance measures metrics, we can tell how we are doing

Improves Transparency

- By publicizing our performance
- Aligns performance targets with customer expectation

Increasing Our Understanding of What Works

- What investment strategies are useful in achieving the targets set and the desired outcomes?
- Performance management process provides us with an opportunity to develop knowledge base further

Communicating Our Efforts to the Transportation Board of Directors, the Legislature, and the Public

- Performance management and reporting helps us communicate how we are doing to our stakeholders
- The story we need to tell is not only what we are able to do but also what we are unable to do with existing resource constraints. This informs discussions on future funding levels

Performance Measures Development

The department has put policy (TP 1-11-2) and procedures in place to help guide the compilation and reporting of performance measures, the retention of supporting documentation, and the review of calculations and methodologies. These procedures ensure the accuracy and reliability of results.

There are sixteen performance measures that have been developed by the Department:

1. Reduce Workplace Accidents
2. Provide Employee Training
3. Improve Employee Satisfaction
4. Streamline Agreement Process
5. Improve Customer and Public Outreach
6. Improve travel Reliability and Reduce Delay
7. Streamline Project Delivery – Bidding to Construction Completion
8. Maintain State Highway Pavement
9. Maintain NDOT Fleet
10. Maintain NDOT Facilities
11. Emergency Management, Security and Continuity of Operations
12. Reduce Fatal and Serious Injury Crashes
13. Project Delivery – Schedule and Estimate for Bid Advertisement
14. Maintain State Bridges
15. Streamline Permitting Process
16. Reduce Greenhouse Gas Emissions

During the performance measures development process, the Executive Leadership Team (ELT) works with the respective division heads in formulating their respective performance measure(s) and designates the division head as the Champion for that performance measure. During formulation of performance measures, it is intended for every performance measure to support at least one of the Department's strategic goals. Also, because the Department is required to report to the Federal Highway Administration (FHWA) on (MAP-21/FAST ACT) performance measures developed by FHWA that support the goals of the U. S. DOT Strategic Plan, on performance indicators as agreed between the NDOT and FHWA, and on performance measures in the Transportation Asset Management Plan, effort is made to align these performance measures as much as possible to streamline the process, increase efficiency, and minimize resource utilization. The performance management process also takes into consideration the requirements of the sections of NRS 353 that deals with performance measures NDOT Financial Management reports to the Governor's Finance Office and the Legislature. However, the need for alignment and streamlining does not take precedence over meeting the Department's nor U. S. DOT's strategic goals.

NDOT Performance measures must be approved by the Transportation Board of Directors before adoption. Following is the process to add or change any performance measure:

- If a new measure is added there must be explanation why the measure is added
- If a measure is changed there must be explanation why it is being changed, and provide data for the measure as it was before and as it is after the change for the first year
- If a measure is eliminated there must be explanation why the measure is being eliminated, and provide data for the first year

After initial approval, a performance measure cannot be changed or modified without submitting it to the Board with proper justification for the change or modification.

Target Setting

After development and adoption of performance measures, the setting of targets begins. Individual Performance Measure Champion/division head in consultation with his or her Assistant and Deputy director determine the target for their performance measure(s).

Widely accepted and performance management practices and target setting rules like the SMART rule are applied when setting targets:

- Specific
- Measurable
- Attainable
- Realistic
- Time-bound

Each Performance Champion develops the methodology for setting their target. The method used in the target setting could be based on policy, trends analysis, risk-based, or statistical or other methods.

However, whichever philosophical approach is used considers the ability of the Department to attain the target, a determination of the most likely outcome, or a commitment to improved outcome irrespective of the probability of not meeting the target. Also, regardless of which approach is used, ease of application, technical robustness, ease of communication, and policy objectives consideration are desired outcomes that any approach must achieve to be considered viable.

After targets are developed and set, they are reviewed and endorsed by the Executive Leadership Team.

As with the NDOT performance management process, the target setting process is reviewed and evaluated each year as new and additional data become available, new insights are gained, and the state of the practice improves as knowledge expands. Targets can be adjusted or modified each year and does not require Transportation Board approval.

Implementation – Tracking

After performance measures have been assigned and targets set, the tracking and evaluation of the performance measure begins. Performance Champions develop short-term and long-term strategies to improve business processes and outcomes that translate to progress in achieving established performance targets.

Data collection and metric monitoring are the next steps in the process. Champions perform periodic data collection to determine the status or progress of their performance measure by comparing the data gathered on the metric compared to where it needs to be with respect to the target. Specific staff is assigned the responsibility of gathering data and monitoring the

status of the performance measure throughout the year and keeping the division head updated. At the end of the performance period the division head analyzes the results and evaluates the strategies that are in place to determine if they are successful or not. If some or all the strategies are successful, they are kept in place for the next performance period, but if they are not successful, they are abandoned or modified, or new strategies are developed altogether based on insights from the analyses.

Performance Measures Data

Data collected for tracking and evaluating performance measures must be stored properly and made available if requested. This data is also used as supporting documentation in the yearly report write-up and must be forwarded to the Performance Analysis Division. Because performance measures are evaluated for different yearly cycles (state fiscal year, federal fiscal year, calendar year), care is taken to ensure that data collected and used for evaluating any performance measure is stamped for that particular cycle.

Although comprehensive reports are not required on a quarterly basis from all the divisions assigned performance measures, divisions are required to collect and submit raw data each quarter that is used to determine the progress of the performance measure at that time relative to the end of the performance period.

These quarterly performance data are reviewed and forwarded to the Executive Leadership Team. The data is organized and store in a data repository in the Performance Analysis division as soon as they are received.

The Performance Analysis division maintains this data that goes back at least five years. This data is used to create trend charts, crosscheck other information, and used for integrated analyses.

Compiling the Annual Performance Management Report

NRS 408.133 requires the Director of the Department to submit the Annual Performance Management Report to the Transportation Board of Directors and the Legislative Counsel Bureau not later than December 31 each year.

Although the performance management cycle is year-round, the compilation of the Annual Performance Management Report begins in May. The Performance Analysis division chief communicates with all Performance Champions to determine availability in scheduling the yearly champions meeting with the Executive Leadership Team (ELT). Each performance measure Champion is allotted thirty minutes for each performance measure. Because there are sixteen performance measures this meeting is scheduled for a total of ten hours including transition times between performance measures. Depending on the Director's availability, this meeting could spread out over multiple days.

The purpose of the annual Champions meeting with the Executive Leadership team is to discuss performance achievement and shortcomings, performance measures and related issues, applied strategies, resource capacity and other obstacles, and performance stories derived during the performance period.

At the meeting, the Performance Analysis division head provides Performance Measure Champions a copy of their previous year's report, the report template for submitting their report for the current performance period (year) and, announces the end of August as the deadline to submit the current year's performance measures report.

The performance Analysis division receives, and reviews divisions performance measures reports as they are submitted by each division. Assistant directors receive a copy of the report submitted by their division for review. Review comments from the Assistant directors are sent back to the respective performance Champion and the Performance Analysis Chief for notified about the comments or proposed changes. The performance measures' reports from the Divisions are also sent to the Communications division liaison staff for review. After all reviews and updates are complete, the compilation of all the reports begins. The Performance Analysis division ensures uniformity and consistency of the report by incorporation some of the guidelines stated in the Communications division's report development draft guide document. Charts, graphs, and infographics are also developed for easy reading and report presentation.

The report is divided into Seven major sections:

1. Mission, Vision, Core Values and Goals
2. Performance Management Dashboard (Executive Summaries)
3. Detailed Performance Measures Reports and data
4. Applicable Directives from The Transportation Board/Legislature
5. State Highway Fund Annual Revenue and Expenditures
6. Major Projects Annual Status Report
7. Appendices

After compilation of the annual report by the Performance Analysis division, the Word file is sent to the Multimedia section for final formatting and addition of the front and back cover pages with pictures. The word file must get to the Multimedia section by the second week of November. Multimedia will complete its work within three working days and submit a draft report to the Performance Analysis division for proofing which should take at most two days. Comments are sent back to the Multimedia section and a draft report is produced before the middle of the third week of November and sent to the ELT for review. The ELT reviews the draft report and sends comments to the Performance. Performance Analysis division then incorporates and documents the comments and sends the updated information to the Multimedia section for final update after which the board draft copy is produced by the end of the third week of November in preparation for the board package for the December board meeting.

Performance Management Reporting

The Multimedia section produces the report in both electronic and hard copies in pdf format. The draft report is included in the December board package which is sent to the board members.

Annual Performance Management Report Development Timeline

Activity	Start by Date	End by Date
Annual PM Champions meeting schedule set up	1-May	15-May
PM Champions meeting with the ELT	15-Jun	30-Jun
Submission of Division's report to Performance Analysis	1-Jul	31-Aug
Division report review	7-Jul	15-Sep
Compilation of reports	16-Sep	31-Oct
Request for safety data	15-Sep	1-Nov
Request for Financial data	15-Oct	7-Nov
Request for major projects information	15-Oct	1-Nov
Inclusion of requested information	2-Nov	7-Nov
Advanced formatting of report by Multimedia	8-Nov	11-Nov
Proofread draft report from Multimedia	12-Nov	14-Nov
Draft report update	15-Nov	16-Nov
Draft to ELT for review	16-Nov	20-Nov
Address ELT comments	21-Nov	23-Nov
Produce draft report for board package	24-Nov	25-Nov

After the December board meeting, comments from board members related to the report are gathered and addressed and the final draft report is completed and sent to the Communications Director for transmittal to the Legislative Council Bureau by December 31, and also posted on NDOT website.

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